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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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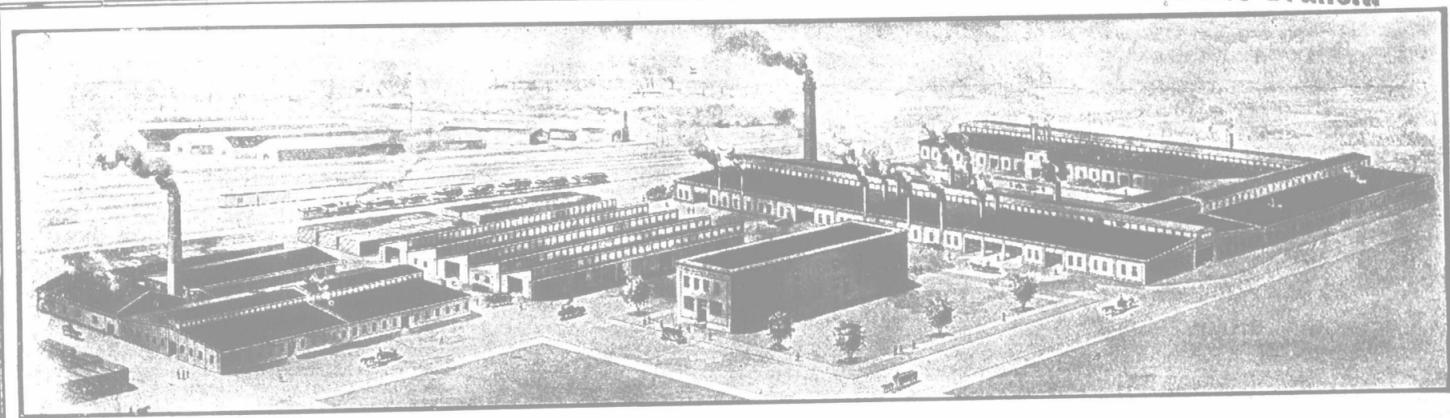
MAY 17 1912

No. 1020

VOL. XLVII.

LONDON, ONTARIO, APRIL 11, 1912.

Publications Branch.



PLANT OF THE GEORGE WHITE & SONS CO., LTD., LONDON, ONT.

The "Eternal" Roofing

The cut shows the big plant that houses one of Canada's important and fastest-growing industries. Note well the location. The plant stretches out along the G. T. tracks—it lies in the very danger zone of flying sparks and hot cinders. But that does not worry the George White & Sons Co. much. If you could examine the roofing of this big plant through a microscope, you would see that even their boiler-house and foundries were covered with

BRANTFORD ROOFING

Think of it!

The roofs shown in the photograph are subjected to the **almost unceasing** onslaughts of the **most relentless** enemies of roofing—**Acids and Fire.**

Think of it!

Wave after wave of **fierce** heat—super-charged with **deadly** acids, **attack** the roof, day after day, **from within.** Flying sparks and hot cinders, vomited from on-rushing trains, **batter it without.**

Add to this the **biting** frosts of zero weather, the **driving** sleets and rains of winter, as well as the **drawing** action of summer suns—think of a roofing **successfully withstanding** this **unusual warfare** and you are **bound** to think of BRANTFORD ROOFING—the roofing that some people call the Roofing "ETERNAL"—because of its **imperishable** qualities.

There are **sound basic reasons** for the enduring qualities of

BRANTFORD ROOFING. Whether you are in the market for roofing now or not it will **pay** you to consider them well. Because BRANTFORD is **an every purpose roofing**—the roof **par excellence** for farm buildings.

The "Base" of Brantford Roofing is long fibred elastic wool—wool that is **flexible** and **weather-resisting.** This is **saturated through** and **through** with pure Asphalt—a **mineral fluid** that **cannot be affected materially** by heat or water, wear or weather.

There are three kinds of BRANTFORD ROOFING. One is **Asphalt** with a silica sand finish—**it wears like iron.** Another called **Rubber,** has a smooth, rubbery finish—**but contains no rubber.** And **Crystal** has a **wear-defying, rock-crystal** surface.

But—you just write for our **big free book.** It contains roofing facts you'll be glad to know, as well as samples of the best roofing.

BRANTFORD ROOFING COMPANY, LIMITED
Brantford, Canada

When You Buy a Fence Do As If Buying a Work Horse

Look for the details that will be tested out early in service. No matter how good a horse looks, he is not of much value if he has poor feet. It is the same with wire fence. Don't be deceived into thinking that all fences will give equal service. You don't have to go far to see that this is not the case, but if you will examine a good stretch of Frost Fence, you will see that it has every provision for long and satisfactory service, and good reserve strength and spring.

It's service you want in a fence, not merely appearance—and if a fence is going to give satisfactory service it must be made of right quality of material and must have good, strong reserve spring. It's because Frost Fence is built exactly on these lines, that you will always find it prepared for any strain that may come upon it.

"Frost" Fence

Frost Fence is extra good value for the money, because it guarantees you years of satisfactory service. In buying a fence, price should be your last consideration; you should first be sure that the fence has all the qualities necessary to give you good service. We could easily make a fence to sell as low as the lowest, but we prefer to produce a fence that you will want to recommend to your neighbors and friends after you have had it on your own farm. This is exactly what has won such a large sale for Frost Fence—that we are today making all our own wire. Don't take the risk of buying a so-called cheaper fence. It is economy to buy Frost Fence—and you can be sure you will get good service.

Talk it over with our local agent before you place your order—or write us for Catalogue.

FROST WIRE FENCE COMPANY, LIMITED
Hamilton, Ontario. Branch: Winnipeg, Manitoba

We Make Our Own Wire. It is all Hard Steel. It is Full Gauge and Heavily Galvanized.

36



SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS.

ANY person who is the sole head of a household, or any male over 18 years old, may homestead a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-agency for the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price, \$5.00 per acre. Duties—Must reside upon the homestead or pre-emption six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price, \$5.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. COOY,

Deputy of the Minister of the Interior.

N.B.—Unauthorized publication of this advertisement will not be paid for.

FARMS FOR SALE

Choice stock, grain and fruit farms to sale. We specialize in high-class properties, and aim at offering good value only. We have a special department devoted to listing and selling Ontario farms. Write for list.

UNION TRUST CO., LTD
Real-estate Department,
261 Temple Building, Toronto.

Corn that Will Grow

Canadian-grown seed corn. Your money back if not satisfied.

J. C. DUKE, RUTHVEN, ONTARIO.

INVENTIONS Thoroughly investigated in all countries. EGERYON, 25, St. James Street, Toronto. DEPT. B. BOOKS, 10, St. James Street, Toronto. Booklet on request.

Are you anxious to save time and money on the work you are doing on your farm at present, and to get larger crops from your farm or orchard? If so, let us send you, **FREE OF CHARGE**, our pamphlets on the use of

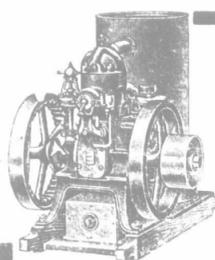
Stumping Powders

USED FOR

Removing Stumps and Boulders
Digging Wells and Ditches
Planting and Cultivating Orchards
Breaking Hard Pan, Shale or Clay Subsoils
Etc., etc., etc.

Figure yourself what clearing your farm is costing now, or what you are losing in crops through not clearing. Write us about arranging demonstrations.

CANADIAN EXPLOSIVES, LIMITED
Montreal, P. Q.



This Engine Runs on Coal Oil

Every farmer can afford an Ellis Coal Oil Engine. It gives far more power from coal oil than other engines. They are safe, as well as cheap; no danger of explosion.

The strongest and simplest farm engine used. No moving parts; nothing to get out of repair. Any one can run without experience. Thousands of satisfied farmers use these engines to grind feed, fill silos, saw wood, pump water, run separators, and do dozens of other jobs. Clearing the tanks of hired men. Fill up the tanks and start it running. No attention is necessary; it will run till you stop it.

FREE TRIAL FOR 30 DAYS. You don't have to take our word for it. Try the engine anywhere in Canada on Thirty Days' Free Trial. We furnish fuel for your work. If it does not suit you send it back at our expense. We will send you a refund of the cost of the engine if you don't want it.

Absolutely guaranteed for 10 years. Write for free catalogue.

Ellis Engine Co.

MENTION THE FARMER'S ADVOCATE WHEN WRITING

DO YOU KNOW

THAT WORN-OUT LANDS MAY BE MADE PRODUCTIVE AND PROFITABLE BY THE JUDICIOUS USE OF THE RIGHT KIND OF FERTILIZER?

NOW IF YOU HAVE A PIECE OF LAND THAT WON'T GROW ANYTHING BUT WEEDS, TALK WITH US ABOUT IT AND LET US SUGGEST THE RIGHT FERTILIZER

WE FEEL VERY SURE THAT WE CAN SHOW YOU HOW TO USE FERTILIZERS WITHOUT GREAT EXPENSE SO YOUR LAND WILL PAY

CONSULT US FREELY IT IS OUR BUSINESS TO KNOW ENQUIRIES FREELY ANSWERED AGENTS WANTED FOR TERRITORY NOT TAKEN UP THE W.A. FREEMAN CO. LIMITED HAMILTON ONTARIO

The "BACON" Seed Drills and Cultivators

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



THE EUREKA PLANTER CO. Limited Woodstock, Ont. 2

\$85 Farm Engine Sensation



Complete with line shaft, truck, pump, jack, interchangeable pulleys with 60 speeds. A farmer's power house on wheels. Agents Wanted GILSON MFG. CO., Ltd., 50 York Street, Guelph, Ontario

Buchanan's Self-Compressing Long Sling

—the result of 33 years experience in making Pitching Machines. Consists of three slings and sectional pulley for having ends together. Easy to operate, quick to work, and exceptionally strong.

We make all kinds of Pitching Machines—Sawed Carriers and Tracks, Slings, Horsepower Forks, etc. Write for catalogue. M. BUCHANAN & CO., INGERSOLL, ONT. 2

STANDARD GASOLINE ENGINE

Every one sold on a strong guarantee. Ask for our catalogue of engines.

London Concrete Machinery Co. Dept. B. Largest makers of Concrete Machinery in Canada.

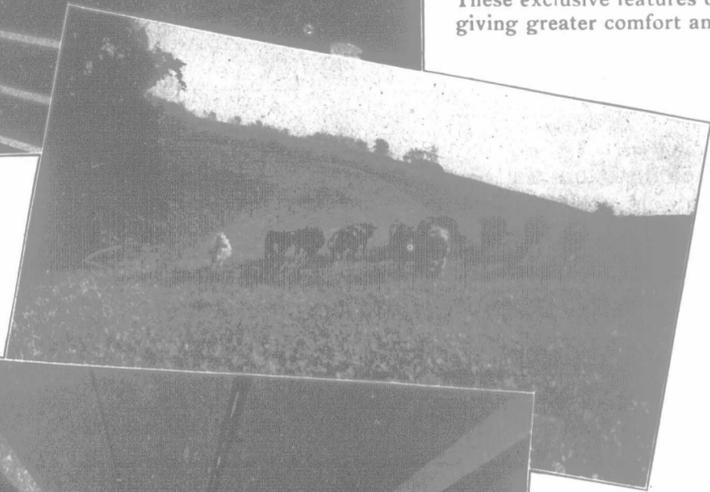
Wire Fencing for Sale

More than elsewhere, new wire, list and prices.

METAL CO'Y MONTREAL

Remodel Your Stable Yourself

YOU can set up BT Stalls yourself. In two hours you can set up 20 Stalls. It will save you lots of worry by putting in BT Steel Stalls. No expensive lumber to buy. No high-priced carpenters to hire. No delay. The best part of it is when your stable is completed you will have the very best possible sanitary job. There will be no worry afterwards with posts rotting out, partitions breaking and continual repairing.



Our Barn Plans Will Help You

We go further than supplying the equipment. We will send you complete plans that will meet your needs, no matter what they may be. Get our book, "How to Build a Dairy Barn." It tells you just how to lay out your barn, how to ventilate it, how to lay proper cement floors that will not be cold for the cattle to lie on. It gives the proper measurements for cattle stand, gutters, manger, walks and passage-way. It will save you time and thought by getting this book. It is free.

What BT Stalls Will Do for the Cow

The protection of your cows is of greater consideration than even price. We want you to get our catalogue. It will tell you all about our patented devices which lessen abortion, do away with the principal causes of big knees, ruined udders and all the injuries which cows are liable to. It tells how our individual mangers prevent overfeeding or underfeeding and save cost. These exclusive features on BT Stalls mean dollars and cents to you, by giving greater comfort and protection to your cows.

Sanitary Dairy Barns a Necessity

At the last session of our Provincial Government power was given our cities and towns to make laws governing dairymen who sent milk into their respective towns. Already Toronto and Ottawa have passed stringent laws requiring that milk be produced in Sanitary Dairy Barns, and have established a system of inspection. Other cities are preparing similar legislation.

The best dairymen do not need any legislation to compel them to keep their stables in a sanitary condition. They know that by keeping their cows clean they will be more healthy and produce more and better milk. They know that pure dairy products mean better prices.

A Dairy Barn is a permanent investment—one that will pay big returns if properly built—make it right. Put in a stable that will not rot out and have to be changed in a few years, which is certain to be the case if you use old-style wood construction. Steel Stalls cost no more than wooden stalls, and will pay for themselves in a very short time in the saving of feed and labor.

The Government Uses BT Equipment

BT Stalls are no experiment. The Dominion Government built three dairy barns last year and put in BT Stalls and Carriers in them all. The different Provincial Governments built some 20 odd dairy barns, and in every case BT Equipment was used. Let us send you our book on how the Government built their dairy barn, and describing the equipment they use.

Fill out the coupon and we will be pleased to send you full information



DON'T WAIT until some dairy inspector gets after you. Make your stables sanitary and healthy and comfortable for your cows. Do it because you wish better conditions—not from compulsion. It will preserve your self-respect and increase your profits.

You Save Money by Buying BT Stalls

The cut shows the cheapest as well as the most sanitary method of watering your cattle. Our manger lifts out of the way and the cement trough—the manger bottom provides a means of watering your stock. This is much more convenient and easier cleaned than the expensive water-bowl.

Fill out the coupon while you are thinking about it

BEATTY BROS.
Fergus, Ontario

We also make Litter Carriers, Hay Carriers, Forks and Slings

BEATTY BROS.

Fergus, 1022 Ontario

Kindly send me free your Book, "How to Build a Dairy Stable," and your Book describing BT Stalls.

How many cows have you?.....
Are you going to remodel or build?

.....

If so, when?.....

Mention if you will need a hay track or

litter carrier.....

.....

Name.....

.....

Post Office.....

.....

Province.....

Clip this out Now lest you Forget



These nested bundles are carried to the job by wagon—



and fit together like this—



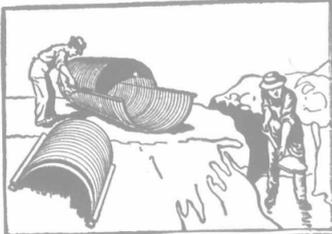
when they are firmly clamped by this three-pronged flange. After that you simply can't break down Pedlar culvert.

A Sample of our Culvert and a Special Book about it to any Farmer or Reeve or Municipal Officer —

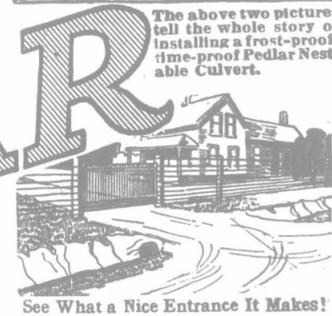
FREE

CULVERT PEDLAR

To make better roads, reduce taxes and cut down statute labor, use Pedlar's Nestable Culvert. In strong, corrugated, non-rusting metal, you build any length needed at the job, excavate just enough to fit it in place, and tamp back the earth. Your culvert is made for years to come. Won't cave in, frost-proof, better than brick, cement or wood. Handy, quick and sure. So good you'll always use it. Holds up traction engines easily. Learn everything about it in our free book. Write for sample free.



The above two pictures tell the whole story of installing a frost-proof, time-proof Pedlar Nestable Culvert.



See What a Nice Entrance It Makes!



Best Culvert for the Fields!

TONCAN METAL

8 ins. to 7 ft. sizes

Look at the pictures on the right. A man sets up Pedlar Culvert, ready to roll into place. Two men place it. This saves time and money. See what a fine bridge it makes at your gate, or see it make a perfect culvert on your farm. This is the best and strongest culvert ever made. Send for sample.

SEND NOW

and get a free sample of Pedlar Corrugated Culvert by return mail.

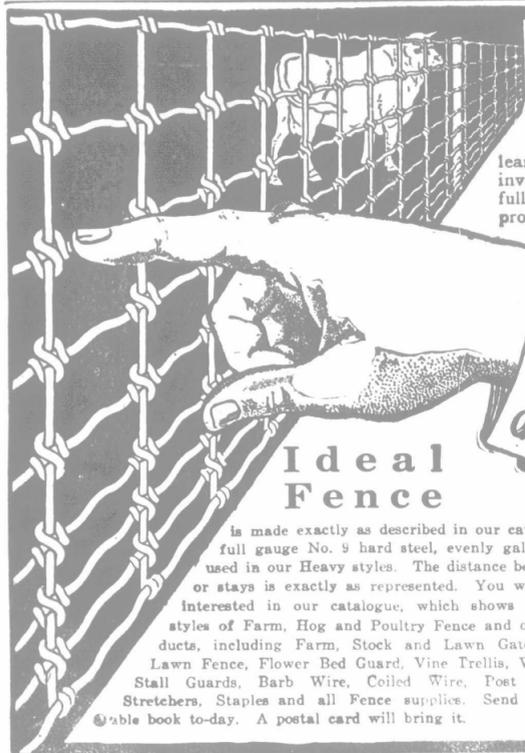
The non-corroding galvanized Toncan metal, and the strength of the sample, will tell you the whole story. Send to our nearest office below. Good culverts make good roads.

- REGINA
- WINNIPEG
- VICTORIA
- 76 Lombard St. 434 Kingston St.
- CALGARY
- Room 7, Crown Block
- ST. JOHN, N.B.
- 42-46 Prince William St.
- PORT ARTHUR
- 45 Cumberland St.
- MONTREAL
- 321-3 Craig St.
- LONDON
- 86 King St.
- TORONTO
- 111-113 Bay St.
- HALIFAX
- 16 Prince St.



- OTTAWA
- 423 Sussex St.
- QUEBEC
- 127 Rue du Pont
- EDMONTON
- 563 Third St. W.
- CHATHAM
- 200 King St. W.
- VANCOUVER
- 108 Alexander St.

WHEN WRITING ASK FOR CULVERT BOOK NO. 250



Ideal Fence Is a Permanent Investment

More miles of Ideal Fence are sold in Canada annually than any other make. This should prove, without a doubt, that the prosperous and successful farmers throughout Canada have learned from experience that "Ideal" Fence offers them the best investment. They know when they buy "Ideal" they are getting full value for their money. They insist on quality, service and protection, and get it in "Ideal". You need not experiment in buying fence, but profit by your neighbor's experience and buy "Ideal."

QUALITY —
First, Last,
Always

This Lock makes

"IDEAL" FENCE

Strongest in Existence

The McGreggor Banwell Fence Co., Ltd.

Walkerville - Ontario

is made exactly as described in our catalogue. Only full gauge No. 9 hard steel, evenly galvanized wire is used in our Heavy styles. The distance between uprights or stays is exactly as represented. You will no doubt be interested in our catalogue, which shows many different styles of Farm, Hog and Poultry Fence and other Ideal products, including Farm, Stock and Lawn Gates, Ornamental Lawn Fence, Flower Bed Guard, Vine Trellis, Window Guards, Stall Guards, Barb Wire, Coiled Wire, Post Hole Diggers, Stretchers, Staples and all Fence supplies. Send for this valuable book to-day. A postal card will bring it.

Sold Over 850,000 Acres in Five Years

WESTERN LAND FOR SALE

In areas to suit purchasers, from 160 acres upwards, situated on or near railways in the

Best Wheat, Oat and Stock - growing Districts of

SASKATCHEWAN AND ALBERTA

450,000 ACRES TO CHOOSE FROM

Prices low. Terms most generous and helpful.

Special Inducements Given Actual Settlers

Our crop payment plan requires no payment on land bought until the purchaser sells his first crop. He can use all his capital for cultivation and improvements.

Write for particulars.

RELIABLE AGENTS WANTED IN EVERY COUNTY.

F. W. HODSON & CO.,
Room 102, Temple Building
Toronto, Ontario, Canada.

Branch Office: North Battleford, Sask.
Also Agents Canadian Pacific lands.

"Good as Gold"

ARE THE POLICIES OF THE

London Life Insurance Company

Head Office: LONDON, CANADA

Past Profit Results are Unexcelled. Present Policy Contracts give most Liberal Guarantees.

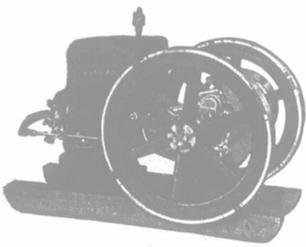
A Purely Canadian Company

"By any test it ranks with the strongest financial institutions on the North American Continent."—*New York Spectator.*

Ask for pamphlet "Reasons Why"

BOYS FOR FARM HELP The managers of Dr. Barnardo's Homes invite applications from farmers, or others, for the boys who are arriving periodically from England to be placed in this country. The young immigrants are mostly between 11 and 13 years of age; all will have passed through a period of training in Dr. Barnardo's English Institutions, and will have been carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained upon application to Mr. Alfred B. Owen, Agent Dr. Barnardo's Homes, 60-62 Peter St., Toronto.

MENTION "FARMER'S ADVOCATE."



Extra Serviceable

These 8, 12 or 16 h.-p. engines are extra strong and rugged, because intended for use under the hard conditions often met with on the farm.

The engine illustrated is one of the famous

"Bull Dog" Gasoline Engines

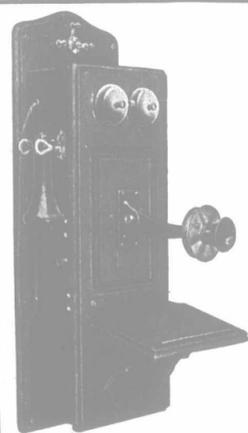
which are constructed especially for outdoor work. Drop a postal to our Canadian agents for our catalogue. It shows the different styles of "BULL DOG" Gasoline Engines, and explains their construction in detail.

Bates & Edmonds Motor Company

Lansing, Michigan

General agents for Canada:

A. R. Williams Machinery Company, Limited
Toronto, Ont. St. John, N. B.



No. 65 Magneto Telephones

This is our standard rural line instrument, of which there are at present several thousand in use in Canada, some of which have been in service more than six years.

You will make no mistake in equipping your lines with CENTURY telephones.

Remember, we will send two instruments on 60 days' trial and prepay the freight, you can't lose on this proposition.

Our prices are right and deliveries prompt.

Your request will bring catalogue and quotations.

Century Telephone Construction Co.
Buffalo, N. Y. Bridgeburg, Ont.

DRAIN TILE

Mr. Farmer, now is the time to make arrangements for putting Tile in that wet or springy field on your farm, but be sure and get the best Tile possible, which is always the cheapest. Large capacity, stock of all sizes on hand. Also dealer in Fence Posts, Ties, Wood, etc.

WRITE TO:

The W. W. SMITH BRICK & TILE WORKS
Shallow Lake, Ont.

\$15 00 and Upwards

We Give a Free Trial



of the Domo Cream Separator, which excels any other separator in the world.

The Domo Separators are of the highest quality, well-built, and durable. They are close skimmers, turn easy, handsomely finished and guaranteed. Prices cut in two.

We gladly send a machine to you on free trial, FREIGHT PREPAID, and if you are not perfectly satisfied, return it to us at our expense. This liberal offer enables you to prove our statements, and that's what we mean, TEST IT AT OUR EXPENSE. We take ALL the risk. Can we offer anything more fair?

Write to day for Circular, which gives full particulars of our machine, trial offer, a few of many testimonials received from users. Price and easy terms of payment. It's free.

DOMO SEPARATOR CO.

BRIGHTON, Ont. ST. HYACINTHE, Que.

MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.

Your Credit is Good

EASY TERMS TO PAY.

Wilson's Gold Medal Scales

100 styles Hay and Stock Scales
Freight paid by Wilson if you order now. Write plainly to:

C. Wilson & Son,

79 Esplanade Street,

Toronto, Can

Free price list



MOVE TO CHILLIWACK

BRITISH COLUMBIA

On the Sunny Pacific slope, where the winter lasts one month, and where the farmer receives larger returns on his investment than anywhere else in Canada. Write for free illustrated booklet.

Sec'y Board of Trade, Chilliwack, B. C.



Canada's Double Track Line

HOMESEEKERS' EXCURSIONS

WESTERN CANADA

Via Chicago

April 2nd, 16th and 30th and every second Tuesday thereafter until Sept. 17th, inclusive.

Winnipeg and return \$34.00

Edmonton and return 42.00

Tickets good for 60 days. Proportionate rates to other points in Manitoba, Saskatchewan and Alberta. Tickets will also be on sale on certain dates via Sarnia and Northern Navigation Company.

Low Rates to Pacific Coast

Tickets on sale daily until April 15th.

Settlers' One-Way Tickets

To Manitoba, Saskatchewan and Alberta, on sale every Tuesday in March and April.

Full particulars and tickets from any Grand Trunk Agent, or write A. E. Duff, District Passenger Agent, Toronto, Ont.

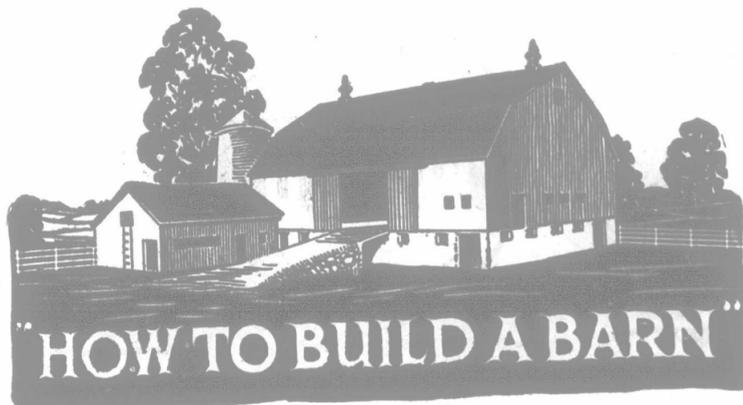
160 Acres of Land for the Settlers

Large areas of rich agricultural lands, convenient to railways, are now available for settlement in Northern Ontario. The soil is rich and productive, and covered with valuable timber.

For full information regarding homestead regulations and special colonization rates to settlers, write:

The Director of Colonization

DEPARTMENT OF AGRICULTURE
TORONTO.



Ever notice the construction of an old barn? It makes you smile to think of the enormous timbers that were used, and you wonder that the barn did not topple over of its own weight. Ever notice the construction of your own barn? Is it up to the modern standard? Could a neighbor put up a barn that would make yours look years behind the times?

How about your new barn? Have you gone into the matter so fully that ten

years from now you will not be sorry you did not use a better form of construction? Will it be lightning proof, fireproof, have sufficient ventilation? How much room will you allow for each horse, cow, or sheep? Where is the best place to keep roots? How will you arrange hay and ensilage chutes so as to allow for easy mixing and feeding?

No matter how large or small your barn requirements are, no matter for what purpose you require a barn, you will find full particulars (with plans, specifications and minute descriptions) given for that barn in the new book, "How to Build a Barn." This book is free for the asking. It is right up to the minute, and in addition to plans and specifications, has many new points about barns that will be full of interest for any farmer. Write for it to-day—a post card with your name and address will do—or fill in coupon and mail it.

THE GALT ART METAL CO., Limited
161-165 STONE ROAD, GALT, ONT.

BRANCHES—General Contractors Supply Co., Halifax, N.S.; Estey & Co., St. John, N.B.; H. Chestnut & Sons, Fredericton, N.B.; J. L. Lachance, Ltd., 253 St. Paul St., Quebec, Que.; Wm. Gray Sons-Campbell, Ltd., 583 St. Paul St., Montreal, Que.; Montague Sash & Door Factory, Montague, P.E.I.; File Hardware Co., Fort William, Ont.; Galt Art Metal Co., Ltd., 839 Henry Ave., Winnipeg, Man.; Gorman, Clancey & Grindley, Ltd., Calgary, Alta.; Gorman, Clancey & Grindley, Ltd., Edmonton, Alta.; D. R. Morrison, 714 Richard St., Vancouver, B.C.

Send me your book on Barns.

L.F.A.

"Scrub" Cream Separators as Unprofitable as "Scrub" Cows



This is the good advice one of the big and long experienced Western cream buying concerns gives to its farm separator patrons, being taken from a letter to one of them:

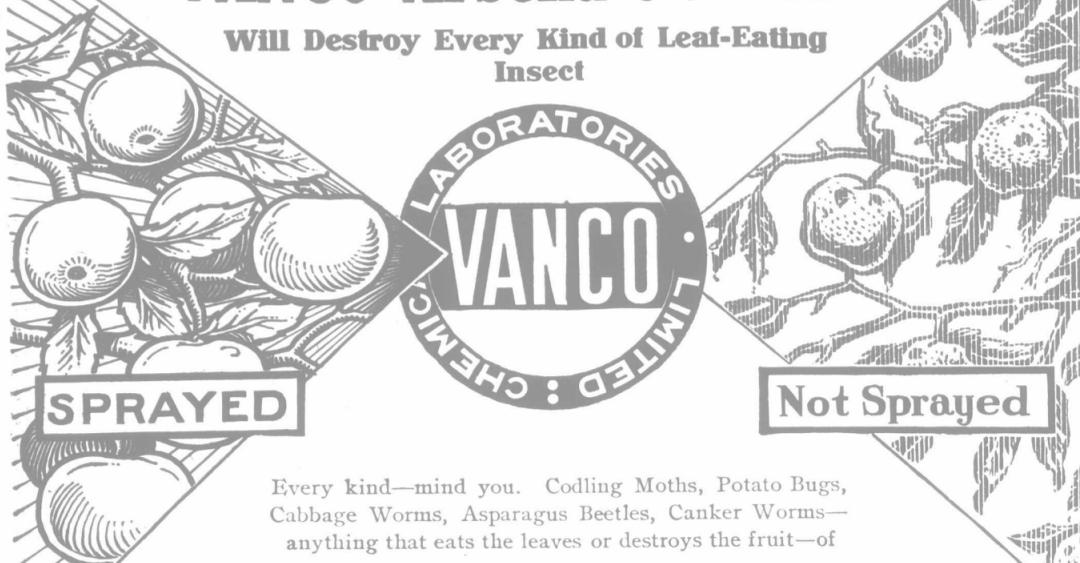
"We believe the DE LAVAL is the best separator made. We feel that anyone wishing to purchase a separator makes a great mistake unless he purchases the best machine on the market. No one can make a success of dairying by continuing to use scrub cows. Neither can he make a success of dairying by using scrub separators."

There couldn't well be a more simple, comprehensive and forceful statement of the whole cream separator proposition than this. It's just plain common sense.

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

"VANCO" Arsenate of Lead

Will Destroy Every Kind of Leaf-Eating Insect



Every kind—mind you. Codling Moths, Potato Bugs, Cabbage Worms, Asparagus Beetles, Canker Worms—anything that eats the leaves or destroys the fruit—of

**APPLE
STRAWBERRY
PEAR
GOOSEBERRY**

**POTATO
TOMATO
CABBAGE
ASPARAGUS**

**PEACH
CHERRY
PLUM
GRAPE**

The Norfolk Fruit Growers Association of Simcoe, Ont.—the largest in Canada—used "VANCO" Arsenate of Lead last spring. The Canadian Government reports show that their fruit was 90% Number 1—which shows that it pays—and pays well—to use only high-grade spray chemicals.

With "VANCO" Arsenate of Lead, there is absolutely no danger of burning the foliage, no matter in what proportions it may be used.

It is made so fine and put together in exactly the right proportions. It does not settle in the spray tank, as does Paris Green. It sticks well, and will stand two or three rains.

It is easily seen in the leaves—thus making it easy to know when plants and trees are completely sprayed.

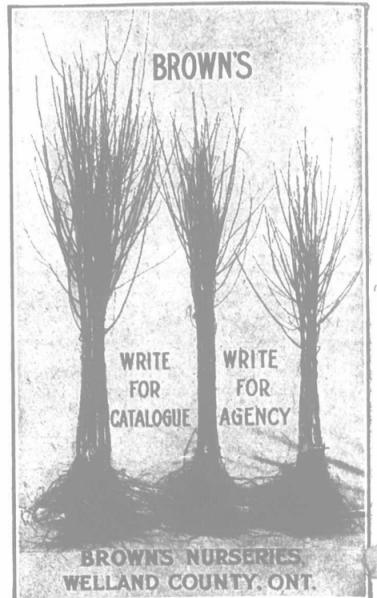
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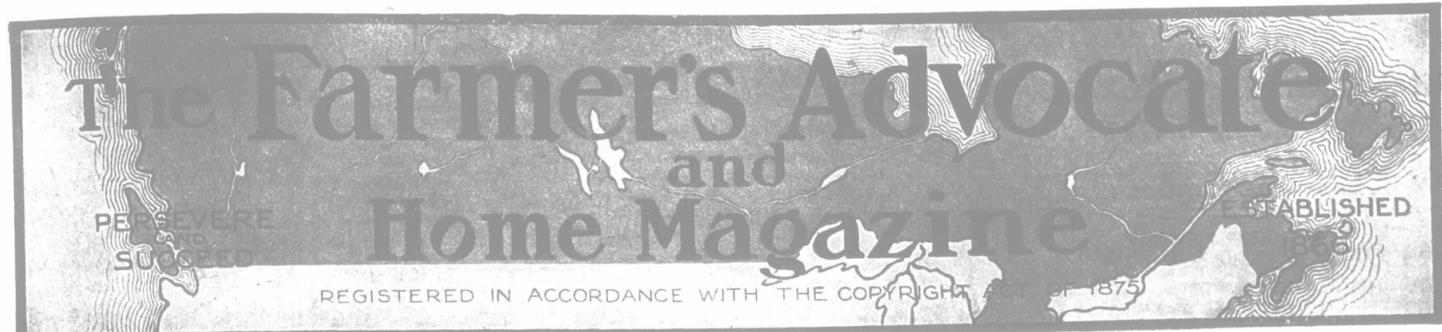
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Vol. XLVII.

LONDON, ONTARIO, APRIL 11, 1912.

No. 1020

EDITORIAL.

The annual spring slaughter of dairy calves has been in full swing for a couple of weeks. What becomes of the carcasses?

Threshing last year's damaged wheat crop, with operations in progress for another seeding, is one of this season's novelties in Alberta.

It is a question whether dairy cows are not spending too much of their time on the railways for the good of the cheese-factory patrons who from time to time own them.

One of these days dairy farmers will undertake raising their own cows, instead of depending on the commission men and railways who now skim off the first cream of the business.

Ontario store hogs and dairy cows have been lately shipped in considerable numbers to the West, where they will convert some of last year's low-grade grain into salable products.

Newspaper reports of the recent opening of the Prince Edward Island Legislature mention chiefly the military display at the function. The flourishing fox industry of the Island was the conspicuous feature of the speech from the throne.

An enterprising Greek restaurant proprietor in an Eastern Canada city has leased a twenty-acre garden farm to grow his own vegetable supplies and broilers, and produce, in part, at least, the eggs required for his tables. A herd of swine will also aid in utilizing the waste by-products of the restaurant.

Some time ago, "The Farmer's Advocate" received a report to the effect that the manager of the Walker Farm, at Walkerville, Ont., was discarding all their cement silos and replacing them with wooden-stave structures. In reply to a letter of inquiry, the company write us that "there is not an atom of truth in the rumor," adding that, if we expect to check all false rumors, we will be kept very busy.

Every farmer may be a conservationist. He may conserve the fertility of his soil by rotation, by drainage, by scrupulous care for his manure, by filling gullied watercourses with brush, by seeding rough land to alfalfa or permanent pasture, or planting it to trees. In these and other ways we all may earn that rich sense of satisfaction which comes from the knowledge that one is not only improving his own opportunities, but at the same time enhancing the value of his legacy to posterity. There is no greater conservation movement than that represented by the conservation of our own farms.

In addition to vast quantities never cut last fall, some 15,000,000 bushels of wheat in the West were reported at a recent date unthreshed, and 20,000,000 bushels threshed still in the hands of the growers. A large portion of this was so damp or filled with snow and ice as likely to be ruined, unless it should speedily reach the terminals for treatment at an early date, and for this existing facilities are not equal. As was the case in the Western States, the wheat-growing game is running its usual course. Even without climatic hazards, depleted soils, weeds and other considerations point unerringly to safer methods.

A Better "West" at Home.

"They're off to the West," remarked a thrifty Ontario farmer at a railroad station the other day, nodding towards a little group of men, each with a new gray telescope. And then he added, reflecting cheerfully upon his own well-ordered homestead, "There's a better Northwest at home if they would only work it."

But, what's the use of talking? People will act the sheep. Twenty years ago, when economic conditions were hard in the East, and an empire of opportunity lay virgin on the Canadian prairie, you could hardly drag renters or hired men out there with horses, and many who did go found their way timidly back East. But once the rush set in, a Western fever spread through people's veins, and now we see thousands upon thousands leaving the finest Province in the world to gamble on wheat farming in the West. Many of them will make money for a time by increment in the value of their investment, but wait till the boom subsides and economic conditions come to their level. Then they will find themselves up against a complex situation, beset with weeds, insects, crop diseases, transportation problems, and waning fertility, without the special adaptability to clover-growing and mixed farming that makes restoration of fertility comparatively easy in the East.

Just now the East, with all its improving opportunities, may not offer quite the same chances to get rich quickly that may be run across by lucky individuals in the West, but sane people know that there are better things in life than getting rich. Anyone prizing the chance to make a sure, comfortable living, while gradually accumulating a competence, following a variegated and interesting system of agriculture which develops brain power and builds character whilst rewarding toil, need look no further than Eastern Canada. Here we have a fine, steady, temperate climate, good water, good social and business advantages, and are situated on the main line of continental intercourse. Far-off fields look green, but, in point of fact, there is no better country under the sun than Eastern Canada in general, and Ontario in particular. Of course, thousands will still continue to leave it in search of fresher pastures elsewhere, and nothing that may be said or written will stop them. Let them go. There will be enough level-headed persons left to hold the heritage the movers so lightly forsake. Meantime, we would say to those who think below the surface, get a title to a piece of good farm land. The time is not far off when you or your heirs, holding a few hundred acres of arable land, will be independently rich. Let the crowd drift. Be wise and hold fast.

An Opportunity for Sheep Men.

In an article entitled, "Better Ways of Handling Our Wool," which appears on another page in this issue, a woollen manufacturer, Alex. Horn, discusses the wool situation in a plain, concise, fair and entirely equitable manner. Mr. Horn bases his article on the statement in the report of the Sheep Commission, that no country in the world handles wool in a worse manner than Canada. This statement is quite concurred in by Mr. Horn, and really it is not a very enviable reputation for our wool-growers and dealers. All sheep-breeders are not open to so severe criticism, but as is the case in everything, those who are endeavoring to keep their wool clean and well sorted must suffer because of the

delinquency of their confreres, because dealers pay a flat rate on wool, expecting the slightly-reduced price on the good wool to pay for the loss on that of poorer quality. Here is where dealers are to blame. To stimulate the production of wool of high quality, let all dealers make a substantial difference between the prices of good or sorted wool and dirty, nondescript, low-grade stuff. This would be a step in the right direction, and if in any district a manufacturer offers an increased price, it would be a wise move on the part of the grower to sell to him, regardless of dealers, and save middlemen's commissions.

Much of the responsibility in the production of a good grade wool is on the growers. There is, as Mr. Horn suggests, a chance for it to become practically ruined while growing, as well as in the handling of the clip. No valid excuse for fleeces matted with burrs can be given. All such rubbish should be carefully cut. Care should be taken in keeping pens clean and in feeding, to see that dirt is not incorporated with the wool. Clipping should be done on a clean floor, and the fleeces carefully rolled and stored in a clean place until delivered at the dealer's. There is little use of washing the sheep and submitting them to the same dirty conditions as obtained previous to the washing for a length of time, which cannot but make them practically as dirty as ever.

There is no doubt but that both the growers and the dealers are somewhat to blame, and the remedy seems to be in bringing them together, so that some better understanding may exist between them; in fact, co-operation seems to be the remedy. This is practiced with success in handling the wool of other countries, and why not try it here? Let the wool be sorted and graded, and let those in charge of the sorting or grading depots take it upon themselves to educate growers in caring for their wool, giving them a clear idea of what class of wool to produce and how to do it; and if the system is not exclusively co-operative, let them pay a sufficient increase in price to pay the growers to take special care to keep their wool clean and free from foreign substances. Keep up the agitation until better conditions result and the sheep business takes the prominent position that its importance warrants.

The Farmer's Cash.

Before the rush of another seeding begins, "Farmer's Advocate" readers will be sandwiching articles on spring cultivation with those of Peter McArthur on the inwardness of the Canadian banking system. At a successful dispersal the other day the fluent auctioneer jocularly reminded the 400 or 500 men before him that funds were safer in the skin of a good dairy cow than in the Farmer's Bank, and he proceeded to knock down a few more promising heifers at \$150 each. And, by the way, it is reassuring to note that buyers were whipping out their little blank books and filling out checks to settle their purchases. This looks better than the old-time "approved joint promissory notes, payable 12 months after date." There has been a tolerably well-founded suspicion that the man whose favorite pastime was in spending three or four weeks of a given year attending credit sales and cluttering up his premises with implements and stock of unknown quantities that he did not need, but for which an inevitable day of reckoning drew on, was not working in his own interests, however it might be with the gentlemanly auctioneer or the note-holders. Sales have their proper and useful

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THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL
IN THE DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

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

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
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LONDON, CANADA.

place, but things that we do not need are seldom cheap at any price. But to go back to Peter McArthur and the farmer's checks, recent years have brought about some remarkable changes in the attitude of banks to rural and village communities. It is not long since one would never dream of looking for a chartered bank except in the city or county town; but now nearly every sizeable business hamlet in the midst of a thriving farming community has its local branch, where checks for cattle, hogs, cheese, grain, and what not, are cashed, and farmers keep an account, out of which they pay for things by check. Time was when few men ventured into the seldom-seen presence of the austere Bank Manager, but now he gets down and out for business like other men, and mixes up more with the people whose funds he uses or transmits to headquarters, to be disposed of as Peter McArthur has been detailing. It is no uncommon circumstance to see a couple of bankers at the local cheese factory annual rendezvous, offering a variety of inducements for the privilege of carrying the account of the concern. Who would have dreamed of that even twenty years ago! While it is not supposed that they are simply out for an afternoon's recreation, or for the more especial benefit of the patrons, it indicates, at least, a growing appreciation of the farmer's expanding business, and reminds us that the days are gone, likely forever, when at long intervals, men in heavy frieze overcoats, buttoned up to their ears, went on long jaunts to county points, with a big wad of bills in one pocket and a revolver in the other, while the recipient of a share of the aforesaid wad secreted it in the old family Bible or in a yarn sock under his pillow. But now we are in the days of steel safes and vaults, dynamite, and promoters, and still uneasy lies the head that gets the gold. With the vast increase in the volume and complexity of business, the wonder is that things go on as well as they do, and it is re-assuring to realize that faith in mankind is not dying out, and that the forces of publicity and equity are making for a fairer divide of the world's goods as between the man who toils and the financier.

"On The Side."

By Peter McArthur.

(With apologies to many authors.)

"This is a tale of terror,
Told when the twilight falls,
And the monkeys walk together,
Holding each other's tails."

—Kipling.

Sh-h-h! We are now about to enter the Fairyland of High Finance, where bank managers make "millions on the side." The entrance looks a good deal like the front door of a big bank; but don't be afraid. If they get after us we shall run. Come on.

Ah! It doesn't look so very different from the everyday world we have left behind. The men we see about us are the same men we see every day on the streets of Montreal and Toronto. But you must be careful, if one of them speaks to you, to address him as "Senator" or "Sir," for most of the men who do business here either have titles, or are intending to buy them before long. Hark! Listen to the singing:

"We are shifters,
We are lifters,

Through this wicked world we roam,
Easing one another's burdens,
Kinder coves were never heard on
Charity begins at home."

That is the Bankers' Association holding one of its High Jinks. They are probably superintending the cutting of a melon in one of the Big Businesses they control or holding a wake over the remains of a bank that once did business as a rival. Aren't they the gay dogs? But let us proceed.

What is that? You would like to see the melon they are cutting. Oh, very well. But you will be disappointed. The melon they are cutting never grew on a vine. It was manufactured at a meeting of the directors of the P. D. Q. Railway. The melon consists of the little blocks of stock they are handing round. Now they will raise rates so as to be able to pay good dividends on all that new stock, and then they will all be richer and happier than ever. Come on.

Now let us stop and look at this splendid fountain, with the showers of beautiful water. It is here that they water the stock. Now let us listen to the beautiful song that those happy, prosperous-looking men who are dipping out the water are singing:

"Avast, belay, yo ho, heave to,
A-pirating we go,
And if we're parted by a shot
We're sure to meet below!

"Yo ho, yo ho, the frisky plank,
You walks along it so,
Till it goes down and you goes down
To Davy Jones below."

These pleasant-looking gentlemen who are singing and dipping water from this inexhaustible fountain are the promoters of mergers and combines. Yes, they are really, truly pirates, though they do not look it. They are the only kind of pirates we have left. Now, look at those scared-looking men who are walking the plank and disappearing forever. Don't they look silly? They are the men who are trying to do business on a small scale. They have to be put out of the way before the mergers can be successful. Doesn't it make you laugh to see them sprawl and squirm as they are being thrown into the water? But who are these honest, homely-looking men who are coming up to the fountain? They are going to sing, and perhaps, if we listen, we will find out:

Honest Men: Innocent, trusting investors are we.
Promoters: We hope so.
Honest Men: Very choice fruit on the bunco-game tree.
Promoters: We hope so.
Honest Men: We hope that you will not consider us rash,
But we're wanting to purchase some water for cash.
Promoters: We hope so.

Now look at them handing over their hard-earned money for the water that is being dipped for them by the pirates. Isn't it a beautiful sight? All that water will turn into pure gold when they get home with it. It may sound foolish, but who are you that you should think there is anything wrong about it? Great is water! Great are the promoters! and still greater are the fools who buy the water, and greatest of all the voters who allow such things to go on.

Do you see those men standing about in little groups? They are all busy making "Gentlemen's Agreements." Ordinary agreements that

are written on paper are liable to make trouble if they should be dragged into court. Let us listen to what some of them are saying:

"You and I really control all the business in our line of goods."

"We do."

"Then, instead of competing, why shouldn't we divide up the country between us?"

"Good idea."

"Then, you confine your sales to the Western Provinces, and I will confine mine to the Eastern. Is it a go?"

"It is."

"At the same time, we might as well put down prices ten per cent. for the producers of raw materials, and raise them ten per cent. for the consumers."

"That's a good idea, too."

"Then, it is a bargain. Shake."

They shake, and a Gentlemen's Agreement goes into operation at once. Now listen to these other men:

"Through friendly directors who owe their election to you, you control the Aviator's Bank, don't you?"

"I do, and in the same way you control the workings of the Submarine Bank."

"Very well. I need a million dollars of ready money to enable me to put through the Nursing Bottle Merger. It wouldn't look well for me to get it from my own bank, so if you will see that I can get it from your bank, I will see to it that you get the million you need to put you through the Baby Carriage Merger."

Then they shake, and Big Business booms. But what is happening now? Everything is getting dark and mysterious.

"By the pricking of my thumbs
Something wicked this way comes."

Ah, I understand. A politician is now making his rounds and collecting campaign funds. He needs oodles and oodles of money with which to educate the voters. And he will not spend it on printing bills, either. He knows that an ordinary man can get a whole political education by looking fondly at a five-dollar bill that has been slipped to him in a corner, with a few well-chosen words. And the people who are here contribute to his fund gladly, because they want to have the people educated properly. Yes, indeed. And, moreover, they want their friend the politician to see to it that no laws are passed that will make trouble in their fairland. They do not want to be "fobbed by old Father Antic, the law." Besides, they want special privileges that will enable them to fatten on the resources of the country, and the politician and his party can give them all those good things. No wonder they give their money gladly. If it were not for politicians who can be placated in this way, the Fairyland of High Finance might be reformed out of existence. Wouldn't that be dreadful?

Now let us look at these men who are writing so busily, and pausing from time to time to shout, "Great is Diana of the Ephesians." No, that is not what they are shouting. Let us listen again. Now I have it right. They are shouting, "Great is the Canadian Banking system." And just listen to the people who are outside of the Fairyland cheering. They believe every word of it. There, there, now. You mustn't laugh, or they will get after us. I believe they are going to get after us. Let us run.

Now we are back in the common workaday world, where people have to work like slaves for every dollar they get. Look at those sweating, laboring men and toil-bent farmers. They do not look gay and well-nourished and prosperous like the people in our Fairyland. And yet it is their hard-earned money that is used to make Fairyland so delightful. It is their money that the men who get "millions on the side" really get. And now look at them as they stand up and cheer when they hear the cry, "Great is our Canadian Banking System." Did you ever hear of anything so pathetically droll? The words of the editors seem to cheer them wonderfully at their work. Doesn't it remind you of the rhyme:

"The toad beneath the harrow knows
Exactly where each tooth-point goes
The butterfly beside the road,
Preaches contentment to that toad."

The Teacher vs. The Horse Groom.

At the annual convention of the Manitoba Trustees' Association, Dean Davenport, of Illinois, told an interesting story to show how some trustees treat the rural-school teacher in the matter of salary. The tale runs somewhat after this fashion:

A number of farmers in a community decided to purchase a stallion that would improve the horse supply of the neighborhood. After some thought and investigation, a big sire of proper type and approved breeding was purchased for

\$3,500. After the deal was completed, one of the parties to the bargain suggested that with such a horse they must have a groom that understood handling him. It was therefore agreed to engage a first-class man, and, after some search, a satisfactory groom was secured, at \$75 a month and board.

Some of these same progressive farmers were members of the trustee board of the rural school to which children of the neighborhood went for instruction. They had a teacher engaged at \$30 a month, she to pay her board.

Model School Training.

I have read with much interest the excellent editorial article in your issue of February 8th on "The Training of Rural School Teachers," at the conclusion of which you invite discussion of the question whether it is better to abolish the county Model Schools or restore them under the County Boards, with the improvements that 25 years' experience of them has suggested; and, as the only article in reply I have seen was written by a teacher, I will try to contribute a few thoughts on the subject from the standpoint of a farmer.

While I believe the Ontario Government has made an honest effort to improve the educational standing of our rural communities, there are some things which I think it has overlooked, a few of which may be mentioned: First, the abnormal condition of the labor market and the great demand for bookkeepers, stenographers, etc., for which a comparatively small amount of time and money is required to prepare. Also, the great exodus to the West which is taking many of our best teachers, as well as our clergymen, professional men and farmers.

It has been said that if the trustees in Ontario schools will pay the price, the teachers would not go West; but farmers living on the high-priced worn land of Ontario cannot be expected to successfully compete with tillers of the virgin soil of the West, much of which is given to them practically free by the Federal Government. Apart from the question of salary, there seems to be a great attraction for young people in a young country, and when a teacher makes up her mind to "go West," the result is as bad for the teaching profession as if they had concluded to get married. There is no stopping them in either case.

By observing the course of study in public schools and the course required to be taken by candidates for Normal entrance, it will be seen that the public school teachers are required to learn a great deal that they will not have time or opportunity, nor will they be required to teach the pupils in a one-room school, divided, it may be, into half a dozen classes.

It is a fact easily understood that it is more expensive for children living in the country to secure the education necessary for Normal entrance standing than for children living in the city or town. Legislation raising the standard required by public-school teachers above what is absolutely necessary is therefore discriminating in favor of town-raised teachers, as against country-raised teachers, and in favor of rich men's children, as against poor men's children.

Having been a public-school trustee for fourteen years, I have had a good opportunity to observe the results of legislation regarding public schools during recent years, and the programme in this county is about as follows:

Near the close of a school term, Boards of Trustees advertise for teachers. There are about half the number of qualified teachers required; these are soon engaged. Next come the teachers with "Limited" certificates, or "40-per-cent." teachers, as they are called, who have failed to secure Normal-entrance standing, but who have made a mark of 40 per cent. on the examination, and have attended a Model School. After the supply of these is exhausted, teachers whose certificates have expired get them extended, and the opening of the next school term finds a number of schools still vacant. From this time on it is a case of the best available to fill up, and about two weeks after the beginning of the term, and after a lot of red tape has been gone through by the Education Department, the Inspector and the Trustees, we find the most of the schools supplied with teachers varying from second-class Normal-trained to those having no qualification except a year or two at High School. But, with the exception of a few subjects, such as nature study, physiology and drawing, the average of the teachers in our county is very little, if any better than twenty years ago.

There is one paragraph in Prof. McCready's letter, in your issue of March 7th, 1912, which gives a wrong impression, when he assumes that, because 225 teachers took the course in Elemen-

tary Agriculture at Guelph, those teachers are teaching in rural schools in Ontario. I think, if he inquires closely, he will find that many of them are in the Western Provinces, and many who remained in Ontario are teaching in village schools; and this will also apply to all Normal-trained teachers, so that, after all, rural Ontario is not getting the benefit of our "advanced school system."

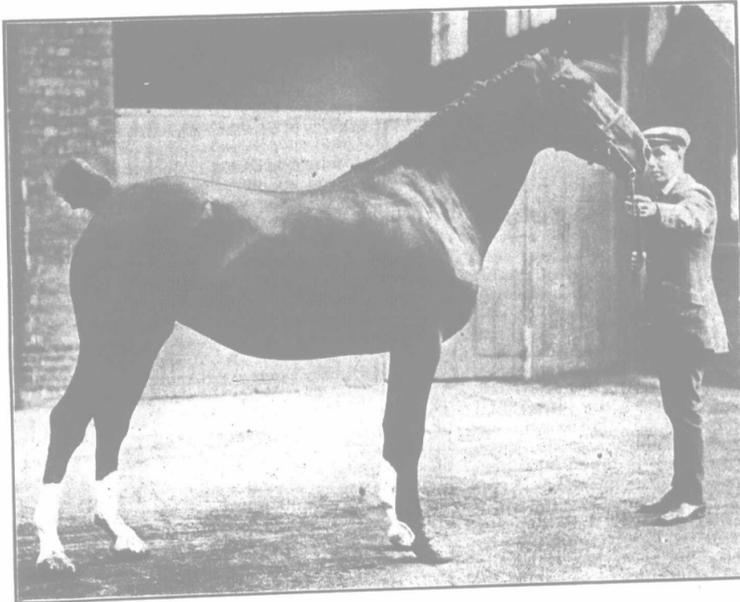
In view of these facts, I would say, in answer to your question, that for a few years, at least, it would be a wise move on the part of the Ontario Government to eliminate all unnecessary frills in the training of rural-school teachers, restore the County Model Schools, and do it quickly, or some person else will. The Model School at Athens, in this County, which was abolished a few years ago, was reopened last year, largely owing to the efforts of A. E. Donovan, M. L. A., and, as a result, twenty-three young teachers received Model training during the last term.

On reading Prof. McCready's letter, which deals chiefly with Agricultural Education, I am reminded of a remark made by Prof. Roberts, of Cornell University, Ithaca, N. Y., at a Dairymen's Convention, when, in speaking of the cultivation of the corn crop, he said: "The way to grow corn is to grow CORN." The way to teach agriculture is to teach agriculture. It is too important and complex a subject to be tacked on to any High or Public School curriculum. All that has been done by our Government in the way of agricultural education, through the medium of Farmers' Institutes, County Representatives, Optional Classes in High Schools, School Gardens, etc., is only what we farmers call cobbling or

June, however, it became pronounced and continuous, closing with November and December prices at the highest level of the twelvemonth.

The following statement is of interest: "The year was one of general trade prosperity and industrial expansion in Canada. The heavy immigration movement, the very pronounced activity in railway construction and other building operations, the enlarged outputs of manufacturing establishments, and the increased volume of trade, foreign and domestic—in which fields the returns of the year uniformly indicated a marked advance over those of 1910—all united in causing an exceptionally keen demand for materials, with resultant enhancement in prices. In foodstuffs, at the same time, the unfavorable crop reports of the summer and autumn months worked similar tendencies. Grains advanced sharply, and though there was a decline in live animals and meats, this was attributed to feed shortage, and cannot be regarded as an alleviation in fundamental conditions. Moreover, imported foods, including sugar, were on decidedly high levels. The financial tone was favorable, and the gold production the largest recorded. From a cost-of-living standpoint, therefore, notwithstanding declines in cotton, rubber, and a few important articles, the year must be regarded as having, through this double influence of crop shortage and accelerated consumption, distinctly intensified the situation, which had previously given rise to such widespread comment, though industrially and commercially it constitutes, on the whole, a very favorable record."

Other considerations contributing to the foregoing result should be borne in mind. The figures of the last Canadian Census have shown the abnormal growth of the cities and towns, at the expense of the rural districts and industries, so that the two are out of balance. Farming is handicapped because it is not sufficiently manned, and this adversely affects the output of food products. If people would all live in town, they must pay the price. Then, again, instead of pursuing reliable methods of actual farming, there has been, during recent years, too general a disposition, particularly in the Western Provinces, to acquire wealth speculatively by securing and holding larger tracts of land for advances in price, through the advent of railways, new towns and sudden inflows of settlement. This has affected the country indirectly, at least, East as well as West, diverting attention from the needs of farming as its conditions change.



Lady Beckingham.
Chestnut Hackney mare, five years old. First in class over 15 hands 2 inches, and champion female, London Hackney Show, March, 1912. Sire Beckingham Squire.

tinkering with the subject. If this Province can support one or more High Schools in every county for the training of professional or business men, it can support an institution, equally well equipped, in every group of counties, as may be necessary, for the training of our farmers. If, from the profits from the manufacture and sale of one product of the soil, and that of very doubtful benefit as a luxury, one man can spend hundreds of thousands of dollars for agricultural education, surely the people of this Province can erect and maintain such schools as will be necessary for the instruction of the youth of this Province in the science of agriculture.
W. JELLY.
Leeds Co., Ont.

The Rise of Prices.

A special report, issued by the Department of Labor, at Ottawa, gives particulars of the price fluctuations of some 261 articles selected as representative of the entire field of Canadian production and consumption. The list is subdivided into groups, including grains and fodder, animals and meats, dairy products, fish, fruits and vegetables, miscellaneous groceries, textiles, hides and tables, miscellaneous building material, paints, leather, metals and implements, fuel and lighting, lumber, miscellaneous building materials, furs, etc. The general conclusion arrived at is that wholesale prices in Canada during 1911 reached a high-level probably than in any previous year with the present generation; certainly the highest since 1884, and possibly since 1873. The upward trend did not develop with strength during the first six months of the year; from the middle of

HORSES.

Now is the time to make free use of the curry-comb and brush.

Clean the mud from the horse's limbs during seeding operations, and prevent scratches and mud fever.

Never confuse the horse by hitting him from behind with the whip and at the same time jerking him severely with the lines. He doesn't know what is wished of him, and in the excitement is likely to do damage which under proper treatment he would not do.

Close, hot days come in seeding. Horses are soft and perspire easily. Collars become gummed up and dirty if not regularly and thoroughly cleaned. Never put a collar in the harness-room or on the harness-pin until it is scrupulously free from all dirty material accumulated during the day's work.

Veterinary Prescriptions for Farm Use.

BLISTERS.

Blisters are irritant applications, used for the purpose of creating what is known as "counter-irritation." They cause a superficial irritation, the results of which may have an effect upon organs more or less deep-seated, or they may be applied for the purpose of stimulating the actions of the absorbents, and thus tend to reduce enlargements of different kinds. In the early ages it was thought that two inflammations could not exist at the same time; hence, in case of inflammation of an internal organ, for instance, inflammation of the lungs, it was claimed that if inflammation of the skin covering the lung cavity were created, the internal inflammation must of necessity be allayed, hence the name "counter-irritation."

Counter-irritation is practiced at present with the idea of producing the same results, but the theory of action is different. The blood vessels of inflamed areas are always congested; hence, if artificial inflammation be set up, the blood vessels of the skin become engorged, and this has a tendency to reduce the engorgement of the vessels, and hence reduce inflammatory action of deep-seated organs in the same region. The effects of a blister probably depend as much upon its application as upon the ingredients it contains. If simply applied to a surface, the effects are slight, but if applied with smart friction (well rubbed in) they are well marked. Blisters may be in the form of a paste or liquid. The active principle of the ordinary paste blister is either biniodide of mercury or cantharides. Many practitioners prefer a combination of the two. When either is used, it is mixed with lard, lanolin or vaseline, and the strength of the mixture will depend greatly upon the action desired, being one part of the drug to four, six or eight of the latter. Where well marked counter-irritation or blistering is desired, the following gives good results:

Biniodide of mercury, 2 drams.

Powdered cantharides, 2 drams.

Lard or vaseline, 2 ounces—(mix).

This, of course, is one to four, and it may be made stronger or weaker, if desired. The seat of application should be clipped, and the animal tied, or some arrangement made whereby he is unable to bite or lick the parts. The blister causes an irritation, and if the patient be at liberty he will lick or bite the parts, and thereby get some of the blister on lips, tongue, or may bite sufficiently hard to scarily the skin of the blistered parts. The blister should be applied a little at a time, with smart friction, then a little more, etc., until 15 to 20 minutes have been spent in the application. In about twenty-four hours a little more blister is rubbed well in, and in about twenty-four hours longer sweet oil or some other non-irritant lubricant should be applied. The patient's head should now be let down, and if he can be provided with a box stall, it is advisable. The blistered parts should be oiled every day until the scale raises off, which is generally in ten days to two weeks, when, if necessary, another blister can be applied, as at first, and, where further blistering is desired, it should be done once in every four weeks. While blistering in this manner causes the hair to fall out, it does not destroy the hair follicles and leave a permanent scar or bare spot. Blemishes of this nature are often noticed after the application of many of the proprietary medicines which are advertised as a "sure cure" for nearly all the diseases to which the bones, muscles, tendons, etc., of a horse are liable. In cases where a paste blister is used it is necessary to give the patient rest for at least two days, and wise to continue the rest for at least a few days longer, until the acute, inflammatory action has become allayed.

In cases where it is necessary to continue the work or drive the patient during and immediately following the application of a blister, a liquid preparation is generally used. This avoids the necessity of tying the patient so that he cannot reach the parts with his mouth, as, there being practically none of the irritant on the hair or surface of the skin, he cannot irritate, lips, etc., with it. Then, again, the ordinary liquid blister is not usually of as great strength as the paste blister; it does not cause such acute irritation, and usually requires repeated application to cause well-marked skin irritation. We, of course, refer to liquid blisters prescribed by those vendors in such matters, not to some of the proprietary medicines advertised, such as the different caustic balsams, etc., which quickly produce more marked superficial irritation than a safe paste blister. Liquid blisters are often known as "sweat blis-

ters," from the supposition that the exudate they usually cause, and the results that follow are due to a sweating of the parts. Two drams of either cantharides or biniodide of mercury, mixed with four ounces of alcohol, makes a good liquid blister. Of course, the mixture can be made either weaker or stronger by using less or more of the drug, in proportion to the amount of alcohol. The usual method of using preparation of this kind is to apply a little with smart friction once daily until the parts become roughened, then apply oil daily until they become smooth again; then apply the blister again, as at first. The application of a blister in any form, with the idea of curing some bone disease, as bone spavin, ringbone, splint, etc., is from the assumption that the counter-irritation caused by the blister increases the deep-seated inflammation and hastens its course to completion. The course of bone diseases of joints, such as bone spavin and ringbone, usually destroys the articular cartilage, covering some of the bones of the joint, and a joining together of said bones by bony deposits. Counter-irritation, such as firing, blistering, etc., hastens the process (called ankylosis), and when it is completed irritation ceases and pain ceases, and if the bones involved are not those of a joint, or part of a joint, in which motion is considerable, lameness will disappear, and whether or not a more or less marked stiffness will remain depends upon the extent of said motion.

"WHIP."

(To be continued.)

What Constitutes the Standard and Thoroughbred Horse.

Will you kindly give me through the columns of your paper the difference between Standard-bred and Thoroughbred horses. I have a very clear description of the Thoroughbred in Sanders' work on live stock, but no information as to what Standard-bred means to the uninitiated.

E. D. L.

The Standard-bred and Thoroughbred are two distinct breeds of horses, although considerable Thoroughbred blood was used in the early days in forming the breed now known as the Standard-bred. The Thoroughbred horse originated in England, where horse-raising was introduced by James I., who imported an Arabian stallion. All writers of the history of the Thoroughbred refer to the three horses, The Godolphin Barb, The Byerly Turk, and The Darley Arabian, which were extensively used in the founding of the breed. The Godolphin Barb was brought to England in 1728, having been foaled in Barbary in 1724. The Byerly Turk was used in England about 1689 or 1690, and The Darley Arabian was purchased in Syria for use in England in 1706. The blood of these three horses had a very marked effect in establishing the breed known to-day as the Thoroughbred. Following these came three English-bred horses: Herod, in 1758; Matchem, in 1748-1781, and Eclipse, in 1764. This latter horse won no less than eleven King's Plates.

It is well known that the horse extensively used in England previous to the importation of the Barb and Arabian sires was a heavy type of animal, suited to carrying armored soldiers and hauling war chariots. With the change in the war equipment of the country, lighter horses were needed. Gradually armor was discarded and chariots done away with. Racing became popular, and speed was necessary in the lighter horses. This was accomplished by using the Barb and Arabian sires on the lighter native mares of the country, keeping the most promising horse colts for use at the stud, and finally the breed through the blending of Arabian, Barb and Turkish blood with the light English mares, became established. This combination of blood gave the Thoroughbred speed, stamina and powers of endurance unequalled by any other class of horse. The Thoroughbred is the fastest horse of them all, but his records are all made at a running gait and under the saddle.

The Standard-bred horse is a trotter. Like the history of all breeds of live stock, that of trotting horses is very old, yet the origin is somewhat obscure. Trotters were common in certain counties in England at the beginning of the nineteenth century. It is, however, the American type of trotter that we are most interested in. Running horses were imported into the United States from England in the seventeenth century. Two stallions were, however, largely responsible for the origin of trotting blood in the United States, and these were Messenger, a Thoroughbred tracing to Darley Arabian, foaled in 1780, and brought to America eight years later. Messenger was the sire of Mambrino, who sired Abdallah, a famous breeder of trotters. Bellfounder, the other pillar of the foundation, was a trotting horse, foaled in 1815, and imported in 1822. He was what was then known as a Norfolk trotter. So began the history of the American trotter. As time went on, various families of trotters came into prominence, owing to the remarkable work at the stud and speed performance of cer-

tain well-known sires of the time. Thus was established such families as the Hambletonian, Mambrino, Morgan, Hal Pilot, and several others.

In 1876, the National Association of Trotting-horse Breeders was organized, and about six years later the constitution was amended so as to define a Standard-bred Trotter. The rules of registry in the American Association are:

1. The progeny of a registered Standard trotting horse and a registered Standard trotting mare.

2. A stallion sired by a registered Standard trotting horse, provided his dam and grandam were sired by registered Standard trotting horses and he himself has a trotting record of 2.30, and is the sire of three trotters with records of 2.30 from different mares.

3. A mare whose sire is a registered Standard trotting horse, and whose dam and grandam were sired by registered Standard trotting horses, provided she herself has a trotting record of 2.30, or is the dam of one trotter with a record of 2.30.

4. A mare sired by a registered Standard trotting horse, provided she is the dam of two trotters with records of 2.30.

5. A mare sired by a registered Standard trotting horse, provided her first, second and third dams are each sired by a registered Standard trotting horse.

The pacing standard is identical with that of the trotting standard, only that the speed required is 2.25 throughout, and the progeny of a registered Standard pacing horse, out of a registered Standard pacing mare, or of a registered Standard pacing horse out of a registered Standard trotting mare are eligible for registration.

The rules for registry of Thoroughbreds in Canada were published in connection with our report of the annual meeting of the Canadian Thoroughbred Horse Society, in our issue of February 8th, 1912.

The two breeds are essentially different in type, as one is bred for running purposes, and the other for trotting purposes.

Tight Overdraw Reining.

Some objections to the overdraw check-rein, especially when it is drawn too tight, are cited by M. W. Harper, in his new book, "The Training and Breaking of Horses." Among others, the most noticeable are that it holds the horse's head in such a position that he is unable to see the ground immediately in front of him, so that he is very likely to stumble on obstacles in the road. Further, it holds the animal's head in such a direction that he cannot pull efficiently. This is particularly true in ascending a steep grade. The horse is unable to lower his head, and hence can put little power into the collar. The horse that is stalled when thus reined can often pull the load if unreined, or if the driver will ride him, thus bringing forward the center of gravity and enabling the animal to put more pressure into the collar. The overdraw check-rein is also very hard on the horse's back and front limbs in descending a grade. When drawn too tight, it holds the head and neck in such an unnatural position that they soon become numbed, and the horse is seen to toss his head from side to side in search of relief.

LIVE STOCK.

The Conflict with Tuberculosis.

It has been intimated that the United States farmers sustain an economic loss of \$14,000,000 per year because of bovine tuberculosis, and there is little reason to suppose that in Canada the loss is very much less, proportionately. What can be done to abate the evil? Through the Canadian Conservation Commission, attention is again called to the almost general need for better-lighted and better-ventilated stables. In the second place, the tuberculin test should come into universal use. This should be followed by the segregation of animals reacting from the test, and if the cases are advanced, their slaughter may be advisable. And thirdly, a comprehensive system of meat inspection for the home market is an immediate necessity. What is chiefly required is a little more common sense, along with additional window glass, and some simple system of bringing fresh air into the stables. Concerning the tuberculin test, it is an almost unerring indication of the presence of tuberculosis, if it is carefully and skillfully used. As an illustration of its accuracy, the results obtained by the United States Bureau of Animal Industries may be cited. During 15 years, some 400,000 cattle were tuberculin tested. In this number, there were 37,000 reactions—that is, diseased cattle—the large majority of which were dairy cattle. In all, 24,784 of these animals were slaughtered, and in 98.39 per cent. of them were found lesions of tuberculosis. A number of the States report even higher percentages. The tuberculin test is, therefore, an almost unerring indication of the presence of the disease; it is inexpensive, and it is harmless.

Better Ways of Handling Our Wool.

Editor "The Farmer's Advocate":

The Commissioners appointed to inquire into the sheep-raising industry in Canada have brought in a report in which they did not hesitate to state the naked truth, regardless of whether it would prove popular or otherwise.

The paragraph upon which I wish to make a few remarks reads as follows: "From shearing to marketing, no country in the world handles wool in a worse manner than Canada. We do not know of any country where it is handled in such an unsatisfactory way and delivered in such bad condition."

This is exactly what we have been telling our customers for years, only in modified language, as we imagine such a plain statement coming from a wool dealer or manufacturer would be resented by the wool-grower.

Our firm has been manufacturing Canadian wool since the year 1870. Our average daily consumption is now 3,800 pounds of wool, at least 95 per cent. being Canadian. I mention this in order that your readers may understand the situation and our relation to the subject under discussion. The Commissioners, in their report, stated from hearing to marketing the wool is badly handled. As a matter of fact, the great bulk of Canadian wool gathers dirt from the time the fleece begins to grow: burrs in the summer, chaff in the fall, and hay and pea straw during the winter months. Then, as if this were not sufficient to reduce the value of the wool to the lowest point, the shearers too often make it still worse when they clip the sheep on a barn floor or in a straw pen, or under the evergreen trees, where they proceed to roll up the wool with whatever foreign substance adheres to it, without ever a thought of the tedious work they are entailing upon the wool sorter, or the fact that the wool thus damaged must necessarily be unfit for goods for which it might otherwise be used.

In some cases the wool-growers and the shearers may not be aware that burrs and chaff and other dirt is detrimental to the value of wool, but one can scarcely imagine that there is anyone living in Ontario who does not know better.

I overheard a conversation between a wool-grower and a merchant last week. The merchant remarked, upon opening the bundle, that there was chaff in the wool. The reply was that, last year, although his wool was clean, he did not receive a cent more for it than his neighbors whose wool was filled with dirt and burrs, so, continued the seller, "I decided I wasn't going to go to any trouble in keeping my sheep clean when my neighbors sold their wool and dirt for the same price." This is not an exceptional instance, by any means. The buyers in Ontario are mostly merchants or grain-buyers, the majority of whom are not familiar with wool, and who buy it as it comes, fine and coarse, clean and dirty, trusting that the good will balance the bad, and it is all bought at the same price. The manufacturer or wholesale wool dealer who buys the wool from the merchant is usually asked to make two bids. One to buy the wool flat (or in bulk), and also to quote prices on the different grades selected.

Owing to the keen competition between manufacturers and wholesale dealers, the wool sold at flat rate brings within one cent, or even one-half cent, per pound of the price of the wool which is bought selected, and the buyer often has cause to regret his bargain, as there may be more inferior wool in the pile than he expected. The manufacturer loses on the deal. The farmer who sold clean wool for less than it was worth is out on the transaction, and the farmer who sold his damaged wool for more than it was worth has the melancholy satisfaction of knowing that he sold inferior produce at the current market price, instead of having a first-class article, which would not have cost him one cent more to produce.

As long as the business of buying and selling wool is continued in this slovenly way, just so long will wool be grown and sold in its present unsatisfactory condition.

Wools from foreign countries are sorted into various grades, not only fine and coarse, but there are many degrees of grades or cross-breeds. A small sample by mail may be sent to represent a certain grade of wool, and a manufacturer depends upon receiving this in a uniform quality, which may be purchased at any time, and one year after another, with little or no variation from the sample.

The Canadian wool varies from the coarse Lincoln and Cotswold wool to the fine Shropshire and Southdown, with many mixtures of cross-breeding; but, notwithstanding this conglomeration of sorts, the fibre of the wool grown in Canada is second to none in the world for strength and lustre. In spite of this natural advantage, however, the Canadian wool-grower, by his careless methods in handling, has been the cause of this natural product having the unenviable distinction of being the worst wool in the world. The largest percentage of Canadian wool is tied

up with binder twine, heavy tags are frequently rolled up inside the fleeces, burdocks matted in the necks, while often the whole fleece is filled with them. There is but a comparatively small per cent. of it absolutely free from chaff, burrs, etc.

The wool-washing in many cases is very imperfectly done. Dipping would be a more suitable word to describe the so-called washing process. We prefer unwashed wool just for this reason, as over 80 per cent. of the fleece-washed wool has to be washed again before being manufactured, owing to the amount of grease and dust which it contains.

After washing the flock, instead of keeping them in a grassy plot until the wool has at least partially dried, they are allowed on the roadway, and, as they love to lie in the dry dust, this adheres to the damp wool, making them like dirty Tim of whom we read in the school books years ago—far worse than they were before. It is customary, also, to delay the shearing for too long a period after the washing. The result is that wool, even if carefully washed, is dirty again before it is shorn.

Tub wool is wool that has been clipped before washing, and is afterwards washed by hand in a tub, trough, creek or pond, as the case may be. Most of the wool shipped from Manitoulin Island is tub-washed, and very burry. The greatest objection manufacturers have to clean, tub-washed wool is that it is so mixed together that it cannot be sorted into the different grades into which the fleeces are divided by the wool-sorter.

BRITISH COLUMBIA AND WESTERN WOOL.

This wool is nearly all unwashed. It is extremely greasy, and shrinks from 50 to 60 per cent. in washing. Our experience with Western wool is that, like the Ontario wool, the fine and coarse is mixed indiscriminately together. Carloads from certain ranches have turned out satisfactory, while wool from others was in wretched condition. It is quite apparent that wool with the Western sheepman is regarded merely as a by-product.

We recently opened up two cars of British Columbia unwashed. There were fleeces in this which each contained from one-half to two pounds of tag locks which had never been detached from the fleece by the shearer. These were pickings which were not worth the freight; and, in the same bales, the most beautiful fine wool, equal to any Australian Merino, as well as coarse, hairy fleeces not worth more than half as much. The sorters opened each succeeding bale with expectant interest. They found lambs' tails, old sheep skins which had lain on the prairie, the remains of sheep long since perished. There was a motley array of sticks, tins, paper, wires and rags, including a man's cotton shirt, which, judging from the artistic patches, had been repaired by a batchelor with a darning needle. We do not attribute the condition of this wool to dishonesty or deliberate fraud on the part of the Western ranchers, but believe it is probably due to gross carelessness.

Not having seen the last part of the Commissioners' report, I do not know whether they suggested any remedy for improving the condition of the Canadian wool crops or not.

It seems to me that the wool-buyers and the

manufacturers must bear their share of responsibility, as the method of buying wool at a straight price for bad and good together has been a premium on carelessness, and has had a baneful influence in depreciating the quality and value of the wool grown in our fair Dominion.

The greatest burden of responsibility, however, must rest upon the wool-grower, who, in this enlightened age, can scarcely plead ignorance to justify his slovenly methods in producing this valuable commodity in its present unsatisfactory condition.

The principles of integrity and uprightness must be observed in every industry, if it is going to succeed. If it is a national industry, a comparatively small number of unprincipled partners will be the means of bringing disrepute upon the whole concern. For instance, for how many years Canadian apples did not command their rightful place in the markets of the world, owing to the fraud practiced by a very few careless or dishonest packers, who shipped cull fruit in the barrels, with good fruit on top. When good stiff penalties were meted out to the offenders and the fraud ceased, the demand increased, and the Canadian brand has since advanced to the position to which it was entitled.

If the Canadian wool is to command the important position which, according to our most optimistic hopes, we believe it can and will occupy in competition with wool from other countries, there must be a universal improvement in the methods now used by the Canadian farmer in caring for the growing wool.

One reason that the woolen manufacturers use imported wool is that a great deal of the Canadian wools are not fit for the purpose for which the manufacturer requires them. For instance, it would not be possible to sell underwear or knitted goods manufactured from dirty wool. How many of your readers would care to wear an undershirt choke-full of burdocks.

It is interesting to note that, at the sheep-breeders' convention, held in Toronto on February 9th, several of those members present advocated a duty of 10 cents per pound on foreign wools being imported into Canada. I feel sure that no amount of duty imposed on foreign wool would be instrumental in changing the present bad condition of the wool grown in Canada, nor raise the price one jot. In my opinion, it is a mistaken idea that a high tariff can be instrumental in changing wrong conditions to right, or that it will make an industry flourish when there is something radically wrong with the management. I never was very much in sympathy with the woolen manufacturer who claimed that a high tariff was the only remedy for all their wants and woes in their uphill fight against difficulties which the woolen manufacturers in Canada have been struggling with for many years.

As it has often been remarked, the majority of those who had the greatest difficulty in the struggle were the ones who were manufacturing shoddy with antiquated machinery. The factories which worked pure wool and made honest home-spun goods are still in existence.

I heartily approve of the suggestion made at the convention by one of the speakers to place a duty on shoddy. I would go one step farther and say a prohibitory duty not only on the

LATEST QUOTATIONS

HAY	\$16.50 per ton
STRAW	\$10.00 " "
OATS	50¢ per bushel
BRAN	\$95.00 per ton
PEAS	\$1.25 per bushel
BUCKWHEAT	70¢ " "



A Market Day Chat.

Discussing the high cost of living.

shoddy, but also on all shoddy goods. I firmly believe that this would be a universal benefit to the wool-grower, manufacturer and consumer.

The Commissioners' report on the Canadian wool states that it is the worst-handled wool in the world. Notice that it does not say a single word that is derogatory at all to the quality of the wool, but to the carelessness in the handling.

Now, it is high time that we Canadians should wake up and remove this stigma which rests upon this, one of our most profitable, but, sad to say, most neglected natural products. Like the Canadian apple, it will assert its rights and command its just dues, provided the wool-grower will give it half a chance.

Victoria Co., Ont.

ALEX. HORN.

Live Stock Pedigree Act.

Based on the existing Pedigree Act, which was passed by the Federal Government in 1900, a new bill, respecting the incorporation of Live-stock Record Associations, has been introduced in the Dominion House of Commons by Hon. Martin Burrel, Minister of Agriculture, and has passed its third reading. This new bill introduces certain new features which have been thought necessary from twelve years' experience gained during the operation of the bill which is now in force. It is hoped the present measure will greatly simplify and improve the relations existing between the Record Associations and the Department of Agriculture at Ottawa. The Act provides that the Minister of Agriculture, or such other member of the King's Privy Council for Canada as is named for that purpose by order-in-council, upon the application of any number of persons, not less than 5, 21 years of age or over, who desire to form an association for the purpose of keeping a record of pure-bred animals of a distinct breed, or several records each of a distinct breed of the same species of animals, may approve of the application and grant certificates.

The application shall be in duplicate, signed by each of the applicants, verified by the affidavit of a subscribing witness. Two copies of the proposed constitution, by-laws, and rules for the regulation of the affairs of the association must accompany the application. Upon the approval by the Minister, one of the duplicates shall be registered in the Department of Agriculture, the other to be returned to the applicants. From the date of certificate of same, the association is incorporated. Associations are limited to one for each distinct breed.

The constitution, by-laws or rules required under the Act provide for the name and objects of the association, membership fees, etc., the location of the head office and of the branch offices, officers' elections and duties, meetings and audits. The registration of pedigrees is left within the powers of the association, the rule to set forth clearly what animals are eligible for registration. An annual report must be made, and the secretary must keep a book at the head office of the association, and one must also be kept at each branch office, the book to contain the constitution and by-laws of the association, and be open to its members. The constitution may provide for the exercise of any of the powers or functions of the association through a common officer or officers appointed under the constitution and rules of the National Live-stock Record Board.

No amendment or repeal of any constitution, by-law or rule shall have any force until approved by the Minister and registered in the Department. The constitution and by-laws are binding on each member, and the liability of each member is limited to the amount due for his membership and registration fees.

The association may handle property necessary for the carrying on of the business; also notes and bills of exchange, and can use the funds of the association for any purpose calculated to benefit the particular breed or species of animals, including grants to exhibitions. It is thought that the powers thus conferred will ultimately lead to really constructive work being undertaken by the various associations incorporated under the Act.

If provided by the constitution, or on request of an association, the Minister may, under the hand of an officer of his department, approve of or authorize the certificates of registration issued by an association.

Every person who wilfully signs or presents or causes or procures to be signed or presented to the recording officer of an association or to the accountant or other person in charge of the Canadian National Live-stock Records, a declaration or application for registration of any animal by any association, containing a false or fraudulent statement regarding the age, color, breeding or pedigree of such animal, shall be guilty of an offence, and shall, upon conviction, upon information laid within two years of the commission of the offence, incur a penalty of not less than \$100, and not exceeding \$500. In the former Act, provision was made for the imposition of a penalty, but nothing definite was stated as to the manner

of enforcement. The new act provides all the necessary machinery for its enforcement.

A copy of the annual report of each association must be sent to the Minister of Agriculture by mail within twenty days after the annual meeting.

If an association ceases to do business for twelve consecutive months, the Minister may wind up the business of the association.

This bill, if enforced, should place breed associations on a solid basis, and should insure breeders and dealers in pure-bred live stock against loss resulting from unscrupulous members making registrations of non-eligible stock, or otherwise falsifying pedigrees.

Top Notchers Pay.

It pays to produce the top notch of quality, and, at the prices which this quality commands on the market, it pays to produce beef. Beef cattle are scarce, and why is this so? One reason has been given time and again, and that is the increase in the dairy industry, at the expense of beef-raising. Beef cattle have not been high enough in price. Perhaps not, but have we been producing the kind of cattle which would bring a high price in any large market? There is always a demand for superior goods. On Montreal market, recently, a steer quoted in the daily market reports as "extra choice" sold for twelve cents per pound, live weight. This steer weighed, according to the report, 1,905 pounds, and at the price quoted netted the seller \$228.60. Is there money in the high-class article? This would indicate that there is. On the same market, the same day, choice steers sold at \$7.50 to \$7.75 per cwt., with a few at \$8.00 to \$8.25 per cwt., and lower grades down to \$5.00. There was a difference of \$3.75 per cwt. between the price of the market-topper and the next highest price for extra-choice cattle, and there was yet a difference of \$3.25 between the choice and the common classes of steers.

It is significant that there was only one steer able to command the top price. There seems to be a marked scarcity of the class of stock for the high-class trade. If there is any money in feeding the lighter and poorer class of stock—and many make a living at it—there must be a profit in the cattle which class with this single steer referred to.

There is also a point in this for the breeder, as well as the feeder. This steer had weight. In breeding for the block, if the highest market price is to be obtained, size is essential. To secure this, use nothing but a big, even bull of one of the beef breeds, and feed the calf well from the time it is dropped. By using the big, beef-type bulls on cows which combine the dairy and beef types, and following a systematic method of feeding, the status of our beef industry might be greatly improved; and, for the fancy trade, the use of animals of beef type on both ancestral sides would best fill the bill.

What a vast difference there is in the price of something out of the ordinary run of things. It matters not what line of goods is being disposed of, caterers to the trade make fortunes out of unusual styles or goods. Why cannot more breeders and feeders cater to a high-class meat trade and swell their annual incomes? Seven dollars per hundred between the common class of beef and the best quality on the market, should be some inducement to feeders to strive for the best. No doubt this very steer could be excelled. No animal is perfect. There is always room at the top, and the effort required to get there is doubly repaid by the satisfaction and increased money returns.

THE FARM.

Tamp Posts with Sawdust.

Editor "The Farmer's Advocate":

I notice, in your issue of March 21st, received by the Women's Institute, Q. No. 5, page 558, "Is there any way to prevent fence posts from heaving in the spring?" As your answer is not very encouraging in reply, permit me to state that in this section of Ontario we have very stiff clay, hard-pan, to contend with, and after an experience of from three to ten years, we find our posts do not heave in the heaviest clay if tamped with sawdust. Use an auger slightly larger than the post, and thoroughly tamp the sawdust with a crowbar. I would advise a three-foot hole, although I have posts in holes 2½ feet for three years, and no sign of heaving, notwithstanding that we have had 44 degrees of frost. Posts classed by, not so placed, heaved ten inches.

JAY S. TRIPP, JR.
Parry Sound District, Ont.

Experimenting with Fertilizers.

Editor "The Farmer's Advocate":

In commenting on my letter re fertilizers, in your issue of March 21st, you remarked that the Experimental Union plan of experiments has been criticised. It was on account of this, and at the suggestion of Mr. Emslie, that I added the series, Nos. 11 to 14, a complete fertilizer, consisting of full quantity of each ingredient, and three plots where one was omitted and the other two sown in same quantity. In my case, this simply served to emphasize and confirm the conclusions already arrived at through the Union series. But, while admitting that, from some points of view, improvements might be made, I have always thought that they were eminently suited to the purpose that they were, I believe, intended to serve, i. e., as an introduction to the use of fertilizers. It must be remembered that the farmers of Ontario have hardly commenced the use of artificial manures; the vast majority know nothing whatever about them, so that we have to begin at the A. B. C., as it were. Our predecessors prospered and accumulated a competence more through not spending money than by making a profit out of their business, and the idea of spending good dollars in fertilizers, other than barnyard manure, in the hope of having them returned with interest at harvest time, is something that is decidedly foreign to the average mind, even to-day. On this account, I have always considered that it was a politic move to keep down the per-acre cost, and I submit that the experiments, as issued by the Union, are as good as they could be made for the limited sum proposed to be expended to the acre. Had we been recommended to spend \$12 to \$20 per acre in fertilizing materials, very few of us would have given the subject any consideration whatever. We may come to that eventually, but I fear the cost of living will have to mount still higher before we spend that amount on ordinary farm crops. However, the experiments are varied for the different crops, and last year I had the pleasure of trying a series on mangels, adding an extra plot or two of my own. The results were very satisfactory, and, I believe, will be found interesting and perhaps also useful. In all, I staked out 12 plots of 1-80 acre each. Seed was sown May 13th, and roots were pulled and weighed Sept. 28th. There were three check plots; the materials sown on the other nine, and the yields per acre for the twelve, were as follows:

Fertilizer.	Yield per acre.	
	Tons.	Lbs.
No. 1—None	23	1,120
No. 2—100 lbs. nitrate soda.....	25	1,120
No. 3—160 lbs. nitrate soda.....	25	1,120
No. 4—200 lbs. nitrate soda.....	25	1,120
No. 5—None	24	1,120
No. 6—100 lbs. nitrate soda	24	400
No. 7—160 lbs. nitrate soda	25	1,120
No. 8—200 lbs. nitrate soda	25	1,040
No. 9—200 lbs. common salt	29	800
No. 10—400 lbs. common salt.....	28	1,920
No. 11—None	24	1,920
No. 12—160 lbs. acid phosphate... — 80 lbs. muriate potash..	26	1,200

Fertilizer sown on Nos. 2, 3 and 4 when plants were 3 inches tall.

Fertilizer applied on Nos. 6, 7, 8, 9, 10 and 12 before seed was sown.

The land on which these plots were situated was one-half of it under corn the previous season; the other half was strawberries, plowed under when fruit was over, and sown with rape; this made a rank growth, and just before winter set in the whole was coated with barnyard manure at the rate of 15 loads per acre, and ground plowed. In spring, as soon as dry enough, the land was harrowed to break crust and prevent evaporation. Later it was plowed lightly, worked down fine, plots staked out (each plot running clear across both corn and strawberry land), fertilizers sown, except as noted, ground thrown up in drills, and seed sown in usual way with a turnip drill. A heavy roller was then used to compact the soil thoroughly. A good, fair stand of plants was obtained, and as soon as the rows could be seen they were gone over with a wheel-hoe, breaking the crust on either side of the young plants, and utterly destroying all small weeds almost before they could be seen. We found this a great help when we came to the thinning, and it is also of great benefit to the young mangels.

Taking the average of the three check plots, 24 tons 720 pounds, as the yield without any special application, it will be seen that the common salt increased the yield just about 5 tons, at a cost of \$1. Four hundred pounds applied gave no better results than 200 pounds. Two hundred and forty pounds of mineral fertilizer, worth just about \$4, only gave an increase of a little over two tons. Nitrate of soda, applied when plants were up, appeared to give slightly the best results, as compared to the application when seed was sown, but none of these increases



Cattle Stable at Weldwood.

Showing gutter, with plain slope up to rear platform, showing also temporary posts used to support joists while replacing old wooden wall between stable and root cellar with a cement wall.

would more than pay for the fertilizers, and, moreover, they are so slight that they cannot be regarded as in any way conclusive. I think we may, however, very safely decide to use salt on our mangel ground. An increase of 5 tons per acre, at a cost of \$1.00, is surely economical production. I used salt on about one-half of my mangels, and the phosphate-potash mixture on part, and hen manure on the balance of the other half. Judging by the eye alone, the hen manure did the best, but all were very good, and the average over all of two acres was a little better than that of the plots. However, the effect of the mineral fertilizers on mangels (we cannot regard salt as a fertilizer) has so far with me been rather negative than positive, and I am planning to test an entirely different class of materials this season, and am hoping to find a genuine fertilizer which will have as pronounced an effect on mangels as acid phosphate has on the turnip crop.

ALFRED HUTCHINSON.

Wellington Co., Ont.

Remodelling Stables at Weldwood

In variety of cow-stable floors, stalls and mangers there seems to be no end. As a rule, each farmer expresses in the stables he builds his own individual ideas of sanitation, convenience and cow comfort. At least, he aims to do so. Subsequent experience tests his theories, and seldom would he build a second stable exactly the same as the first. A stable floor (with manger and passage), which six months' use commends as a very nearly ideal cement-concrete job, was laid last summer in the re-arranged stable of the stone-and-wooden-basement barn at Weldwood. For the information of intending builders, we shall go pretty fully into details of construction and cost. The cost may be thought rather high, but everything has been counted, and a good job done.

The barn is 40 x 70 ft. (taking outside dimensions of the 3-foot-high stone foundation), and stands east and west. The superstructure is partly supported by two rows of 8-inch posts extending from end to end, and providing for an easy division of the stable into three longitudinal sections. In the original plan of the stable this logical system was not followed throughout. A closed-in stable for five horses, with a box-stall extra, occupied the east end of the south division. A drive-house occupied the east end of the north division, and between was a feed alley for the horses. A row of double cow stalls extended across the west end, and a part row, with one box stall filled up the space between main cow stable at one end and the horse stable and drive-house at the other (see Fig. 1).

An obviously better arrangement which suggested itself was to have the cattle stables running lengthwise, with a central feed passage between, opening into a silo chute at the east end of the barn. The erection of a separate drive-house permitted the conversion of the space formerly devoted to the storage of vehicles. The anticipated need of a new and separate horse stable rendered it desirable so to arrange the cattle stable that ultimately there would be one complete row of cow stanchions and one complete

row of loose pens through which a team might be driven to clean them out. After careful consideration, it was decided to have the cow stable along the north side, which was opposite the barnyard and towards the house; also towards the most suitable location for a dairy.

In spacing the stalls, one difficulty presented itself. A row of posts formerly mentioned came in line with the foot wall for the stanchions, but would jut out two or three inches into the mangers. Each post, therefore, must needs line up with a stall partition. This would bring the stall widths very irregular. Fortunately, it was discovered that two of the posts could be moved. This now permitted a better division of the stall space, which was graded down from 3½ feet at the west, to three feet at the east end, the width of the stalls corresponding approximately to the length of stall platforms, which were made 5 feet at the west end, tapering to 4 feet 8 inches at the other. That the description of floor construction may be more readily followed, we herewith present a plan of the stable as completed to date (Fig. No. 2). We also present cross-section diagram, showing the contour of the floor (Fig. No. 3).

EXCAVATION.

The interior of the basement having been gutted, saving only the horse stable, which was to be left for a year or so, excavation was com-

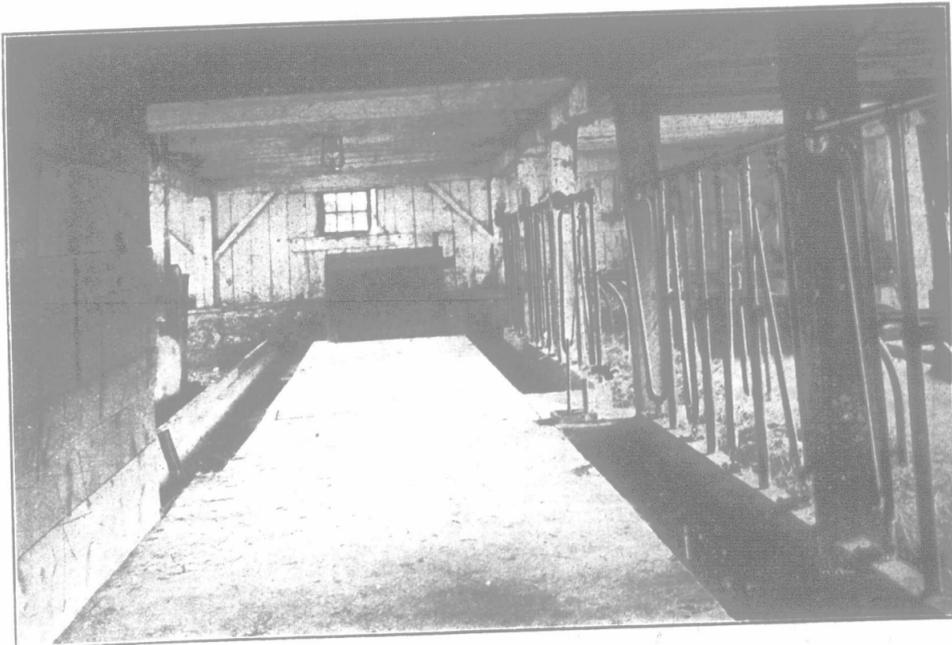
menced. The floor was excavated and filled to a shape corresponding roughly to what should be the contour of the finished floor, allowing for an average four-inch thickness of cement. Diagram No. 4 shows this at a glance. To gauge the depth of excavation at the back wall, a stick 8 feet 8 inches long was used, this being the height to the bottom of joists. To gauge depth of excavation at gutter, another stick 2½ inches longer was cut. To gauge height of filling on stall platform, a third stick was cut 5 inches shorter than the first, and 7½ inches shorter than second. The level was carried to a line about 14 feet 2 inches from the back wall, where the filling for feed passage was raised about 8 inches above that for stall platform, allowing for a thinner cement floor here. To hold earth filling temporarily in place at manger and gutter drops, planks set on edge were supported by stakes driven in the ground. All filling was solidly tramped and tamped in layers as filled in with a heavy wooden tamper, particular pains being taken where the filling was deep, as in an old cistern that had to be filled up. Without a solid foundation, it is useless to expect cement to stand the test of time. Minor gradations in contour were judged by the eye. When the excavations and fillings had been roughly accomplished according to the gauge sticks mentioned, the spirit-level and straight-edge were employed to test and where necessary to finish more neatly. In the completed floor, manglers and passages were laid about 2½ inches thick, the gutter next edge of drop about 3 inches, and rest of floor about 4 inches.

LAYING FLOOR—MANHOLE CASINGS.

Before laying the floor proper, provision was made for water system and ventilation. Water pipes laid in tile enter stable from an outside manhole on north, 3 feet under floor level, crossing under floor to cement water tank on south side of the barn. At a point underneath the central feed passage is a T, from which water runs at right angles 6 feet to an upright stand-pipe, where it may be drawn off for inside use. Beyond the T is a stop-cock, turned by a long-shanked wrench, so that one may, upon occasion, force water back to stand-pipe, without going outside the barn to close hydrant at stock watering tank. This stop-cock and T were enclosed in a second square cement casing, and protected with plank trap, flush with cemented surface of feed passage. A small wooden box, 4 inches square was constructed around the stand-pipe, enclosing, also, the stop-and-waste cock at bottom, designed to drain upright when frost threatens. As a matter of experience, we seldom use this cock, as the waste of water is excessive. By merely wrapping the upright stand-pipe with sack-ing, we have avoided any serious frost trouble during the past severe winter, though manure often froze in the stable.

VENTILATOR FLUES.

Two inlets were provided for the Rutherford system of ventilation. It was not feasible to have more. These were simply cement-lined U-shaped openings under the stone wall, each opening being 20 inches wide and 10 inches deep, in the clear. The width is not 20 inches in the



Cattle Stable at Weldwood.

Showing steel stanchions, raised feed-alley floor, and cement trough manglers. In foreground on left is horse stable, and beyond that a space where loose pens have been fitted up since the photograph was taken. The plan is to build a new horse stable eventually, and have a row of loose pens all along south side.

clear, as each flue is split by a central 4-inch pier, deemed necessary to support some large stones over the 20-inch span. For these inlets, excavation was made about 28 inches wide, to a depth of 14 inches below the bottom of wall. Simple boxing was constructed, and cement concrete packed under and around between curbing and earth face. After the cement had set, the curbing was removed, and box curbing for piers made and filled. These were subsequently removed, leaving the appearance as denoted in Fig. 5.

THE FLOOR ITSELF.

Gutter and rear passage were cemented first. Using the three-foot stone wall as a guide, the surface of floor was marked along north wall by a horizontal chalk line parallel to top of said

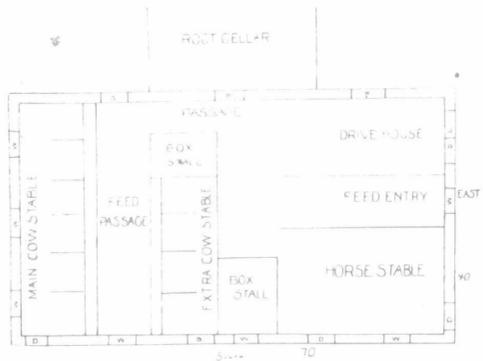


Fig. 1.—Plan of stables at Weldwood before rearrangement.

wall. At gutter, 2 x 2 strips were laid from end to end of stable, pretty snug against earth face. To gauge the position exactly, a working scantling was now cut, to be used later for grading the cement-concrete surface. The workman took a scantling seven feet long, squared two feet off one end, then on one side marked an eighth inch back from square pencil mark, then marked and sawed a bevel across from this point to mark on other edge. The two-foot end thus cut off was turned upside down and spliced to the long end with a piece of board nailed on the side. This gives a slope of almost exactly 2 inches in 2 feet. The lower edge of the 2-foot end was now trimmed down so as to fit the earth bottom, thus obviating the necessity of any further excavation, and at the same time saving an inch or so here on the thickness of the floor.

At the west end of stable, where the stall platforms were longest, this 7-inch piece marked

the exact distance from wall to the 2 x 2-in. at drop. At the east end, a 4-inch length of scantling was spliced to the square end next the wall. The 2 x 2-in. strips were now located at each end, and slanted uniformly from wall to wall.

We are now ready to commence filling, starting at the end opposite the door where the cement was to be wheeled in. For a starting point, lay the scantling along end wall, with a slope on the plain part of 1/4 inch in 5 feet; chalk-mark the wall along upper edge of this scantling, remove scantling and place four feet from same wall, using spirit level to ascertain same grade; bed, stake and wedge to hold in place. Now fill to within an inch of surface with cement-concrete mixed 1 to 8.

For details of mixing, see article on construction of silo, issue Feb. 1st, 1912. Ram well with flat, iron rammer, finish with cement-concrete mixed 1 to 4, grading with straight-edge applied to line on wall and top of working scantling; tamp and trowel surface moderately, not taking pains, however, to have too smooth and slippery a surface. The 5-foot platform behind gutter was now grooved to guard against slipping of cattle or of horses, if used to clean stable. An inch stick, 4 feet long, had one edge rounded. This edge was first laid in soft cement parallel to back wall, and one foot from it. From the groove thus made it was next bedded at 7-inch intervals, crosswise of the passage, one end of groove running out of the gutter slope to insure drainage of liquid manure that might be spilled on back platform. As soon as one four-foot space was finished, the working scantling above mentioned was moved 4 feet further, and another section laid. Endeavor was always made to avoid leaving any section at night without the finishing layer.

FOOTWALL FOR STANCHIONS.

The swinging steel stanchions having been hung from the horizontal pipes connecting the wooden posts, the stanchion footwall was next built. This was to serve also as the back of the manger. Curb plank for this were set with upper edges 14 inches above gutter, thus bringing them 6 inches above forward end of stall platforms to be laid. The plank for back surface of foot-wall towards gutter was set plumb, so as to have wall vertical. For the manger face, plank was set on slope so as to bevel this face of the wall. The curb plank were thus 5 inches apart at top, and 6 at the bottom. They were held in place with stakes driven in ground, and also by cleats on wooden posts. Wooden wedges were used between stakes and curb planks, about an inch space being allowed for these when driving stakes. About every four feet cleats were nailed across

top of curb plank, and under each cleat was a wooden divider to stiffen the plank additionally. Cement-concrete, mixed 1 to 6, was now filled in to within a few inches of the top, where the anchors of the specially-designed steel plates to hold the patent swinging stanchions were carefully imbedded at such height as to have the plates rest on the finished wall. It is important to have the stanchions hung right in the first place, in order that the chains at bottom will have the right degree of slack to permit free motion of the lower link back and forth on the plate. When the curb planks had been filled, the top was trowelled off and the corners worked down neatly with trowels, to avoid leaving a burr when plank should be removed.

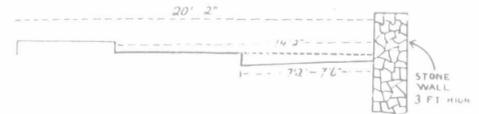


Fig. 4.—Contour of excavation for cow-stable floor.

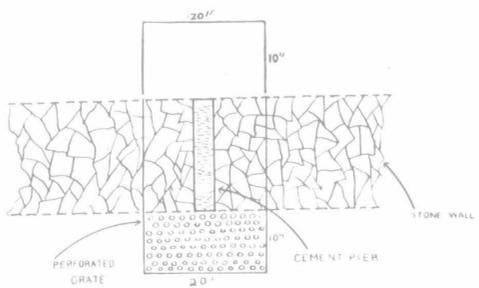


Fig. 5.—Plan of ventilator inlet.

STALL PLATFORM.

The stall platforms were laid next, the curved-pipe partitions having been set, levelled, plumbed and tightened. On the gutter bottom, after the 2 x 2-in. pieces were removed, an 8-inch plank was set on edge, the slope of the gutter giving the plank a slight incline forward, preserving a right-angle into which the corner of a manure-scraper now fits nicely. This plank was wedged every third joist with a brace-scantling toe-nailed at bottom to run up to ceiling joist. This plan was adopted, instead of horizontal bracing, because the cement-concrete had to be wheeled in over the back platform, and ordinary braces would be in the way. Half a dozen inch boards were, however, laid flat side down, reaching from curb plank to back wall. The cement concrete was now filled in here as in case of back passage, bottom coat 3 inches thick, mixed 1 to 8, top one an inch thick, 1 to 4. The richer mixture was also used to work down between face of earth filling and curb plank. Slope of stall platform to drop about half an inch.

Note.—In filling cement-concrete here, it had to be kept half an inch below the edge of the 8-inch plank used, the actual drop from platform to gutter being thus 7 1/2 inches.

FEED ALLEY.

Feed alley was done next, and mangers last. For feed alley, curb plank were set, staked and wedged to place, upper edges being even with top of stanchion foot wall. The plank were inclined one inch toward each other, so as to give a flaring side to both mangers corresponding to the flare provided by the forward surface of the foot-wall, making each manger two inches wider at top than at bottom; width at top was 20 inches. For feed alley, the bottom layer of cement was made 1 1/2 inches thick, and mixed 1 to 8; for top, 1 inch thick, and mixed 1 to 4. Feed-alley floor was continued on level into silo chute. For cross passage opposite root cellar door, the rise from level of stall platform to level of feed alley was made with a slope of about 6 inches in two feet, and cross-grooved in manner similar to the way the back passage was done. Foot-wall for loose-pen stanchions was now laid in much the same manner as stanchion foot-wall, only, instead of plates, we bedded a row of spikes along one edge on which to pound down a scantling later on. Square mortises in which to set 4 x 4 posts were also provided opposite every sleeper post by simply standing in the soft cement a short piece of 4 x 4, and removing before cement hardened.

MANGERS.

The mangers were laid last, and consisted of two thicknesses of cement, the lower one 1 1/2 inches thick of cement concrete mixed 1 to 8; the upper coat, though thick, of cement-concrete mixed 1 to 4. The corners were rounded, but a width of 14 inches at the center was made perfectly flat, so that a heavy empty pail would set square upon it. To make the corners smoothly, a piece of tile was

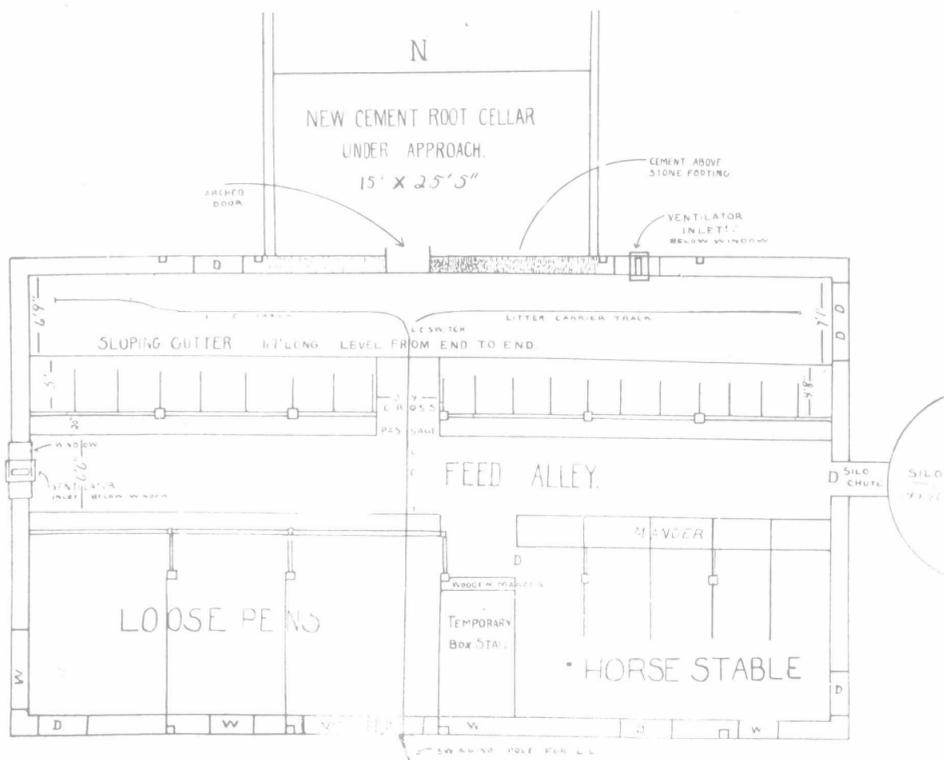


Fig. 2.—Plan of rearranged stables at Weldwood.



Fig. 3.—Contour of stable floor.

employed, though the mason thinks an old drainage scoop would be better. A day after mangers were completed a pure cement wash was applied with a whitewash brush.

Door sills were constructed at convenient seasons while other work was in progress, and, for double-door standard at east end of stable, a mortise was cold-chiseled out of cement before it had set too hard.

LITTER CARRIER.

During the winter a litter carrier was purchased, but its installation was not completed until a period of moderate temperature in February. By means of a swinging pole on the south side of the barn, we are enabled to run the machine out and dump it on the horse-manure pile on the side of the barn opposite the dairy and dwelling. The cost of the carrier, as supplied by the manufacturers was \$60 cash. To this must be added \$1.50 for pole, and \$4.42 for iron plates to reinforce center sill where cut to keep track well up, giving plenty of head room, and also the main plate, where guy-wires are attached. The labor of installation amounted to 84½ hours, worth \$14.33, so that the total cost may be computed at \$80.25. As a matter of fact, it was a little more, for a new door, elsewhere specified, was necessitated by the carrier. Perhaps \$85 would cover the whole. The carrier is, however, a great improvement, saving disagreeable labor and promoting sanitation. It is especially appreciated on Sunday afternoons.

STANCHIONS.

The swinging steel stanchions give first-class satisfaction, allowing the cattle more freedom than most chain ties, and keeping them comparatively clean. We hesitated for a time whether to put in the pipe partitions, but decided it would be a wise precaution against possible injury by cows stepping on each others teats and udders. The steel stanchions puzzled the cement contractor, who had never installed them before. He spent about a week tinkering at them, and for most of this time we reimbursed him, thus adding to the cost. At the time he was working at them we had too many other irons in the fire to render any assistance.

SPECIALLY DESIRABLE FEATURES.

In connection with this stable floor, special attention is directed (1) to the contour of the gutter, which is more convenient to clean, and in our opinion otherwise preferable to any square gutter; (2) to the mangers, which have no corners, being thus easy to keep clean, also rendering it easy for a cow to reach all parts, and yet providing a flat surface on which to set a pail. If changed in any particular, we might have the mangers four inches wider, as cows sometimes drop meal over the edge, although this is very easily brushed down. The stall platforms are fairly well judged as to width and length. The longest stall is a trifle too short for the comfort of our largest cow, an extra-long Holstein, and the shortest stall a little too long to keep the shortest Jersey clean; but, for an average herd, the range would not be easy to improve upon. The adjusting devices which may be had with the stanchions help to regulate the length of stalls. The gutter should have been made with a depth of 2½ inches, as intended, instead of 2 inches, as the contractor got it. Otherwise, the stable is one of the most satisfactory improvements we have accomplished on the farm. Another hundred dollars or so in flooring and partitioning loose pens, and providing ventilation outlets, will give us an exceedingly satisfactory and convenient stable, capable of accommodating between forty and fifty head of cattle; but this, of course, will mean a new horse stable.

MATERIALS AND COST ITEMIZED.

Material for floors only:	
Cement, 27 barrels, at \$1.65 per barrel.....	\$ 44.55
Gravel, 16 loads, at 26c. a load	4.16
Material for ventilator inlets, two man-holes, rebuilding basement wall where doors were moved, etc.:	
Cement, 7 barrels, at \$1.65	11.55
Gravel, 2½ loads, at 26c. a load65
Perforated steel plate to protect opening behind cattle	2.45
Steel stanchions and partitions for 19 stalls	79.00
Litter carrier and fittings, iron plates, etc.	64.42
Pole for litter carrier	1.50
Material for four doors (double doors at east end, storm door on north side, and litter-carrier door on south side of basement)	
Material for one new window	10.17
Material for one new window	1.75
Total cost for all material	\$220.20

LABOR.

Hauling 16 loads of gravel for floor	\$ 18.88
Hauling 27 barrels cement, at 94c.....	2.50
Hauling 2½ loads gravel	2.95
Hauling 7 barrels cement65
Cutting, excavating, ditching for water system, making doors, and general re-arrangement of stable (mostly unskilled labor), 308 hours	57.37
Mason's charge for flooring stable, at 2 cents per foot, outside barn measurement	32.00
Mason's board while working by foot	10.80
Mason's time at miscellaneous jobs, such as moving doors, casing manholes, setting stanchions, etc., cost, including board	41.41
Installing litter carrier, pole and track, 84½ hours	14.33
Total labor cost	\$180.89

Total cost of remodeling and equipping stable to date	\$401.09
Cost of straight flooring—material	48.71
Cost of straight flooring—labor other than excavation	64.18
Total cost of straight flooring	\$112.89

Total area of straight flooring, 1,525 sq. feet. Cost per foot of straight flooring, 7½ cents. Number of feet of straight flooring per cord of gravel, 286. Number of feet of straight flooring per barrel of cement, 56½. Cost of installing litter carrier, \$80.25. Note.—Several hundred feet of lumber have been used for dividing loose pens. This portion is not yet completed though in use.

Danger from Lightning.

Country people are in more danger from lightning than are the people of the cities, according to J. Warren Smith, Professor of Meteorology in the United States Weather Bureau and at the Ohio State University, who states that lightning kills 2½ times more farmers than the railroads do. He points out that, in Ohio, where they have an average of 35 thunderstorms annually, and statistics show a greater number of deaths in that section of the country than in others. The property loss from this cause is enormous. The greatest danger during thunderstorms is under trees, in strong drafts of air, near wire fences, wire clothes-lines, wires attached to poles, etc. Barns are struck oftener than houses, and houses oftener than churches. Buildings with wooden roofs, when struck, are more likely to be burned than those with metal roofs. Good lightning-rods, properly put up, are an efficient protection, but poor rods are worse than none. Professor Smith states that iron rods kept painted are better than copper, and are much cheaper.

Objects of Crop Rotation.

Rotation provides for growing crops that extract different foods from the soil. All crops do not use the same amount of the various plant foods found in the soil. Some are shallow feeders; some are deep feeders. Some crops use up the nitrogen in the soil, while others have the power to store up nitrogen in the soil. Rotation allows or assists nature to repair her waste places and incidentally facilitates the war with weeds.

In experiments at Rothamsted, England, conducted by Lawes and Gilbert, potatoes were grown on a piece of land continuously for a long series of years, until it finally refused to produce potatoes. But when it was sown to barley, it yielded a crop of seventy-five bushels to the acre. This was, in part, at least, because different plants select different food from the soil. Potatoes are potash-lovers, and in the years they had been grown on the land they had so reduced the potash content in it that potatoes could no longer be grown; but there was still enough to produce a fine crop of barley, the food requirements of which are different. There are sound reasons for a wise rotation of crops, but in this particular case other factors, such as the bacterial or mechanical effects on the soil of the long-continued potato-growing, may have materially affected the results.

"My experience has been," said R. S. Stevenson, when discussing alfalfa at the Ontario Winter Fair, "that, when we have broken up a stand of alfalfa, we have got excellent results in subsequent cropping. In seeding, we have best results from following a fall-plowed field and sowing about the second week in July."

80 Bushels from 300.

I have only taken your paper for one year, and I may say that I did not know before that anyone was farming but a few neighbors and myself. In years past, once through the fanning mill would do for seed grain, and, in fact, we would go in to see if the grain wouldn't do as it came from the cleaner. Last spring I put the seed through four times. This winter I put through three hundred bushels of grain to get 80 bushels for seed. A. W. DAWSON. Lincoln Co., Ont.

"Whatever you do, do not go back on red clover," was a timely injunction by Prof. G. E. Day during a debate on alfalfa at the Winter Fair, at Guelph. "When you get a piece of alfalfa, leave it, sowing clover in rotation. One of the greatest drawbacks of agriculture in this country is that we do not sow nearly enough red clover."

THE DAIRY.

By-Products of the Dairy.

In dairying there are two great sources of income. The first is the steady income directly from the dairying process, and the second is the profit derived from the by-products. These together make dairying the most profitable line of farming. Dairying in itself usually turns in a fair profit, but when we consider the added profit derived from the various by-products or sidelines to dairying, we find a greatly-increased revenue.

In the successful management of any manufacturing plant, the use of the by-products often spells success. Not infrequently, the income derived from this source is sufficient to carry on the overhead expenses of the plant. The realization of these by-products by one man, when another neglects them, is what distinguishes between the successful and unsuccessful manufacturer.

Conserving the natural resources are frequently talked about, but are made possible by the advent of dairying. Dirty, impoverished farms can be cleaned, and fertility added to the soil, by the judicious use of manures provided by the dairy herd. Where the cows are kept, and only the butter-fat sold off the farm, the land can be built up, and its productiveness increased every season. Fertilizer, then, is the first by-product of importance. Any farmer dislikes to hear his farm spoken of as a dirty, impoverished, useless place, which his sons do not care to possess. Even the most slothful prefers to hand down to posterity land that will yield a living for forthcoming generations. To do this, the farmer must study how best to replace the elements of plant life that are taken out of the soil by each crop that is harvested, always leaving a little more plant food in the soil than is taken out. Sometimes, on farms where dairying is not practiced, it is necessary to buy commercial fertilizers, the bills for which eat a big hole into the profits and leave little for the man's work. Hence, dairying offers a by-product in the form of soil fertility that would amount to a great deal in cash, if it had to be purchased and applied to the land to keep up its productiveness. This by-product alone is sufficient in many cases to establish the industry, regardless of anything else.

Some dairymen establish an industry for the breeding and sale of pure-bred stock in connection with dairying. This is perhaps a side-line, but can justly be called a by-product of the dairy. Pure-bred stock are always in demand, and good long prices can be had for the sale of first-class breeding stock. But even when only grades are kept, the profit from the sale of heifers and cows often amounts to a considerable sum of money. Thus comes the sale of dairy stock as by-product number two.

The third by-product of importance is skim-milk. Of course, in some cases this milk is sold, but on many farms there is a great surplus over what is needed for rearing the young dairy stock. Pigs and chickens can be raised fairly successfully without this skim milk, but the most practical poultrymen or hog-raisers assure us that these can be raised much more profitably when they have it.

To sum up, we find that the by-products of dairying make it possible to raise better crops and enlarge the earning capacity of the farm by realization on side-lines that otherwise would not be possible on the average farm. Dairying in itself is fairly profitable, but certainly the dairy by-products are well worthy of consideration.—[Farmer's Advocate and Home Journal, Winnipeg, Man.

POULTRY.

Care and Feeding of Laying Hens

Paper read before the Women's Institute, St. Mary's, Ont., by Ena MacKay.

In all branches of the live-stock industry good blood is the foundation of success, and in nothing does good blood count for more than in poultry husbandry. Common hens, like cheap labor, are not to be depended on.

We often hear the question asked, "Which is the best breed?" I would say that this is a matter of choice. In proper hands, nearly all kinds and breeds have proved profitable. There is, however, a distinct satisfaction in having a uniform flock, not to mention the extra profit from the sale of eggs for hatching or fowl for breeding purposes. Laying strains of Rocks, Orpingtons, Wyandottes and Rhode Island Reds are now known to produce as many eggs as any of the so-called egg breeds, and they lay more readily in the winter, when eggs are more difficult to produce and high in price, and they certainly prove superior to the smaller breeds for roasters, and bring us more money when marketed.

In selecting eggs for setting, choose only from hens that are healthy and vigorous, and of a good laying strain; choose well-shaped eggs, neither too large nor too small, and be sure that they are perfectly clean, as bacteria often lurk about dirty eggs, and washing is injurious to them, and likely to completely spoil fertility. Be careful not to touch them with oily or greasy hands.

Have clean boxes for nests, and keep the brooding hens away from the rest of the flock. Put a sod in the bottom of the nest, hollow it slightly, and then cover with soft hay or straw, and when the hen is put on the nest, dust it well with insect powder or sulphur, and sprinkle a little in the nest, too. I find little trouble in moving a hen from one nest to another when I do the exchanging after dusk. Give her a couple of eggs, then put a board up to the front of the nest, so that she cannot get off, and leave her there until towards evening next day; then take down the board, and set food and water near the nest. If not frightened, she will generally come off and feed and return to the nest. When she does this once or twice, it is generally safe to give her the eggs. While the hen is sitting, provide her with a hopper of whole grain (mixed oats and wheat are good), grit, and pan of water, and see there is a place in the pen where she can roll in and dust. Do not give her wet food when sitting, as it induces diarrhea. On the tenth day give her another dusting of insect powder, and from the nineteenth day moisten the eggs daily with a little warm water, if the hens cannot get outside; even then it is good practice, as it helps the chicks to get out of the shell. When the eggs pip, put the board to the front of the nest again, and keep the hen on the nest until the hatch is out. If eggs have been shipped any distance, or been subject to any sudden jars, they should rest at least twenty-four hours before setting. About the middle of April is a good time to set the hens, as, by the time the chicks are hatched the weather will be getting warm. Be sure and place your coop on a dry, sunny spot. We place them on a bed of sand and gravel, and I find it so much easier to keep them clean. People have said, "What a task it is to look after young chicks." It should not be so where common sense and system are used about the work. I find it a very pleasant and profitable task caring for my feathered pets. Chicks should not be fed until 36 hours old. Just before leaving the shell, the chick draws into its body the whole of the unabsorbed yolk of the egg. This is its food before and after leaving the shell. It is the food nature provideth to sustain life until the chick is strong enough to take other food. If fed too soon, the yolk of the egg which is taken into the body before leaving the shell will not be drawn upon; it will remain unabsorbed, and in time decompose, causing bowel trouble and death. Hard-boiled eggs, chopped fine, mixed with three parts breadcrumbs, is what I feed for the first few days, and I am careful to see that they always have fresh water to drink and plenty of grit. As soon as the chicks are large enough, they are fed wheat; and, as they always have free range, they seem to thrive and grow right along. Perhaps, if the chickens had to be kept penned in, wheat alone might be too strong, so I prefer to better to give less wheat, and feed ground or rolled oats. I prefer the dry to the wet feeding for chicks, and, since I have adopted that plan, I never have a sick chicken. A friend of mine always feeds her chicks bread soaked in milk, and she says she has good luck. One thing is certain, that is that chicks need plenty of water, but that they will eat more of it if they have a small amount of the

day may be given without stint, but the rest of the time they should be kept in good appetite. See to it that the chick is kept growing. Remember that the getting of frame and size comes when they are young and growing. When that stage is past they mature and fill out, and can only do so to the extent of the frame they have.

It is of great importance that the chicks should not be allowed to perch too young. The result would be a crooked breast-bone. A chicken's breast-bone, until it reaches the age of ten or twelve weeks, is very pliable, and the part mentioned consists of gristle. When the chick is allowed to perch at an early age, the whole weight of its body is laid upon its breast-bone; so, night after night, as the weight bears upon this tender spot, it is gradually growing out of place, until, when the chicken has reached the age of three months, the gristle has plowed into bone, and the part has grown from its right position and is dislodged. Birds so developed should never be bred from, as the chickens might inherit it, and there is often a very decided difference in the price offered when we market such birds. Keep them in their coops as long as there is room for them, but always remember that the coops and the ground on which they rest must be kept clean.

One of the wisest things to do when engaged in the poultry business is to get the man of the house interested with you, for there are many things about the poultry-yard in which you will need his helping hand; and, once interested, he won't be so apt to inform you of how often those hens have eaten their heads off. Now, to have a healthy, profitable flock of hens, there are some facts that we must pay attention to. Irregularly-fed hens are not a paying proposition, and satisfactory results are never attained from a flock that receives attention only during the egg-laying or breeding season. In order to secure good results from them, they must be nourished and attended to. The question of feeding is a very important one, as it has within its power the making or unmaking of a bird. There should be a knowledge of the various grains and their feeding value, and of the mixing of the foods in proportion; and there should also be sound judgment in the matter of feeding. A fowl requires grain food, vegetable food, meat food and grit. These foods should be clean and wholesome, and a portion should be given in some form to induce the birds to take exercise, in order to keep them healthy. Fowl should be well supplied with water. Many make the mistake of not giving sufficient drink, or not giving it regularly. This, I consider, a very great mistake. If you will take time to observe your birds, you will find that the first thing they do after feeding is to go at once for a drink, and they generally do the same after laying an egg. The supply, then, should be constant and clean. Dirty water, dirty or slimy drinking dishes, or dirty surroundings, will do more towards making a flock unhealthy and diseased than anything else.

Wheat is the most popular feed, and is one of the best, but its price, compared with that of other grains, makes it necessary to mix other grains with it. Oats are good, and, when rolled (hull and all), are an ideal food as a dry mash. Barley is considered next to wheat in point of value, but, on account of its hard shell, is not very satisfactory, as, if much is fed, the hens are apt to become crop-bound. Corn is heating and fattening, and is, therefore, best adapted for winter feeding; it is counted rich in egg production.

Our method of mixing is 2 parts wheat, 2 parts oats, 1 part barley, with just a few peas added; one quart to 25 hens. We feed this quantity twice a day in winter—morning and evening; at noon, boiled potatoes and parings, which are mixed with the meal. Three or four times a week we give them meat which has been boiled and run through the chopper; feed from 1 to 2 quarts to 100 hens, and you will soon see happy results in the egg basket. Of course, for summer feeding this is not necessary, as the birds running at large find plenty of animal food for themselves; neither is it needful to feed such quantities of grain.

Alfalfa is becoming one of the most important of green foods. It is an egg-producer, and is very valuable in winter-egg production. You will find that the hens are very fond of this, and will eat large quantities of it. A good way to feed it is from a rack made of poultry netting, and fastened to the wall.

Grit is as necessary to poultry as tooth-powder to animals; both are used in grinding food, the difference being that animals grind it in their mouths, and poultry and birds in their gizzards, so you will see how absolutely essential it is that they should be provided with good quality grit. Sharp gravel, old earthenware, coffee-cans, broken up small, make excellent grit. Egg shells and old mortar are not only good for use in digestion, but help in the mending of the egg shell.

It is the well-fed hen that pays. I do not

that a poor hen will not lay. When a hen gets only enough to keep her own wants supplied, she will never lay. A. G. Gilbert, manager of the Poultry Department at the Experimental Farm, Ottawa, lays great stress on this fact. He says it is only the surplus feed that goes into eggs. There is less risk of getting a hen overfat by heavy feeding than of reducing its egg-yield by under-feeding, and the only time that good hens are apt to get too fat is after moulting, when they take a rest from laying. Many complain about their hens being so fat and not laying. Very often the trouble is traced to the manner in which they are fed. If just scattered plentifully on a clean floor, you may be sure that there will soon be star boarders in your flock. See to it that there is litter, and plenty of it, so that they will have to work for what they get, and they will be healthier and happier, and more apt to repay you.

Sunshine is essential to egg production—almost as much as food and water. If there is any doubt about this, shut some birds away for a month or two and note the result.

It is perfectly natural that fowls should moult their feathers during the warm weather. During this period, if the hen is properly fed and cared for, she will continue to lay. The moulting of the old feathers makes no special demand upon the strength and nourishment of the birds; but when the new feathers are growing rapidly, the nourishment which had earlier gone to the production of eggs is diverted to the growth of feathers. During this period and for a few weeks after, egg production is likely to cease, and the hens pass the time in regaining the strength which was spent in the growth of feathers. There is a difference of opinion upon the question as to whether the time of moulting can be artificially controlled or not. I will not touch on this, as I prefer to trust to nature and her ways, and let the hens moult when they will. It is a mistake to neglect them at this time; give them plenty of nourishing food; a thick gruel made of ground linseed cake, is good—a quart to 50 hens daily, until the new feathers get a good start. Add 2 ounces yellow sulphur to this quantity three times a week. Sulphur is regarded as a feather food, and also helps to cleanse the skin and remove impurities, and at no time does the hen need meat more than when she is growing feathers.

About the housing of the hens in winter, I am afraid I'm behind the times. I do not take to the theory of open fronts; would rather surround them with summer conditions, if possible. The house should be dry, no drafts, plenty of light and good ventilation, and should be thoroughly disinfected twice a year. For this we make a solution of good fresh lime and water. To every gallon we add one-half pint of coal oil, and use a spray pump to apply it. If you want to keep your fowl free from disease, it is necessary that you do not miss a crevice or corner. Keep at it until every spot from floor to ceiling, nests and roosts, are white. This is no little task, and you will readily understand that this is one of the places where the man's helping hand comes in.

A dust-bath for the inside of the house should be provided, and it should be near a window where the sun shines on it. For this purpose, a common box, filled with sand, ashes or road dust is effective. No matter how careful the flock is kept, we will sometimes find a sick hen. At times a few doses of some good poultry food given in a mash, or salts, 1 pound to 100 hens, in a mash, will bring them all right again. If a hen shows signs of tuberculosis, it is wise to dispose of her at once. For roup or bad cold, I use Rundle's Non-Such Liniment, and the method is 1 teaspoon three times a day in one-half cup of milk, with bread enough to soak it up. For dizziness, miss a meal or two, then give them a teaspoonful salts in bread and milk. I save all the egg shells in the summer months, dry and grind them, and give them to the hens in winter. I find that they are just the thing needed to tone up a droopy hen. A head of cabbage or a mangel is good when they are shut in. Hang it so that they will have to exercise themselves to get it. Some give turnips, but there is danger of the flavor of the egg being so good, and it is the good flavored egg we are anxious to get.

Freshness is the prime requisite in quality, but freshness is not necessarily a question of age. An egg may be fresh, under certain conditions, at the end of a week; it may be spoiled under other conditions at the end of a day. For instance, if an egg is placed up soon after it is laid, and put away in a cool cellar, it will remain fresh for some time; whereas, if laid early in the day, and exposed to the heat of a broody hen, would not last more than eight or ten hours. Be particularly careful about the cleanliness of the nests. Egg shells are porous, and, to lie for a long time against anything that is not clean will impart a taint to the inside. We should never leave near onions or coal oil near the nests, as they have a strong odor. If shells are

soft, 2 pounds slacked lime to a pail of water will make them stronger.

Many methods of breaking up the broody hen are recommended, some of which are very cruel. Ducking the hens in cold water, or hanging them up by the legs, and similar methods, are not to be tolerated. When the hen has been sitting for two or three days, I confine her in a pen, give her lots of good food, grit and water, and I seldom have to keep her there longer than a week or ten days before she is laying again. It may not be known to all that hens that have been frightened a few times are of no further use as layers. I have read again and again where poultrymen have attributed the non-production of eggs from hens which have been known as good layers to this fact. Let us bear in mind, then, that kindness, cleanliness, perseverance and care are a few elements that make for success with poultry.

The Great Hen Race.

In the twentieth week of the International Egg-laying Contest at the Storrs (Conn.) Experiment Station, 100 pens of five hens each competing, a pen of Rhode Island Reds made the remarkable record of laying 32 eggs, several pens laying 30 eggs each. All told, at the end of the 21st week, 22,391 eggs had been laid, but broodiness caused the weekly record to be lower than the previous one. The English pen of White Leghorns still leads the race, with a total of 417 eggs since the contest began, on Nov. 1st last. A Pennsylvania White Leghorn pen ranks second, with 368 eggs, pens of American Dominiques and R. I. Reds following, with 360 each, and Beaulah Farm, Hamilton, next, with 356.

APIARY.

Profits from Beekeeping.

Editor "The Farmer's Advocate":

You will remember a little private correspondence we had a month ago in reference to comparative profits of bees and hens. You asked me at that time to give a good strong article on the profits of beekeeping. I have not time to write a long article, but perhaps you can use the following:

Profits in beekeeping are just as variable as in any other line of agriculture, depending on location, management, season, etc. The season of 1911 was considered a poor season in many parts of Ontario, yet the average report of 600 beekeepers, pretty evenly distributed over the Province, was about \$5.00 per colony. I believe I am right in making the statement that 200 colonies of bees require less work than a 50-acre general farm, and I venture to say that the average farm of 50 acres of land in Ontario does not give higher yield than \$1,000 per annum. However, this average is below the profits that are being made by specialists in beekeeping.

Last season we had reports from a number of beekeepers, distributed from the East to the West, reporting a yield of over 100 pounds per colony, worth 9 or 10 cents per pound, wholesale. In one case, 69 colonies yielded 9,200 pounds—an average of 133 pounds. In another case, a man of 67 years took 5,150 pounds from 60 colonies—an average of 86 pounds. In another case, a man of 80 years of age sold his crop for \$1,000. These are not exceptional cases, but indicate what can be done by giving beekeeping the same business-like attention that would be given to any other line of work.

I hope that these figures will not lead anyone to the idea that large profits are easily made from bees. Beekeeping for a living is not by any means to be taken up by one who is looking for "easy money." A great deal of care and thought and labor and skill are required by the one who would make money from bees. My only thought is to emphasize the statement made by the late Deputy Minister of Agriculture at the Ontario Convention of Beekeepers, in November, that "Beekeeping is a business capable of greater development in Ontario at the present time than any other branch of Agriculture."

MORLEY PETTIT.

GARDEN ORCHARD.

Varieties of Tomatoes.

A. G. Turney, in his bulletin on "Tomatoes," states that, while he does not attempt to recommend particular varieties for each district, there are certain varieties commonly grown in each district which have given general satisfaction both to the canner and grower, and one is fairly safe in choosing one of these. Those recommended are Ignatum, Matchless, Worden, Greater Baltimore, Perfection, Success, and, for a fairly early tomato, Chalk's Early Jewel and selected strains of

Earliana. Stone, although a good yielder, and an admirable variety from the canner's standpoint, is apt to be a little late, and often a portion of the crop is caught by frost. Selection, with a view to early maturity, would produce a very valuable strain of this variety. Chalk's Jewel is apt to run off in size, and Earliana, after the first picking, falls off in quality of yield, the fruits not ripening up well at the stem end, thus causing a waste to the canners. Both these varieties may be rendered still more valuable by judicious seed selection.

Sprouting Potatoes for Early Use

Editor "The Farmer's Advocate":

For early potatoes, select some early variety, or use a few that you may have on hand. All varieties can be forced. Place some, crowns up, or spread out, in any warm place; perhaps about 60 degrees temperature would be about right. It is best, I think, if they can have some light, as they will grow stronger. But, as time is short now for sprouting to plant this spring, they can be forced by some kind of artificial heat, and if set on a little earth or dampened sawdust, and covered with a sheet or newspaper, and sprinkled with a little water occasionally, they will soon sprout, but the sprouts will be more tender, and will need more careful handling. A few can be sprouted in the hotbed or near the furnace or stove. I prefer to have them started soon enough to sprout two inches by planting time, though I have planted sometimes when the sprouts have been five inches. If they come up too soon and get cut by frost, they will come again.

It is best to use fair-sized sets, having two or three eyes; I would rather have more than less. The variety that I have used chiefly for early planting for twenty years is known as Early Marshall, and was originated by a Mr. Marshall, of Colchester County, N. S. For some reason—I know not what—when potatoes are set on end to sprout, all the eyes do not always put forth a sprout, but from two to three sprouts, and sometimes only one, from the crown eye appear. If it be so in general, that each eye does not sprout, it will account, perhaps, for the many vacant spaces so often seen in potato fields. I never count on failures of that kind, because I handle the potatoes for seed from one to three times over, and discard all imperfect ones seen. I have not sprouted at any time more than ten bushels a year.

P. B.
Colchester Co., N. S.

Classifying Insects and Fungi.

To spray with any degree of success requires, besides a knowledge of the acting principle of the remedy which is being employed, a rather intimate acquaintance with the enemy which is being combated. The different classes of insect and fungous diseases do not show similar characteristics. If it were so, then the question of remedy would resolve itself into a very simple one; the discovery of a single successful one would end our labors. As it is, a great many of these remedial compounds are required in plant economy, the absolute number needed depending entirely upon the different ways in which insects and fungous diseases attack their food or host plants. This results largely from differences in anatomical and physiological structure of these little but often highly-destructive animals and plants.

CLASSES OF INSECTS.

Practically all insects can be divided into two leading groups: (a) Those which actually chew and swallow their food, and have what the entomologist calls "biting mouth parts," and (b) those which obtain their food by piercing the other tissues of the plant and sucking up the juice, called insects with "sucking mouth parts." The first group of insects, among which we find grasshoppers, cucumber beetles, codling-moth larvae, currant worm, and a great many others, can be poisoned by covering the surface of the plant with some poisonous material; while the plant with some poisonous material; while the second group, since they do not eat the surface of the plant, but feed only on the inside juices, must be destroyed by means of some substance which will act upon their bodies, as caustic washes, or something which will act upon their breathing pores, smothering them, such as gas.

This, then, divides insecticides into two groups—food poisons, and contact insecticides. There are some insects, however, owing to their peculiar habits, inaccessibility, or other

causes, which require special treatment, such as the cut-worms, which work underground, and the grain weevils, which affect stored products; the ones which feed inside the bark or within the stem of the tree or plant, such as the apple-tree borer or the raspberry-cane borer; the household pests, and the animal parasites.

CLASSES OF FUNGI.

A fungus is a plant which feeds upon other plants, and is thus a parasite. It begins with a seed (spore) which germinates and produces a great number of small, thread-like structures, which correspond to the roots, stems and leaves of an ordinary plant, and called the mycelium. Sometimes the mycelium develops wholly upon the surface of the plant or fruit, as with the powdery mildew of the grape; while, at other times, the germ tube of the spore penetrates the skin and produces the mycelium within the tissues, just as happens in the case of the grain rusts and smuts, downy mildew, and a great many others.

Fungi, then, can be classed as external and internal, and the method of dealing with them varies, accordingly. Those of the first kind can be attacked and destroyed by use of proper materials, but the second kind can only be prevented. —[From Bulletin 195, "Insecticides and Fungicides," by R. Harcourt and H. S. Fulmer, O. A. C., Guelph.]

[Note.—See the spray calendar and L. Caesar's article, "Spraying Fruit Trees," in the issue of March 28th, 1912. From these, the various kinds of insects and fungous diseases can be readily classified and their proper treatments noted.—Editor.]

Hints on Top-Grafting.

Top-grafting is only valuable when there are varieties which for some reason it is desirous of changing to some other variety, and in sections where it is desirous to grow varieties which are not very adaptable to those sections, owing to lack of hardiness, and in perpetuating some special strain.

Grafting should be done in the early spring, preferably the latter part of March. Much of the failure has been due to grafting too late in the season. Scions should be made from last year's wood cut in three-or-four-bud lengths.

A limb more than 2½ inches in diameter is not very successfully top-grafted.

Cut main limb off as low as possible.

If handling mature trees, it is well to spread the period of conversion over two or three years, so as not to have too sudden a change.

Where possible, make the cut above some small laterals, so as to have the laterals utilize some of the sap.

Insert the scion at a slight angle, the top pointing outwards.

Two scions are enough to a cut.

It is of prime importance to have the cambium or sap layers of stock and scion in contact with each other in such a way as to promote a good flow of sap as soon as possible.

Split the stub with a grafting iron, and keep the split open with the upturned edge of this, inserting the scion and covering the whole surface well with wax.

Cut the scion wedge-shaped, about one inch long, leaving the bud edge wider than the inner edge, to insure a firm contact with the cambium layers.

Set the bud slightly below the top of the stub. In top-working young trees, they may be worked over as soon as the limbs are about a half inch in diameter.

In selecting scions, the grower should always take them from a tree which is outstanding in the quality of its fruit, in color and productiveness.

Grafts usually, if they grow at all, make a very rapid growth. Keep long grafts headed back.

If one is enough to cover the surface of graft, all others should be removed.

The second and third years the tops should be removed, leaving the grafts only.

WAX.

A very good wax is made of the following: One part tallow, two parts beeswax, four parts resin. Melt these together; pull, and cut into convenient size for use. This may be easily handled by first applying grease to the hands when using. Some grafters find it more convenient to melt it and apply it with a brush. Waxed cloth is also used. This is made by dipping strips of cotton into the hot mixture until saturated. The wax for this purpose should be made a little thinner by adding more tallow.—[From Bulletin 194, "Apple Orchard in Ontario."]

The Onion Maggot.

One of the worst pests with which the grower of onions has to contend is the onion maggot. This little insect is very appropriately named, for the onion seems to be its sole host-plant. A very complete discussion of this insect is contained in the report of the Connecticut Agricultural Experiment Station, from which we gather some interesting and valuable information for those interested in onion culture.

The presence of the onion maggot is first shown by the plants changing to a yellowish color, and finally wilting, while the lower or outer sheaf of the surrounding plants has also become affected in the same manner. The leaves of these plants have become soft and flaccid to the touch, and in general have a sickly appearance. Examination will show that the cylindrical root of the young plant has been nearly cut asunder, so that only the outer epidermal tissue or shell remains. Inside of this remaining tissue one or more maggots may be found feeding. If the plant is more advanced, and the bulb partly formed, a hole may be found bored either in the side or on the bottom of the onion, and one maggot is present in the interior. More commonly, however, several maggots of different sizes are found in a large, irregular cavity in the center, and the earth around the orifice is wet and slimy, forming a large, muddy mass, into which the maggots crawl to rest when not feeding. If the bulb has been infested for a longer time, the upper part of it may be found soft and putrid. From recent attacks, it seems that the highest and driest portions of the field are preferred by the insect.

The adult fly passes the winter in the pupa stage in the ground, emerges in spring usually when the young onion plants are just above ground, and lays her eggs, from two to six in number, singly, on particular plants here and there in the field. The eggs are perceptible to the naked eye. These eggs hatch in from seven to ten days, according to temperature. Upon hatching, the maggot bores down inside the sheath until it reaches the root, where it begins feeding. When the bulb is formed, the maggot may gain entrance from the side or bottom. The maggot is full-grown in about two weeks, and pupates in the ground, or sometimes in the onion itself, remains in the pupal stage two weeks, and emerges as the adult fly. Several broods are produced yearly.

The adult fly resembles the common house-fly, but is a little smaller, and distinctively gray in color. Three dark lines run along the body between the wings, and a row of long black spots along the middle of the abdomen. The pupa is enclosed in a chestnut-brown-colored case, with a stain of black at each end. The maggots are glossy, dull white, smooth in appearance, of an elongate-conical form, tapering to a point at the head or forward end.

There are a few natural enemies of this pest, among which are a species of golden-eyed flies of the genus *Chrysopa*, several species of predaceous beetles, minute parasitic wasps and predatory mites; however, none of these natural enemies do enough to materially lessen the numbers of the pest.

CONTROL METHODS.

The insect is difficult to control. By clean culture, prevent as many insects as possible from reaching maturity and multiplying. Clean up all rubbish and burn. Remove all previously affected plants and burn. All crop refuse must be destroyed. Having made the land as clean and free from infestation as possible, plant on ground not infested the previous season, and as far as possible from any land that has been infested, as flies are not known to migrate very far to lay their eggs. Then regulate the time of planting so that the adult which emerges with the first warm days of spring will have laid its eggs before the main crop of plants appear. When feasible, an earlier trap crop, afterwards destroyed, may be planted. Planting in hills is recommended. Fertilize well with quick acting mineral fertilizer, avoiding stable manure, rotted leaves, or other organic fertilizers, as they are apt to induce infestation. In addition, protect the plants and prevent the eggs from being laid on them, or the maggots from getting to the roots, by applying some material or covering on the surface of the ground around the stem of the plant, for which purpose use some of the preventives enumerated.

PREVENTIVES.

Sand and Kerosene.—A cupful of kerosene and a bucket of sand, applied to the base of the plant along the rows, to prevent the parent fly from depositing their eggs. This will also kill the maggots attempting to work through it.

Carbolized Lime.—Three pints of lime mixed to a thin cream, in a gallon of water, with a tablespoonful of crude carbolic acid, applied around the plant, has proved very successful.

Glue and Bran.—A mixture of 2 pounds of glue, one gallon of water, and $\frac{1}{2}$ pound of bran, placed lightly around the plant, prevents the young

maggot from getting into the tissue beneath after it hatches.

Mineral Fertilizers.—Kainit, nitrate of soda and sulphate or chloride of potash are useful as deterrents, especially when used just before or after the ground has been wet. They may be used as a top-dressing before planting, or applied afterwards as near as possible to the roots, the earth being turned away for this purpose. These fertilizers also stimulate plant growth, helping the plant to recover from maggot injury.

Other substances frequently used as repellants are powdered charcoal, powdered white hellebore, powdered tobacco, dry lime, dry unleached wood ashes and pulverized gas lime. Salt between the rows has proven of value in some cases. Any of these preventives, for best results, must be applied early, and immediately after plants are set or have made their appearance above ground.

REMEDIES.

If the maggots succeed in getting a foothold, the infested plants should be taken up carefully, providing they are few in number, and their maggot contents destroyed. If this fails to stop the infestation, other means may be tried.

Carbolic Acid Emulsion.—Add to 1 pound of soap boiled in one gallon of water, $\frac{1}{2}$ gallon of crude carbolic acid, and dilute the whole with 50 parts of water. This is perhaps the best of the remedies for general use, as it is a strong killing agent, and is also said to act as a preventive. It is used to best advantage a day or two after plants are started, and should be repeated every week or ten days until the last of May, in the North.

Paraffine Oil and Sand.—Spread broadcast among the onions, and then water the plants. It has been found very efficient in many cases as a killing agent.

Lime and Liquid Manure.—Five pounds of fresh-burned lime slaked in 100 gallons of liquid manure, stirred ten minutes, and applied with a sprinkler, is of value, although the use of organic manures generally is not recommended.

Carbon Bisulphide.—Injected around the roots, this is efficient in some soils, but is not practicable on a large scale.

Hellebore Decoction.—Applied as soon as eggs are noticed, and continued at intervals of five or six days.

Kerosene Oil, sprayed upon the soil, is of some value.

Hen Manure, which has been covered with soil to retain ammonia, is reported to be useful.

Stress is laid upon the fact that differences in soil, condition and composition make a difference in the relative efficiency of any treatment, either remedial or preventive. It should also be borne in mind that the more maggots destroyed each year, the less will remain to propagate for the coming year, so that, if active measures are used for two or three years, the infestation will be so reduced that keeping the pest in check becomes a comparatively easy task.

THE FARM BULLETIN

Drainage in a Dry Season.

FREE ASSISTANCE IN DRAINAGE AGAIN OFFERED BY THE O. A. C.

During the exceptionally dry season of 1911, land that was underdrained produced, on the average, about \$16.50 more per acre than land that was not drained, according to data collected by the Department of Physics at the Ontario Agricultural College.

Reports were received from a large number of farmers, of whom twenty-five were able to give definite figures on yield on drained and undrained land. Three of the number said they saw no difference, but all the others reported increases. Eleven counties were represented in the reports, from Durham in the east, to Essex in the west. The value of increases, including straw, was figured at October, 1911, prices, and March, 1912, prices. The former showed an average of \$15.97 per acre, and the latter \$17.04, and both totalled an average of \$16.50. The three who reported no increase were counted in obtaining the average.

In wet seasons the results are even more marked, but even at \$16.50 per acre drains more than pay for themselves in two years.

The O. A. C. is again renewing its offer of assistance to farmers in laying out their drainage systems. The Department of Physics has a special staff of Drainage Advisers for this work. There is no charge for the services of these men, the farmer being the travelling expenses. The railway fare is a dollar a mile for this work, and, as several drains are always made on one trip, the cost is spread among the several parties concerned. If you are wanting to have a drainage system laid out, drop a card to the Department of Physics, Toronto, Ontario, and a regular

application form will be sent, and later on one of the Department's Drainage Advisers will make the survey.

Why Prices Are High.

Editor "The Farmer's Advocate":

Food products and prices are the subjects of many discussions, and many and various are the reasons given why prices of certain food products should be so extremely high.

One writer in the press says: "One cause of the high cost of living is the failure of farmers to raise on their farms as much as they might do, with profit to themselves and improvement to their farms." The writer is evidently not a farmer. Another says that, "To reduce the price of eggs to the city consumer is an easy matter, if the grocer or retailer would deal direct with the farmer." If eggs, why not butter and potatoes, also?

Others, again, condemn the cold-storage people, who hold large quantities of food products until prices are forced up, and then unload. Let us take the two commodities mostly put in cold-storage, butter and eggs. Why is it that this class of farm products keeps up to such a high level during the summer months, as compared with prices twenty years ago? During the months of May, June and July, the supply of these products reaches its maximum, and if farmers had to depend upon the consumers to absorb the supply as fast as produced, what would be the result? Under the present rate of production during those months prices would drop to nearly nothing, and only the best would be taken, farmers would cease producing so much, and then would follow periods of famine, with prices such as only the wealthy could pay. As it is now, the cold-storage men step in when prices drop to a reasonable level, and take all the surplus eggs and a reasonable share of the surplus butter, and put them in cold storage, thus keeping prices up during the flush of production, and protecting cities like Toronto and Montreal against a famine when production falls to low-water mark. Towns of a few thousand people may deal almost directly with the surrounding farmers, but to suppose that a city like Toronto could do so, is absurd, for it requires a small army of men, who make it their sole business to secure food supplies, often from different parts of the Dominion and beyond, and, in extreme periods like the present, even from different parts of the globe; and thus the cold-storing of certain food products is necessary to provide against periods of insufficient production.

While prices for nearly all lines of farm produce are exceptionally high at present, farmers are in no enviable position financially this year throughout the greater part of Canada. Many farmers are buying what they should be selling, on account of unfavorable climatic conditions last season. Everybody knows that potatoes are almost out of sight, and doubtless many wonder why. The acreage was as large as usual, but the weather conditions were fatal to the crops over a very large extent of country, extending over into many parts of the United States. To make matters worse, the extremely cold weather of the past two months caused the frost to penetrate many cellars, with the consequent loss of the few potatoes many farmers had. High prices and shortage of seed may cause a shrinkage of the acreage usually put into potatoes, which will naturally affect prices unfavorably to the consumer next season, unless we have a very favorable season, when the crop may easily be quadrupled per acre, compared with last year.

The same weather conditions which adversely affected the potato supply also affected the butter supply, and what promised to be a banner year in the production of dairy products up to about the first of July, showed a lamentable falling off from the middle of July on, and the effect was soon seen in the tendency of prices to creep up to higher levels than usual during the three fall months. Pastures were never revived, from lack of our usual fall rains, and, where farmers could not supplement the pastures, cows went into winter quarters in poor condition. Extreme scarcity of winter feed in many sections caused farmers to either sell off their cows or dry them up, and by so doing helped to aggravate the butter situation. This combination of conditions has caused butter to reach unheard-of prices, and put it practically out of reach of a large portion of the working class in our cities.

Weather conditions are again responsible to a great extent for the very limited supply and the continued high price of eggs. There is always a period, from the latter part of October to the New Year, when the egg production is almost nil, and during that period the price for "strictly fresh" goes up by jumps, on account of the very meagre supply and the very insistent demand from those who are able and willing to pay whatever is demanded. If the weather happens to be mild during December, many pullets will commence to lay, and, if properly housed and cared for, may be induced to keep at it fairly well during the

cold, rough months of January and February; but in many cases they will discontinue when extreme cold weather sets in. Thousands of hens commenced to lay this winter before New Year on account of the very mild spell we had during the latter part of December, but most of them shut down tight as soon as they encountered zero weather; and since the New Year until recently, we had little else but zero weather, with the result that but few poultry-keepers have been getting anything like their usual supply of winter

eggs, and prices were from 15 to 20 cents higher through February, in Toronto, than in February, 1911.

Then, look at the prices of hay and oats, brought about solely through weather conditions. Twenty dollars per ton for hay was never heard of at country points distant from Toronto before, and in many places it is being shipped in from distant parts, and is being bought by farmers, many of whom usually have hay to sell.

It is all very well to say that this or that factor is responsible for the unusually high prices of certain farm products, but we cannot ignore the fact that we have had an unusual set of weather conditions to contend against during the past 12 months, which have been a bigger factor than most people give them credit for, and yet many townspeople think the farmer is a chronic grumbler on the weather question. "FARMER."

Agricultural Legislation and Appropriations at Ottawa.

The new Government at Ottawa, in its first session, has given fairly satisfactory evidence of its appreciation of the importance of the agricultural industry to Canada. Not only have important measures, framed in the interests of agriculture been enacted, but generous votes of money have been passed for carrying on the work of the Department, administered by the Hon. Mr. Burrell, and for other undertakings on behalf of the farming industry to be looked after by other Departments of the Government service.

APPROPRIATIONS.

The following table is an itemized statement of the amounts of money voted on behalf of agriculture, besides other appropriations calculated to improve rural conditions:

	1912-13	1911-12
Experimental Farms—general vote	\$180,000	\$150,000
Publications of Ex. Farms.....	15,000	10,000
Establishment and maintenance additional Experimental Farms	200,000	100,000
New barns, Indian Head Experimental Farms	25,000	
Dairy and Cold-storage Br.....	140,000	140,000
Experiments in cold storage of fruit	28,500	28,500
Bonuses for cold-storage warehouses	200,000	200,000
Seed Branch	80,000	60,000
Live-stock Branch	102,000	102,000
Administration, Diseases of Animals Act	350,000	325,000
Administration, Meat and Canned Foods Act	175,000	150,000
Encouragement and sale, Canadian tobacco	20,000	20,000
International Institute and Publications	15,000	10,000
International Exhibitions	175,000	225,000
Exhibit, Imperial Institute.....	8,000	8,000
Dominion Exhibition	50,000	50,000
Administration and Enforcement, Destructive Insects and Pests Act	25,000	15,000
Dominion Building, Canadian National Exhibition	100,000	
Seed grain for settlers	200,000	
Appropriations to Provinces for improvement of Agriculture	500,000	
Investigations re improvement of Agriculture	10,000	
National Biological Laboratory	25,000	
Erection and leasing terminal elevators	1,500,000	
Commissions, employees, etc., re Canada Grain Act	25,000	
Extension of Rural Mail Service	200,000	

BRANCHES OF THE DEPARTMENT.

Under the new Minister and new Director, a pronounced advanced policy for the Experimental Farms has been decided upon, as evidenced by the increased vote. The recently-added Farms are being equipped to carry on important experiments, in accordance with the general policy of the Farms' system. The Superintendents of the older Farms are to be given a freer hand than formerly in carrying out such work as the local conditions require. Experiments with live stock are to be greatly increased. The Indian Head Farm is to have a modern set of barns to replace those destroyed by fire a few months ago.

Under the old Government, the Seed Commissioner took a prominent part in organizing and advertising field-crop competitions and Seed Fairs, besides providing and paying the expenses of expert judges and printing the reports. While most of the Provinces applied for and received this service, others did not. A new policy has now been decided on, under which financial assistance is offered to each Province on the basis of a refund of two-thirds of the amount awarded in prizes. The organization of competitions, selection and payment of judges is to be looked after by the Provincial Departments of Agriculture. By this arrangement the Federal Department

is prepared to spend about \$25,000 more in seed-improvement work this year than last or any previous one.

The vote for the Live-stock Branch includes, in addition to the usual work, a substantial grant to the National Live-stock Records, as well as bonuses to owners of Thoroughbred stallions who allow their horses to stand for public service. This latter assistance is based on the idea that the utility of the light-legged horse is improved by the blood of the old English breed of race-horses.

The Dominion Exhibition vote of \$50,000 this year goes to the Central Canada Exhibition Association at Ottawa. Part of the grant is to be used for paying the cost of conveying to Ottawa exhibits from any point that is beyond 100 miles from the city. A new machinery hall, 384 by 144 feet, is to be erected by the Association during the coming summer.

The Department of the Interior will administer the vote for providing seed grains for settlers on unpatented farms in Manitoba, Saskatchewan and Alberta. An investigation carried on by the Seed Commissioners showed that much of last year's crop in certain sections is not to be depended on for seed. To assist settlers doing homestead duties in such districts, the Government will provide seed at market value, to be paid for out of crops to be harvested before the patents are granted. A very low rate of interest is charged the settlers.

THE AGRICULTURAL AID ACT.

This measure provides for the contribution, by Order-in-Council, to any Province for the encouragement of agriculture a subsidy not exceeding such sum as may be voted by Parliament for that purpose. The bill further provides that the Minister of Agriculture, with the authority of the Governor-in-Council, may enter into an agreement with the Government of any Province, setting forth the terms upon which such subsidy is granted, and prescribing the conditions under which and the purposes for which it shall be expended. It is for the purpose of working out a scheme which will be a permanent basis for future Federal helps to agriculture in the several Provinces that C. C. James enters the Dominion service.

The appropriation of \$500,000 for this year is to be divided as follows:

Ontario	\$175,733.32
Quebec	138,482.40
Nova Scotia	34,288.45
New Brunswick	24,509.93
Prince Edward Island	6,529.85
British Columbia	27,334.76
Manitoba	31,730.05
Saskatchewan	34,296.29
Alberta	26,094.95

THE LIVE-STOCK PEDIGREE ACT.

The original Act, which dealt with the legislation necessary for the incorporation of the Live-stock Record Associations, was repealed by a new measure. Certain sections of the old bill were found not to be sufficiently definite to make the working of the Associations satisfactory. There are two points of difference of practical importance between the old bill and the new. Under the new Act, the various associations are given greater powers in the spending of their moneys, while the other point makes more clear the nature of the penalty for misrepresentation and the method of collecting it.

In regard to the spending of money, the old Act provided only for the registration of pedigrees, printing of books of record, etc. The various associations went beyond these powers every time they granted money for prizes at exhibitions. The new bill makes it legal for Record Associations to spend money in whatever way they see fit in promoting their work. As provided in the old measure, amendments to the constitution, including rules of entry, fees, etc., of an incorporated Record Association do not become law until approved by the Minister of Agriculture.

The old measure provided no machinery for imposing penalties for misrepresentation. The new Act places the administration in the hands of the Minister of Agriculture, very similar to the

provisions of the Meat and Canned Foods Act. Hitherto, misrepresentations were dealt with by interested Record Associations. Under the new measure, the National Record Committee is empowered to take up this work and to have it dealt with by the law officers of the Government.

RURAL MAIL DELIVERY.

The rural delivery of mail, set in operation by the late Government, proved so popular that the new powers showed no inclination to abandon it. On the contrary, routes already established are to be extended, and others laid out. This further development of the system demands the creation of a new branch of the post-office department under one official, who will have the standing of a deputy minister. Special officers are to be detailed to lay out routes in different parts of the country. To work out and carry on the system on a more extensive plan than formerly, the sum of \$200,000 was voted.

THE CANADA GRAIN ACT.

An Act respecting grain, repealing "The Manitoba Grain Act" and its amendments, "The Manitoba Inspection Act," and Chapter 85, Part II. of "The Inspection and Sale Act," and known as "The Canada Grain Act," after much study and debate in both Houses, received royal assent. It includes 248 sections, and is intended to facilitate the grading, storing, weighing, transporting and marketing of Western grain, with a view to safeguarding the interests of grain-growers and others interested in the grain trade. The Act is to be administered by a Board of Commissioners, the salaries and expenses of which are provided for in the vote of \$25,000 passed for that purpose. The Act also involves an expenditure of \$1,500,000 for acquiring, building or easing terminal elevators.

In the matter of marketing, the bill provides for shipping over loading platforms, through flat warehouses, storing in country elevators, selling direct to country elevator operators, or, if he chooses, a farmer may ship his own grain and sell it through his commission agent.

Flat warehouses are for temporary storage purposes. They have bins of one-thousand-bushels capacity, which a farmer may occupy for six days, exclusive of Sunday, for filling and loading on cars. A bin may be occupied for a longer time if cars are not available. These, like country or other larger warehouses and elevators, must be bonded and licensed.

Country elevators, of which there are more than 2,000 in operation, are allowed under the Act to store, clean and sell grain. Provisions are made to regulate all manner of cases that experience teaches may be encountered.

The Act makes provision for a new class of elevators, known as "Public Elevators." These may be stationed throughout the East as well as the West, except at terminal points. Their function is to store and ship Western grain after it has passed inspection. Grain stored in these must retain its identity. That is to say, it must grade out as it graded in, which prevents mixing. Terminal elevators include every elevator or warehouse which receives or ships grain, and is located at any point declared by the Governor-in-Council to be a terminal. At present the only terminal elevators are situated at Fort William and Port Arthur.

Again, provision is made for "hospital elevators," which include elevators or warehouses used for cleaning or other special treatment of rejected or damaged grain, and which are equipped with special machinery for that purpose. The official grain inspector may, if he sees fit, in the interest of the owner and at his risk and expense, order a warehouse man to transfer grain out of condition, or becoming so, to a hospital elevator.

Exhaustive sections deal with transportation. Railway companies are compelled, on the written application to the Board of Commissioners by ten farmers, to construct and maintain loading platform. These platforms are for the free use of farmers in loading cars, which must be supplied on application. Cars may be ordered through railway agents who are compelled to keep open order books. In cases of car shortage the board may at its discretion order an equitable distribution according to the apparent needs. Regulations are provided for the guidance and control of commission merchants and track buyers. Under

the head of sale of grain samples, markets are to come into force by proclamation in the Canadian Gazette.

A measure known as "The Highway Bill," involving an expenditure of one million dollars as subsidies to the different Provinces according to population for road construction passed the House of Commons, but the Senate failed to sanction all its provisions, necessitating that the bill be held over until next session.

LIGHTENING AN OVERLOADED DEPARTMENT

Quite in line with a suggestion previously advanced through "The Farmer's Advocate," is an announcement that the Census and Statistics Branch of the Department of Agriculture has been transferred to the administration of the Minister of Trade and Commerce. This is a change that has been in contemplation by the Government for some time, as it has been recognized that not only has the Department of Agriculture been overburdened with incongruous branches, such as patents, copyrights, archives, etc., but that the statistical work might with advantage be co-ordinated with the work performed by the Department of Trade and Commerce. The mines branch is to be turned over to the Department of Interior, where it belongs more properly than to the Department of Inland Revenue.

Nova Scotia Notes.

Eggs are plentiful, and have dropped from 28 cents to 20 cents. Dairy butter remains the same, namely, 25 cents; creamery butter is selling for 32 cents. Beef is creeping up; a certain merchant lately paid \$52.65 for a carcass (steer three years old) weighing 585 pounds, or 9 cents per pound, cash, and the hide was bought for \$7.00. The buyer claimed that it was the best beef he ever handled. Potatoes are retailing for 70 cents per bushel. The flow of milk is increasing, and output is easily sold. The local milk companies report good business. A few farms are for sale, and a number of farmers are moving to the Western Provinces. Draft horses 1,200 pounds and up are in demand just now for the construction of the Eastern Railway of Nova Scotia, at least that part of it between Dartmouth and Dean's Settlement—about seventy miles. It is said that the new railroad, when completed, will run through a fine farming country.

Farmers are taking keen interest in the standing field-crop competitions, and are giving more attention to the cultivation of grain. A good exhibit of seed was shown at the sixth annual Seed Fair. In wheat and oats (White Russian Wheat and Banner oats), the first honors went to Ronald Chisholm, of Briley Brook, Antigonish County, he also winning the Broadfoot Cup for the second time. Mr. Chisholm has already taken several first prizes with his grain, at the Amherst Fair in December, 1911, and at the January Provincial Seed Fair, at Truro, 1912. Potatoes were of excellent quality.

The price of seed being so high of late years, farmers are endeavoring to raise their own supply, and are making good. J.M.
Antigonish Co., N. S.

Is the Field Horsetail Poisonous?

The specimen of plant sent to this office by Mr. Mason is the common Field Horsetail, also called the Small Scouring Rush (*Equisetum arvense*). It is getting common throughout the country, and is particularly noticeable along the railways, its light spores doubtless being picked up and disseminated by passing trains. It flourishes in moist fields if its perennial roots or root-stocks are given a chance to get established. Its pale-yellowish, spore-bearing stems live but a brief time in early summer, and these are succeeded by the sterile, much-branched, green plants, which are more conspicuous, and may grow rank enough to become an impurity in hay.

Mr. Mason inquires whether it is more dangerous eaten green than dry. I have no knowledge of stock ever having been injured by eating it in the fresh state. An allied plant has the reputation in Europe of poisoning horses eating much of it in hay. The United States Department of Agriculture received statements from two of the New England States of supposed poisoning of sheep and horses from eating the American plant named above. About ten years ago, Messrs. Chestnut and Wilcox scolded the effects of Horsetail diet upon a rabbit. The conclusion they reached is that its deleterious action, which was very marked, was due solely to the mechanical effects of the harsh, scouring stems upon the alimentary tract. As far as they felt justified in going was to say that hay containing a considerable proportion of the weed should be fed sparingly or cautiously. Any experience that Mr. Mason or any other reader has had on this subject, if communicated, would be of general interest.

Automobile vs. Traction Engine.

Editor "The Farmer's Advocate":

It is not at all peculiar that in every case in which the right of the traction engine to the use of the highway is brought into question, the automobile should at once be cited as an instance of a machine, more destructive of highways than a traction engine could possibly be, driven with larger disregard of the right, not to say the lives, of others, and yet having practically undisputed use of our highways. True, here and there are instances of unwarranted arrest at the hands of petty officers having too huge a sense of their own importance, but, as compared with the number of such machines in everyday use, these are too few for serious notice. And, while no one will dispute the fact that the automobile is a very large factor in the destruction of our rural highways, no one seems to be willing to consider the elimination of the automobile because of it. The sentiment is rather in favor of making the road to withstand the demands of automobile traffic, and much time and money is being spent to achieve this result. And this is as it should be, for the automobile already far outnumbers the horse-drawn pleasure vehicle. While men of means who love the horse for his own sake will never give him up, they will still have an automobile, and people of moderate means who never would have considered horse ownership for pleasure are falling over themselves to buy automobiles. Also, the farmer is finding the automobile to be an actual necessity, and what is a good road for autos is equally good for the horse. No wonder, then, that the automobile is having its own way with the roads.

On the other hand, on the few occasions that the traction engine really does hurt the road, the damage is plainly noticeable. It shows at once. Unlike the insidious but constant and rapid wear occasioned by the automobile, the whole detriment is accomplished and is measurable at once, and the steady deterioration from the automobile does not measure up in the town official's mind with the occasional ravage of the heavier machine. It will take education to change the point of view of some of these legal suasion for others. The subject is a good one for the attention of Threshermen's Associations everywhere. The plain fact is that the thrasher engines have equal rights on the highway with other users. It remains with the owners to secure universal recognition of these rights, never lying down, always ready to fight when they are questioned.

Peel Co., Ont. ERNEST L. DAVIDSON.

Cultivate Cheerfulness.

Editor "The Farmer's Advocate":

In an editorial in "The Farmer's Advocate" of March 14th we are told that "the milk of human kindness tendeth to abundance of the milk that bringeth in the cheques."

I am of the opinion that "the milk of human kindness" can be used to advantage not only in the treatment of our dairy cows but in dealing with every living thing about the place, from pussy lying under the stove to wifey working over the stove.

In dealing with animals, this does not necessarily mean abundance of feed alone. Did you ever notice that when you go into the barn on a morning when things do not seem to be going just right, and you order the horses to "get around there!" as if they had done something for which they should be punished, they will begin to step over with their heads high in the air, and they will give a sniff which if it could be translated would say, "What have we done now?" Then if you go on down into the stables and shout at the cows in the same rough voice, have you noticed how they put up their noses and show the whites of their eyes, as if wondering what awful thing were coming to them.

Such men are common all over the country, unfortunately, but not for a moment can we believe that they are the ones that get the most out of life. Their stock never seems to do quite so well as that of the man who always speaks quietly. It needs no argument to prove that cows which are yelled at and pushed and scolded will show their resentment in a way most potent to the farmer by holding up part of their milk, and it will be the very best part too. The scales and the testing machines have proved this. Both quantity and quality suffer when the cows are roughly treated.

The horse that is misused never gives his master the confidence and good service that a properly-treated animal does. He always stands looking out of the corner of his eye to see what move his driver is going to make next.

Then, again, the man who is habitually cross with his cows and horses is very apt to treat the members of his household the same way, and if there is anything that will make home-life miserable it is this habit of speaking sharply to everybody one meets.

Look at this from any standpoint you like, it is the cheerful man or woman who wins out in

the end. Even hens know when they are kindly spoken to, and cats and dogs. There is something in the heart of every living thing that responds to cheerful words and kindly ways; and they cost far less than the harsh words and manners so many of us have, either consciously or unconsciously acquired. C. C. S.
Carleton Co., Ont.

P. E. Island Letter.

Up to almost the middle of March we had close winter weather, with a very heavy covering of snow on the fields. About the middle of the month soft weather set in, and for a week there were great freshets, making travelling very difficult, and leaving the fields quite bare. It looks bad for the clover on the new meadows just now, as the frost is out three to four inches. Succeeding frost will be sure to break the root, unless we should have a fall of snow to cover it up.

Butchers are scouring the country for fat cattle just now, and it looks as if beef would be at a premium this spring. Seed oats are also in strong demand, and sell from 60 to 75 cents per bushel. Much of the Islands export of oats this spring will be for seed in Nova Scotia and New Brunswick.

From February 28th to March 14th there were four seed shows held here—two in King's County (one at Souris and the other in Georgetown). These were the smaller shows, but brought out strong competition. The samples shown were excellent, and the large attendance, notwithstanding unfavorable weather and bad roads, showed that farmers have awakened to the necessity of using only the best seed if they are to have paying crops. The Provincial Seed Fair was held in Summerside, and happened on good weather, which resulted in a big attendance. This show is always improving, and exhibitors are ever on the increase. The samples of all seeds are so well cleaned and most of them so true to type in the different varieties that the judges have some difficulty in placing the awards. Better oats, wheat, potatoes, peas cannot be got together anywhere in Canada. The domestic science exhibit in connection with this show occupies a building all by itself, and has grown to great proportions under the management of the ladies. It was a magnificent display in the art of bread-making. Hundreds of homemade loaves, all of which appeared to us to be about perfect, together with a vast array of fancy cake, pies, biscuits, and the hundreds of tempting samples of fruits and vegetables preserved in glass, gave ample proof that the P. E. Island ladies were experts in the culinary art.

The Central Seed Fair, held in Charlottetown, was a grand closing to the circuit, and was in some particulars the best show of all. The management secured the market building, and had ample room to display their splendid exhibits to advantage. This show, as well as the Provincial, was open to the whole Island, and competitors in all the other shows were here. Competition was very close and the samples the very choicest. The expert judges had little criticism to make of any of the exhibits.

The domestic science department was also a very strong feature of this show, and in connection there was also a large exhibit of poultry of all the standard varieties.

The great feature of both of the larger shows were the educational meetings held through the day.

These seed shows with their educational meetings seem to come nearer the people, and attract their attention to better farm practices than the big fall shows where there is so much of the amusement element, such as horse-racing and fake shows in evidence to take their attention from anything useful or instructive. W. S.

A Supervisor of Government Farms.

An appointment which has been on the tapis for some time became a reality last week, when the Ontario Legislature announced that S. E. Todd, B. S. A., a graduate of the Ontario Agricultural College, and for the past two years District Representative of the Ontario Department of Agriculture in Lambton County, where he made an unqualified success of the varied work connected with his office, has been made Supervisor of all the farms connected with Government Institutions throughout the Province, comprising some 1,000 or 5,000 acres, his new duties to commence at once. Mr. Todd's new work will be largely of an advisory character. As an agricultural expert, he is looked upon as one of the best in the country. He revolutionized Lambton County agriculture, and we look for great things in his management of the Government farms.

Ontario Crops and Live Stock.

The following information regarding agricultural conditions in Ontario is contained in a bulletin prepared by the Provincial Department of Agriculture, based upon information furnished by a large staff of experienced correspondents, under date of April 1st:

Fall Wheat and Clover.—These crops were protected against the intense cold of midwinter by a heavy covering of snow, much of which still lay on the land at the end of March. This has made it difficult for correspondents to report definitely, but the opinion most frequently expressed was that both fall wheat and clover would come from under the snow in practically the same condition in which they entered. It was pointed out, however, that the trying weather of April, with its alternate thawing and freezing, was yet to be met with before these crops reached the new growing season.

Fruit Trees.—Until the buds begin to swell, it will be too early to speak definitely regarding the effect of the severe winter upon orchards. There are, however, a few reports of injury to peaches and other tender-fruit trees, on account of the very low temperatures of January and February, although the most serious injury from that cause, as yet apparent, has been the splitting of a number of apple trees. On the other hand, so far, no damage from sleet storms has been sustained by orchards. Cotton-tail rabbits and mice are reported as doing considerable injury to young fruit trees.

Live Stock.—The unusual length and severity of the winter, the shortage of fodder supplies, and the great lack of bedding materials, have been most trying to live stock. Notwithstanding these drawbacks, the general condition of the various classes of farm animals may be fairly summarized as being rather on the lean side, but healthy.

Horses, on account of their high value, have received more attention than any other class of live stock, especially in the case of working horses, which are, as a rule, in fine shape. Out-

side a few mild cases of distemper, no disease has been reported.

Cattle are also in good general health, considering that most of them have had but little more than a maintenance ration. Fat cattle are rather scarce, and there are not as many store cattle as usual, and neither are up to the average in quality, owing to the paucity of fodder supplies.

Sheep are comparatively few, but are in good condition, and early lambs are coming on nicely.

Swine are scarcer than usual at this time of year, and appear to have suffered more than other live stock from the long confinement of the hard winter. Early litters are not doing as well as usual. The scarcity and high prices of feed, and dissatisfaction with the market prices for hogs, are given as the reasons for the more recent falling off in numbers.

Fodder Supplies.—All kinds of fodder supplies are low, taking the Province over, except in some Eastern counties, and careful feeding must be practiced until live stock can be turned upon the grass. While a few correspondents report a surplus of hay, others speak of having to buy from outside points at stiff prices. All classes of grains are also scarce and high in value. Straw was never more appreciated; it has been scarce for feeding, and almost impossible to get for bedding. Roots have been in fair supply, and so has corn, which has been largely used both as silage and stover, to the saving of other more expensive fodders.

Methods.—The bulletin will give in detail quotations from practical farmers as to how they met the difficult situation of a long and steadily cold winter, with short supplies of fodder. The outstanding features of this feeding campaign were, briefly: Disposing of all unnecessary animals early; feeding only what would be eaten absolutely clean; freer use of the cutter, especially for straw, of which only the very poorest was used for bedding, sawdust, leaves, etc., being substituted; fuller adoption of the corn crop, more particularly as silage, which one correspondent describes as "the salvation of those who had it";

larger utilization of chaff for mixing with other fodders; purchasing mill feeds and brewers' grains, and cheap frozen wheat from the Northwest.

Bulletin on Weeds and the Seed Law.

A bulletin has been issued by the Seed Branch of the Department of Agriculture, Ottawa, giving a full reprint of the Seed Control Act, 1911, which is the law governing the sale of seeds in Canada. This Act, with the regulations of the Governor-in-Council, names the weeds which are considered most noxious and are particularly legislated against, and defines the standards of quality in regard to purity and germination to which seed of various kinds must conform when sold for seeding purposes. The standards for four grades of timothy, red clover, alsike and alfalfa seed are given, and full information regarding the law, as applied to farmers, and the way in which it may be used for their protection.

The second part of the bulletin deals with seed-testing work and the application of the law through seed inspection. Seed laboratories are maintained in Ottawa and Calgary for the use of seedsmen and farmers, where samples are tested free of charge.

The largest part of the bulletin, and perhaps that of most interest to farmers, deals with weeds and seeds. About 90 different species are illustrated and described, and, with the use of the bulletin, the identification of both the growing plants and the seeds should be comparatively easy. The weeds considered noxious under the Seed Control Act are given first, in botanical order. This bulletin will be very interesting and useful to those interested in the identification and control of weeds, and the means to adopt to prevent their introduction and spread through commercial seeds. It is known as Bulletin No. S-6, and may be had free on application to the Publications Branch, Department of Agriculture, Ottawa.

TRADE TOPIC.

Spring is here, and fence repairing and building new fences will be found necessary on nearly every farm in the country. It is necessary to have something easy to work and effective for digging post holes. Standard earth augers are said to be good tools for earth boring. They enter hard earth, have an extension blade, hold fine sand, do not bind in the hole, will bore nine different sized holes, and are guaranteed to do the work with half the effort. These tools are manufactured by the Canadian Logging Tool Company, Ltd., Sault Ste. Marie, Canada. See the advertisement in another column.

GOSSIP.

The death is announced of John W. Groves, of Chicago, Secretary of the American Shorthorn Herdbook, who succeeded J. H. Pickrell in the office. It is believed that no pedigree register association has ever had the services of a more systematic and capable official. He was the owner of a fine farm and kept closely in touch with the stock-breeding industry. Owing to the absence abroad of assistant secretary B. O. Cowan on a six months' leave of absence, a special meeting of the directors has been called to select a successor to Mr. Groves.

The annual auction sale of Shorthorns from the noted Anoka herd of F. W. Harding, at Waukesha, Wisconsin, April 3rd, was largely attended by prominent breeders from many of the States and a considerable number from Canada, two of whom secured the cream of the offering for the highest prices. The cattle were of superior character, in fine condition, and brought good prices, the top of which, \$1,650, was the bid of Robert Miller, of Stouffville, Ont., for the roan yearling bull, Gloster's Fashion, born November 10th, 1910, a son of Leader's Fashion, out of a Duchess of Gloster dam, by Whitehall Marshal, Sultan's Test, a roan, born January, 1911, the last son of the renowned white bull, Whitehall Sultan, went to H. O. Weaver, Iowa, at \$1,305. Two other yearling bulls sold at \$505 and \$605. The highest price for a female, \$1,305, was paid by R. W. Caswell, of Saskatoon, Sask., for the roan yearling heifer, Cloner Sultan, calved January, 1911. The same yearling also paid the second highest price, \$875, for the roan yearling heifer, Gloster

Sultana 2nd. Seven other females sold at prices ranging from \$400 to \$760. The average for the Anoka offering was \$400.

QUESTIONS AND ANSWERS.

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

Miscellaneous.

BARN PLAN.

I wish a plan for stable under a barn 50 x 34 feet. I wish to keep both horses and cattle in same. Was considering placing horses in one end, then a hall, a row of cattle facing the horses, and another row facing a hall in other end of stable, boarding up tight in front of horses, and also cattle facing hall in front of horses. Kindly tell me how best plan would be to ventilate this stable. Wall is half concrete and half large brick; barn doors to face north and south. State in which end horses would be best. Intend placing another barn to south-west corner for grain barn.

D. M.

Ans.—Not knowing all the conditions entering into the building of this barn, we cannot state definitely which would be the best plan to adopt in its construction. No doubt your contractor could help you some, and we would advise that you see a few stables about the size you contemplate building before you decide definitely on a plan. We think the plan you suggest is a good one. After the horse stable is taken off one end, it will leave the remaining portion of the barn practically square, so it will be immaterial which way the rows of cow stalls run. We would suggest that you provide a few box stalls in the cow stable for cows at time of parturition; also for calves. These could take the place of regular stalls at one end, or might be placed behind the cattle. A small box stall could also be provided in one end of the horse stable. There is some dif-

ference of opinion as to which is the better way to arrange the cow stable with the cattle facing each other, making one feed alley, or with them backing each other, making one litter alley. A little advantage is found, we think, in having the cattle face each other, as it is a great saving in feeding, whereas the cleaning of the stables is not facilitated by the other method unless the alley is wide enough to drive a team through and clean out in a sleigh. Where feed and litter carriers are used, or even where they are not used, and stables cleaned with the barrow, a little time is saved, especially in feeding, when the rows of cattle face each other. Board the partition separating the horse stable up tight. If a basement for stock is to be put under the other barn, it would be better to place the horse stable at the east end of the present structure, as we understand it, so that an opening could be made from the cow barn into the basement of the other new barn, which basement might be used as a manure and watering shed, or be divided into box stalls for stock. The best system of ventilation we can recommend is the Rutherford system, or a slight modification of it. This system allows for the admission of fresh air at or near the floor. Intakes are often placed under the floor. At the O. A. C. the intakes are above the floor, and a cloth screen inside turns the air upwards, preventing drafts. The intakes should be placed on as many sides of the building as possible. The size of the intakes should provide at least 15 square inches per head of cattle or horses in the building. No openings should be less than 4 x 10 inches. Outlets should begin at the ceiling, be controlled by keys, like a stovepipe, and come out at the peak of the roof. Outlets should have twice the capacity of the intakes, that is, they should be at least 30 square inches for each animal stabled. They should never be less than 18 inches across. They should be constructed with two layers of board, with one inch air space between. Sometimes constructed of single boards matched, they give satisfaction, but the two-ply system usually gives the best results.

LICE ON CHICKENS.

What would be the best remedy for destroying lice on young chickens, and also what would be effectual in killing mites?

E. E. S.

Ans.—Insect powder dusted into the down, or a little lard rubbed on the heads.

SOFT-SHELLED EGGS.

- 1. Is it the lack of sufficient sand given to hens that causes the egg shells to be soft?
- 2. What is the cause of hens starting to eat eggs?
- 3. Is there any remedy for it? If so, what?

4. Will it be injurious or beneficial to hens to allow the warmth or heat from the pigpen to go into the henhouse? Or would you advise keeping a tight board partition between the two departments?

E. R.

Ans.—1. No; although plenty of grit in some form is beneficial. Lime should be kept before the birds constantly in liberal quantities. Oyster shell is a convenient one. Lack of exercise and over-fatness tends to cause soft shells.

2 and 3. Soft shells, or any condition such as laying from roosts, which may cause the eggs to become broken, and give the hens a taste of egg meat. Exercise helps to guard against the trouble.

4. It is not advisable. Better have a tight partition.

SMALL SILO.

1. Would a silo eight feet across and fifteen feet high, filled, keep in good shape for feeding?

2. How long would it feed three cows, and is it good for sheep?

3. How much corn would it take to fill it, and would dry and green corn, mixed, be all right, and would you cut it up together?

S. J. T.

Ans.—1. The chances are you would not have very great satisfaction from such a silo, as there would be too large a percentage of deteriorated silage. No doubt you could preserve feed that way with care, but we would not recommend the building of so small a silo.

2. It would probably hold about 12 tons, and if the waste did not prove excessive, should feed three cows about 200 days. A little may be fed to sheep, but silage is not so good a feed for sheep as for cattle.

3. About an acre of reasonably good corn should fill it. In so small a silo, where settling is not as free as in a large one, we would not care to risk much dry corn. Put the corn in within two or three days after cutting. Chop it up fine, and tramp well.

THE CANADIAN BANK OF COMMERCE

ESTABLISHED 1867

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

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

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

MARKETS.

Toronto.

At West Toronto, on Monday, April 8th, receipts numbered 46 cars, comprising 929 cattle, 12 hogs, 13 sheep, 18 calves, and 26 horses. Owing to light run, trade was active, and prices for butcher cattle 15c. to 20c. higher. Exporters, \$6.80 to \$7.40; butchers' heavy cattle, \$6.75 to \$7; butchers', 1,000 to 1,100 lbs., \$6.50 to \$6.75; good, \$6.25 to \$6.50; medium, \$5.90 to \$6.15; common, \$5 to \$5.80; cows, \$3 to \$5.75; bulls, \$4.75 to \$5.75; milkers, \$40 to \$65; calves, \$5 to \$8.50. Sheep, \$5 to \$6; yearling lambs, \$7 to \$8.75; spring lambs, \$4 to \$8 each. Hogs, \$8.50 fed and watered, and \$8.15 f. o. b. cars.

REVIEW OF LAST WEEK'S MARKETS

The total receipts of live stock at the City and Union Stock-yards last week were as follows:

	City.	Union.	Total.
Cars	112	172	284
Cattle	1,258	2,442	3,700
Hogs	2,742	1,237	3,979
Sheep	860	127	987
Calves	874	87	961
Horses	4	113	117

The total receipts at the two yards for the corresponding week of 1911 were as follows:

	City.	Union.	Total.
Cars	227	190	417
Cattle	3,084	3,330	6,414
Hogs	5,596	1,110	6,706
Sheep	891	852	1,743
Calves	687	122	809
Horses	30	185	215

The combined receipts of live stock at the two markets for the past week show a decrease of 133 cars, 2,714 cattle, 2,727 hogs, 756 sheep, and 98 horses; but an increase of 152 calves, compared with the corresponding week of 1911.

Receipts of all kinds of live stock were light, especially hogs, sheep and lambs. Prices for cattle remained steady to firm, but all of good to choice quality were readily taken. There was a fair outside demand, buyers for Montreal, Ottawa and Hamilton, being on the market, as well as one order for about 100 export steers by a Chicago firm.

Exporters.—Rice & Whaley bought, on order, five carloads of export steers, 1,250 to 1,300 lbs. each, for Sulzeberger & Sons, at \$6.90 to \$7.25; bulls, \$5.25 to \$5.75.

Butchers.—Cattle of export weights were bought for local killing at the abattoirs, at \$6.80 to \$7.40, prime butchers', 1,000 to 1,100 lbs., sold at \$6.50 to \$6.75; good, \$6.25 to \$6.50; medium, \$5.80 to \$6.15; common, \$5.15 to \$5.70; inferior, \$4.50 to \$5.10; cows, \$3 to \$5.75; bulls, \$4 to \$6; calves, \$1.75 to \$2.75.

Stockers and Feeders.—Cattle, 800 to 850 lbs., sold at \$5 to \$6.75; 700 to 750 lbs., \$4.50 to \$5.75; 450 to 700 lbs. each, sold at \$4.50 to \$4.80.

Milkers and Springers.—Receipts have been quite equal to the demand, and prices at \$40 to \$60 for the bulk, with some at \$65 each.

Veal Calves.—Receipts were light.

"Bobs" sold at \$2.50 to \$3 each, and the rest ranged from \$4 to \$8 per cwt., with a few at \$8.50 and \$9, but very few.

Sheep and Lambs.—Receipts were light and prices firm. Ewes sold at \$5 to \$6 per cwt.; rams, \$4 to \$5; lambs, yearlings, \$7 to \$8.75; spring lambs, \$5 to \$8 each.

Hogs.—The packers commenced the week trying to get prices down to a lower basis, but failed. Selects sold at \$8.25 to \$8.30, fed and watered, and \$7.85 to \$7.95 for hogs f. o. b. cars at country points. On Good Friday, prices took another rise, selling at \$8.35 for selects fed and watered, and \$8 f. o. b. cars at country points. There were 880 on the market, all sold.

Horses.—The Toronto horse market is generally inclined to be slow, with prices easier for the general run. Good quality horses in all classes fetch good prices still, especially in the drafter class. We attended a farm stock sale last week where one pair of draft mares brought \$550, on seven months' time; another pair went at \$475; one seven-year-old mare, 1,600 lbs., at \$275; one driving mare, three years old, \$300; one driver, five years old, \$180; one Shetland pony, harness and cart, \$230. Prices ranged as follows for the general run of horses: Drafters, \$175 to \$275; general-purpose horses, \$150 to \$225; express and wagon horses, \$150 to \$200; drivers, \$100 to \$300; serviceably sound, \$30 to \$100 each.

BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, 95c. to 96c., outside points. Manitoba wheat—No. 1 northern, \$1.13½; No. 2 northern, \$1.10½; No. 3 northern, \$1.06½, track, lake ports. Oats—Canadian Western, extra No. 1 feed, 50c.; No. 1 feed, 49c., lake ports; Ontario, No. 2, 45c. to 46c.; No. 3, 44c., outside points; No. 2, 47½c. to 48c., track Toronto. Buckwheat—72c. to 73c. per bushel, outside points. Barley—For malting, 90c. to 92c. (47-lb. test); for feed, 60c. to 70c. Corn—American No. 3 yellow, all rail from Chicago, 75c., track, Toronto. Peas—No. 2, \$1.15 to \$1.25, outside points. Rye—No. 2, \$1 per bushel. Flour—Ninety-per-cent. winter-wheat patents, \$3.95, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.60; second patents, \$5.10; strong bakers', \$4.90, in jute; cotton, 10c. more.

HAY AND MILLFEED.

Hay.—Baled, car lots, per ton, \$16 to \$16.50 for No. 1; No. 2, \$14 to \$14.50. Straw.—Baled, car lots, per ton, track, Toronto, \$8.50 to \$9.50. Bran—Manitoba bran, \$25 per ton; shorts, \$27; Ontario bran, \$25, in bags; shorts, \$27, car lots, track, Toronto.

COUNTRY PRODUCE.

Butter.—The market is slightly easier all round. Creamery pound rolls, 37c. to 38c.; creamery solids, 34c.; separator dairy, 34c. to 35c.; store lots, 31c. to 33c.

Cheese.—Market steady; large, 16½c.; twins, 17c.

Honey.—Market unchanged; extracted, 13c. per lb.; combs per dozen sections, \$2.50 to \$3.

Eggs.—New-laid, 24c. to 25c. for case lots.

Beans.—Market firm. Broken lots sold at \$2.40 to \$2.50 for primes, and \$2.60 to \$2.70 per bushel for hand-picked.

Potatoes.—Ontario potatoes, \$1.50 to \$1.55, car lots, track, Toronto; New Brunswick Delawares, \$1.65; Irish potatoes, \$1.50.

Poultry.—Receipts continue to be light, with prices very firm. Fresh killed—Turkeys, 25c.; chickens, 20c. to 22c.; hens, 14c. to 16c. per lb.

HIDES AND SKINS.

Prices for hides and skins at Toronto for the past week: No. 1 inspected steers and cows, 125c.; No. 2 inspected steers and cows, 110c.; No. 3 inspected steers, cows and bulls, 105c.; country hides, cured, 110c.; green, 11c. to 12c.; calf skins, 12c. to 16c.; sheep skins, \$1 to \$1.25 each; horse hides, No. 1, \$2.25; No. 2, \$1.75; No. 3, \$1.25; to \$1.50; tallow, 75c. to \$1.00; to 6½c.

FRUITS AND VEGETABLES.

The following are the prices at which received at Toronto for the week ending April 8th: Apples, \$1.50 to \$1.75; alfalfa No. 1, per bushel, \$11 to \$12; alfalfa No. 2, per bushel, \$9.50 to \$10.50; timothy No. 1, per cwt., \$18 to \$19; timothy No. 2, per cwt., \$16 to \$17.

No. 2, per bushel, \$13.50 to \$14.50; alfalfa No. 1, per bushel, \$11 to \$12; alfalfa No. 2, per bushel, \$9.50 to \$10.50; timothy No. 1, per cwt., \$18 to \$19; timothy No. 2, per cwt., \$16 to \$17.

FRUITS AND VEGETABLES.

Apples.—Spies, \$3.50 to \$5; Baldwins, \$3 to \$4; Greenings, \$3 to \$4; Russets, \$3 to \$3.50. Onions, per bag, \$2.50 to \$3; parsnips, \$1.35 to \$1.60; turnips, per bag, 40c. to 55c.; carrots, \$1.20 to \$1.30 per bag; cabbage, per barrel, \$2.75 to \$3; beets, 75c. to \$1 per bag.

Montreal.

Live Stock.—Not only was the supply of cattle offered on the Montreal market large last week, but the quality was unusually fine, even for Easter week. It is claimed that one particularly fancy steer sold at 12c. per lb., the weight of the animal being over 1,900 lbs. Other sales were made at 10c. These, of course, were the exception. Quite a few sales were made at 8c. to 9c. per lb., but of course the bulk of the offerings brought rather lower prices. However, any really choice Easter beef would bring 7c. to 8c., and it was only the lower grades that would not make 6c. to 7c. Choice bulls brought 6½c. to 6¾c. per lb., and cows ranged from 5c. to 6c. per lb. There was little enough attention paid to the ordinary run of cattle; these ranging down to 4c. and even lower for canning stock.

Some fancy lambs sold at around 9c. per lb., and ordinary stock at 7c. Some spring lambs were offered at about 16c. per lb., live weight, which came to about \$6 to \$10 each.

Some milk-fed calves sold at 11c. and 12c. per lb., while the ordinary stock brought about \$3 to \$10 each. Select hogs were in fair demand at 9c. per lb., off cars.

Horses.—Prices show no change, being as follows: Heavy draft, weighing from 1,500 to 1,700 lbs., \$300 to \$350 each; light draft, 1,400 to 1,500 lbs., \$225 to \$300 each; light horses, 1,000 to 1,100 lbs., \$100 to \$200 each; and broken-down animals, \$50 to \$100. Choice saddle or carriage animals sell at \$350 to \$500 each.

Dressed Hogs.—Dressed hogs are now selling at a very high price, and the market continues firm, being 12½c. to 12¾c. per lb. for fresh-killed abattoir-dressed stock.

Potatoes.—There is a fair demand for potatoes, and the tone of the market is firm, owing to light supplies of best stock. Green Mountains are selling at \$1.70, it is claimed, in car lots, while smaller quantities are selling at \$1.90 to \$2 per bag of 90 lbs.

Honey and Syrup.—Up to the present if any syrup is arriving it is in very small quantities, the weather having been rather gloomy and unfavorable during the past few days. Prices are still quoted at 7c. to 7½c. per lb. for maple syrup in wood, and 70c. to 75c. per gallon in tins. Sugar is quoted at 8c. to 9½c. per lb.; white clover comb honey is 10½c. to 11½c. per lb., and extracted is 8c. to 10c. per lb.; dark comb is 7c. to 8c., and extracted is 7½c. to 8c.

Eggs.—Sales are taking place at 25c. to 26c. in a wholesale way, and in smaller lots at as high as 27c. Buyers are trying to get stock at 22c. in the country, but are having a hard time doing so.

Butter.—New-milk butter is still scarce but the supply is increasing. Prices are high and the market is firm, sales taking place as high as 38c. for fancy fresh. Other qualities range from 31c. to 36c., while rolls will bring 32c. Holders are firm in the country, selling at 35½c.

Grain.—The market for oats showed very little change and prices are practically where they were the week previous. Western Canada No. 2 are quoted at 52½c. to 53c. per bushel, car lots, export; extra No. 1 feed, 51c.; No. 3 Can. western, 50c.; No. 1 feed oats, 49c. to 49½c.; No. 2 local oats, 50c.; No. 3 local, 49c., and No. 4 local, 48c. per bushel.

Flour.—Manitoba spring wheat patents, in bbls., \$6 for firsts and \$5.50 for seconds; strong bakers' being \$5.30, and prices in bags being 30c. less. Ontario winter wheat patents are \$5.10 to \$5.35 per bbl., in wood; straight rollers being \$4.65 to \$4.75.

Millfeed.—The market is very firm, being \$25 to \$26 per ton, in bags, for bran; \$27 to \$28 for shorts; \$28 to \$29

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103 Branches in Ontario, Quebec and the West

for middlings; \$32 to \$34 for pure grain moulle, and \$29 to \$30 for mixed moulle.

Hay.—Demand is good and the market steady. No. 1 hay sells at \$15.50 to \$16 per ton, carloads, on track; No. 2 extra, \$14.50 to \$15.00 per ton; No. 3 northern, \$13.50 to \$14.00; No. 2 hay, \$11.50 to \$12.00; clover mixed, \$10.50 to \$11 per ton.

Seeds.—The market for seed is not as active as it should be, owing to high prices and the backwardness of the season. Red clover is 23c. to 27c. per lb. by the bag; alsike is 22c. to 26c., and timothy, 16½c. to 20c.

Hides.—The only change in the market is an advance in calf skins to 14c. and 16c. per lb. Hides are still 11c., 12c. and 13c.; spring lambs, 10c. each, and sheep skins, \$1.10 each. Tallow is 1½c. to 2c. for rough, and 6c. to 6½c. rendered.

Chicago.

Cattle.—Beeves, \$5.30 to \$8.65; Texas steers, \$4.50 to \$5.90; Western steers, \$5.35 to \$6.85; stockers and feeders, \$4.75 to \$6.60; cows and heifers, \$2.60 to \$6.70; calves, \$5.75 to \$8.50.

Hogs.—Light, \$7.60 to \$8; mixed, \$7.65 to \$8.05; heavy, \$7.70 to \$8.07½; rough, \$7.70 to \$7.80; pigs, \$5.30 to \$7.55; bulk of sales, \$7.85 to \$8.05.

Sheep and Lambs.—Native, \$4.40 to \$6.50; Western, \$4.50 to \$7; yearlings, \$6 to \$7.15; lambs, native, \$5.65 to \$7.75; Western, \$6.25 to \$8.25.

Buffalo.

Cattle.—Prime steers, \$7.25 to \$7.85; butcher grades, \$3 to \$7.

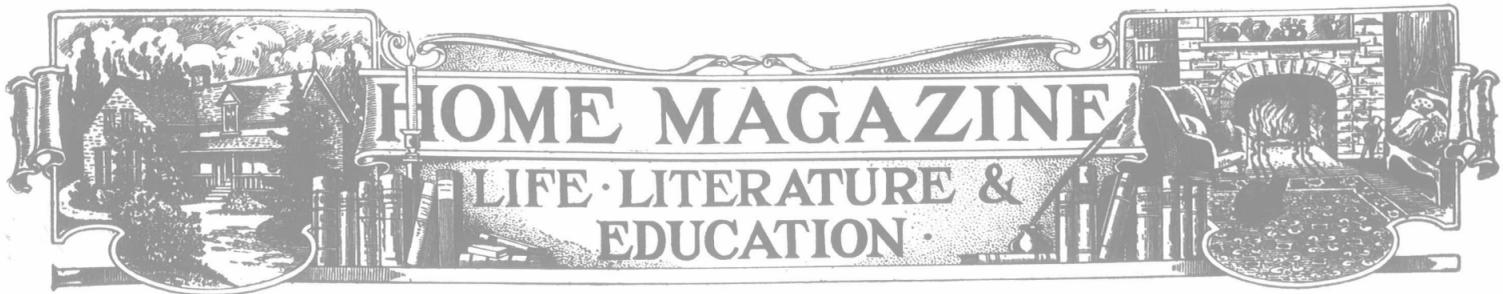
Calves.—Cull to choice, \$5.50 to \$9.

Sheep and Lambs.—Choice lambs, \$8.40 to \$8.60; cull to fair, \$7 to \$8.25; yearlings, \$7 to \$7.50; sheep, \$3 to \$6.50.

Hogs.—Yorkers, \$8.15 to \$8.30; pigs, \$7.40 to \$7.50; mixed, \$8.30 to \$8.35; heavy, \$8.15 to \$8.30; roughs, \$7 to \$7.50; stags, \$5.50 to \$6.

TRADE TOPIC.

HOMESEEKERS' AND SETTLERS' SPECIAL TRAINS TO WESTERN CANADA—Via Chicago and St. Paul, April 16th, 23rd and 30th, and every second Tuesday thereafter until September 17th, inclusive. Tickets will also be on sale on certain dates via Sarnia and Northern Navigation Company. Special train will leave Toronto 10.30 p.m. on above dates for Edmonton and points in Manitoba and Saskatchewan, stopping at all points on Grand Trunk Pacific Railway west of Winnipeg. Through coaches and Pullman tourist sleepers will be carried fully equipped with bedding and porter in charge. Berths may be secured in sleepers at a low rate. This is an exceptional opportunity for those wishing to take advantage of the remarkably low one-way settlers' rates or round-trip homeseekers' excursions through the American cities. No change of cars. Secure tickets and berth reservations from any Grand Trunk agent, or write A. E. Duff, District Passenger Agent, Valour Station, Toronto.



The Roundabout Club Some Old Time Echoes.

An Anti-Woman's Suffrage Letter.

[Essay submitted in Literary Society Study No. IV.]

Should the suffrage be extended to women? After years of conflict between aristocratic governing classes and the champions of equal rights and privileges before the law, we now have almost everywhere under the British constitution complete manhood suffrage; that is to say, that every male having reached the age of twenty-one years, excepting a few who may be legally debarred, may exercise a unit of elective power equal to that exercised by any of his fellows, and may, if elected thereto, sit in the governing bodies of the country.

Thus the privilege and responsibility of government rests entirely upon the male section of the population; women, except for a few cases in the municipal governments, where their property rights may be especially involved, exercising no elective power.

The question which is now before us for consideration is one as to whether women should also be permitted to participate in the government of the country, a question which has been brought particularly to the front in political controversy during late years by a movement on the part of a faction of women who demand the enfranchisement of their sex. Although side issues may present themselves in the discussion of this question, the one all-important consideration is whether the enfranchisement of women would in the long run be of benefit to society.

Women may, as free citizens of the country, have a perfect right to a voice in its government, a right which it would be folly to deny them should they as a body demand it. They may be, and few men will dare to say that they are not, possessed of ability that would render them very useful as co-workers directly engaged in the government of the country. But, after all, is this woman's proper sphere of duty? Have they not been given a work entirely distinct from and yet quite as important as the making of laws and the ruling of empire? Have they not been given thrones of power which, although from the outside may not seem so alluring as the thrones of political power, are destined to exercise a far greater power over society than any political influence ever could; thrones which would inevitably be undermined should their occupants presume to encroach upon the kingdom of man.

There are two old maxims: First, "A man is what his wife makes him"; and, second, "The hand that rocks the cradle rules the world." The sphere in which a woman can use her influence to the greatest and most far-reaching advantage is that of her home. Here every true woman ruleth her own family, and here she may serve her country in ways beyond the power of those possessed of political influence. So, lest in the attempt to gain direct political power women should lose, and they certainly to a large extent would lose the greater powers which have long since been vouchsafed to them, may they forever abandon the idea that it would be possible for them to increase the scope of their influence in the field of social service by exercising the franchise.

T. J. RUTHERFORD

Atex Co., Ont.

THE FRANCO-PRUSSIAN WAR. IV.

I cannot quite recall how many weeks I was detained in Cassel by the exigencies of war, but they are vividly remembered as weeks of almost unbroken excitement, and of breathless interest. The streets were filled with soldiers, immense squads of whom, with their horses and artillery or forage wagons, camped in the squares. In my brother's house were billeted five or six soldiers, all of whom behaved in

is now on his way to Cassel via Belgium as a prisoner of war," the question on the lips of nearly every one being, "Who now represents the Government of France?"

There are many still living who can record the black cloud which hung over the one-time gay, but now unhappy Paris, when the "unhinged elements of the Commune" raged in its midst.

History records the capitulation of Napoleon, and the downfall of the nation which had brought about that cruel war. "A Napoleon on the throne of

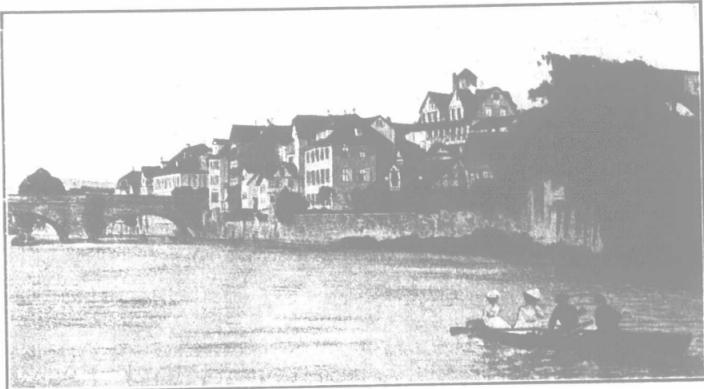
Hercules, which dominated the largest of them; I had sat at one of the hundreds of marble-topped tables enjoying my coffee and milk-bread, whilst others, who knew the language, could talk and listen, that was before the thought had entered the mind of any of us that the castle of the Wilhelmshohe near by was so soon to become the temporary abiding-place of the captive Emperor of France.

After our return to England, my brother, at my request, and for a purpose I had then in hand, contributed the little sketch which I will hand on to you as rounding out my story of certain reminiscences of the Franco-Prussian war of 1870-1871.

ON THE WILHELMSHOHE.

September 7th, 1870.

"The Wilhelmshohe has perhaps scarcely ever had so many visitors as this autumn. Except on Sundays and Wednesdays, when the waterworks play in the afternoon, it is generally very quiet and still here at this season of the year. And, nevertheless, how beautiful! The variegated foliage of the magnificent forests which meet the eye in every direction, can nowhere be surpassed. Green, yellow, brown and red, in every gradation of color, as if a painter's hand had wrought the charm. It is as if the leaves before they fall and take an everlasting farewell, wished to show themselves to us once more in all their inimitable beauty so that we may still more deeply regret their loss. The hotel at the Wilhelmshohe, a first-class house in every respect, is, with the exception of the castle, the only large building there, and being in its immediate vicinity, very naturally plays a premier role under the existing circumstances. In and before the same there is any amount of "life," and the magnet which exercises its powers of attraction is—Napoleon! To see Napoleon! That is the watchword. It is, therefore, no wonder, when the conversation chiefly confines itself to the queries: "Have you seen him, or, when is he to be seen?" It is difficult to give a positive reply to the last question, for the hours when the Emperor takes his walks or drives are regulated by the weather and the state of his health. There are days on which he does not stir out. At other times, on the contrary, as for instance yesterday, one has opportunities of seeing him repeatedly. It was a splendid autumnal morning, and the fine frosty air invited to a stroll. About 10 o'clock it began to get lively in the immediate precincts of the castle, a carpet was laid down by a couple of footmen on the steps leading down from the grand entrance, and shortly after, Napoleon appeared, leaning on the arm of Prince Murat, and followed by the Duke of Muscovy and General Castleman, the three gentlemen of his suite who usually accompany him. As he took the path which leads to the grande promenade at the back of the castle, the spectators who were present had a capital opportunity of imprinting his features on their memory. The Emperor looks much better than he did three weeks since. Is it the wholesome air of the Wilhelmshohe, or is it the quiet and regular life which he leads in contradistinction to the days of mental and bodily toil which he had undergone before his surrender? Enough. He has perfectly recovered his health, and, as Mr. Campbell, the Emperor's "grand piqueur," and an old acquaintance of mine, observed to me yesterday, "His Majesty, sir, was never better in his life!" His appearance astonishes all those who, in consequence of the manifold descriptions of him which have been given within the last few weeks, had pictured him to themselves quite differently. His appearance in plain clothes is also



Cassel, Waterfront, on the River Fulda.

a most exemplary manner, always trying to help rather than to hinder in the increased domestic arrangements which their presence involved.

When my travelling companion was at last able to join me, preparatory to our return to England, he had stores of adventure to tell; he, with his friend, an old brother officer, having followed, as near as they were permitted to do, the trail of the armies. They had narrow escapes from capture, as possible spies,

France was bound to establish his rights to the same by political and military successes, so one day the nation was informed by its representatives that it desired war with Germany, and because of this mandate, which it dared not disobey, war with its horrors, war bringing death and desolation to the homes of two countries, was proclaimed and fought to the bitter end. The comment of General Von Moltke, uttered over forty years ago, is as applicable now as



Archway, Cassel.

which they decidedly were not, their being known as Englishmen whose nation was somewhat held in disfavor just then, adding to the difficulties of travel common to all in the time of war.

History tells us that on the 3rd of September, 1870, the message from headquarters of the Prussian army read as follows:

"In two hours' time we leave this place (Donchery), and then for Paris!" and then "The Emperor Napoleon III., under escort of two squadrons of Hussars,

it was then. "To-day," he said, "the question, 'Is a nation strong enough to make war?' is of less importance than 'Is its Government strong enough to prevent war?' A weak Government is a standing menace to peace."

During my stay in Cassel I had several opportunities of visiting beautiful Wilhelmshohe, with its old palace and lovely park, with its many natural features artistically retained. I had seen the Cascades and fountains, and had gazed wonderingly at the gigantic figure of

to his advantage, for the gaudy French uniform was anything but becoming to him. He has retained his old "dragging" walk, and by this, as well as by his short, thick-set figure, he is smaller than all his attendants, and is much overtopped by some of them, one can, even at a distance, easily recognize him. After a short time had elapsed the party returned to the castle. It is possible that the spectators, who, with a certainly pardonable curiosity, beset the Emperor's path on all sides, may have been a source of annoyance to him, but at the same time, proves the statements "that he was specially guarded, and the public kept at a distance," to be false. Only the terraces immediately before and behind the castle are no longer open to the public. With this exception, everything is as it used to be in this respect. Although, as I have already observed, the spectators were only at a very short distance from the Emperor, he was nevertheless saluted but by very few, one exception being an American who has been staying for several days at the hotel, a handsome, elderly gentleman, who never loses an opportunity of reverently greeting him. He was also present on this occasion with his two daughters, and got a bow from the Emperor in return for his deep obeisance. This evident admirer of fallen greatness (rather a rarity in our days), has, however, left this morning." H. A. B.

(To be continued.)

Hope's Quiet Hour

Unselfishness

Let us not love in word, neither in tongue; but in deed and in truth.—1 St. John, iii.: 18.

"Such was the life Thou livedst, self-abjuring,

Thine own pains never easing,
Our burdens bearing, our just doom enduring,

A life without self-pleasing."

I have been asked to write on "Unselfishness," and the subject is like a boomerang—the moment I begin to preach against selfishness, my own sermon turns round and hits me full in the face. What can I do but step down from the pulpit and study unselfishness from the penitent bench? Even St. John, the Apostle of Love, looks up to this great grace longingly. Instead of telling his people to climb to heights already reached by himself, he stretches out a brother's hand and urges them to climb beside him: "My little children, let us not love in word, neither in tongue; but in deed and in truth." "We ought to lay down our lives for the brethren." "Beloved, let us love one another."

"So, if I hold up before you the radiant beauty of unselfishness, please do not imagine that I am unselfish myself, or that I even fancy myself to be unselfish. Looking at the people around me, who are patiently and cheerily spending their lives in unselfish toil for others, my easy and comfortable existence looks very mean and poor.

You see how apologetic I feel in attacking this suggested topic. If it has succeeded in making me so uncomfortable, perhaps it may also spur you on, and so we may gain ground together.

There is an easy kind of good-nature which likes to pose as unselfishness, let us never rest satisfied with that. It is pleasant to do things for other people, it is pleasant to keep on good terms with all the world, but that is no proof of real love. A mother may think she loves an only child, though her way of showing that love is to give him his own way in everything, crippling and weakening his soul for the battle of life. In his weak affection for his sons, could not nerve himself to punish them for small sins, and it was largely the fault of this righteous, God-fearing man that his sons died a violent death in impudent wickedness. David, the man after God's own heart, was weakly indulgent towards Absalom; and this cruel failure in a father's duty led to Absalom's shameful failure in the duty of a son, when he fought against David and drove him out of Jerusalem.

It is sometimes cruel selfishness to be sweet and gentle, when the wrong-doing

of one whom God has entrusted to our care demands merciful severity and firm discipline. It is also selfish for a woman to make a drudge of herself in order that her daughters may not spoil their white hands, to injure her nerves by overstrain and allow her family to grow up without the companionship she could have given them, if she had insisted from the first on their doing their fair share of the work. That is not real love, because love would know that a girl's white soul is infinitely more precious than the beauty of her white hands, and would not recklessly injure the priceless soul for the sake of the appearance of the body. It is selfish, because a mother

faults behind his back. Lately I have listened to a lecture on Socialism. The lecturer seemed to think his chief business was to speak fiercely about the cruel indifference of capitalists towards their employees. But was this violent language likely to rouse the slumbering consciences of the hated capitalists? Not at all! The millionaires were conspicuously absent in the crowded hall, and the lecturer received the loud applause which he evidently expected. I am not intending to find fault with the Socialist movement, which is the natural growth of the wonderful increase in brotherly feeling which has taken possession of us. I am only conscious that men and women—all

the knowledge of their danger. The cancer of sin was eating out the heart of their religion; and, no matter what the cost to Himself, they must be wakened from their dream of safety. Many brave men in these days are echoing His warning. Many—thousands of Socialists among them—are flinging their defiance of oppression in the very face of the oppressors, reckless of the cost to themselves. Courage is a splendid thing, but at least one thing is greater—Love. To tell men of their sins because you hate the sin, and are not far from hating the sinners, is far better than easy, self-satisfied complacency. But to tell a man straight to his face about some special sin, because you love him and cannot endure to let him go unwarmed down the precipice, that is Christ-like unselfishness.

But most of us are not called to talk to others about their sins, our business is chiefly to look at our own sins; and we can't become holy in a few days, any more than a child can become a man in a few days. Love is an accomplishment requiring daily practice. If there has been very little pure gold in our offering of service to God and man, in the past, we can do better to-day, and still better to-morrow. Perhaps the next day we may slip back a little, or forget we are soldiers fighting to win. Well, what of that? We can rouse up from our carelessness, clasp the hand of our Master in penitent prayer for help, and try again, and yet again. We are ashamed to think how often we have pretended to be unselfish, how often we have done a kind act, or presented a "gift," without any real love in our hearts. Unless that habit is checked, we shall become hypocrites!—how we hate that mean word. Character is slowly made by repeated acts; and acts of apparent kindness, intended only for the glorification of self, are hypocritical. They pretend to be far better than they are. Such acts, constantly repeated for many years, harden into character. May God keep us all from becoming hypocrites. Let us love, not in word and deed only, but in TRUTH!

"Glory built
On selfish principles, is shame and guilt."

Let us try to be constantly and consciously with Him Who is LOVE, then we shall unconsciously grow more and more like Him, and shall find that the great gladness of life comes from seeing and using everyday chances of being kind and loving. It was said of two of the apostles that the people around them perceived that they were unlearned and ignorant men, but "they" took knowledge of them, that they had been with JESUS." His character was seen in them. What a glorious proof they gave of His Risen Life. May we also reflect His Living Love.

DORA FARNCOMB

News of the Week.

Parliament was prorogued at Ottawa on April 1st.

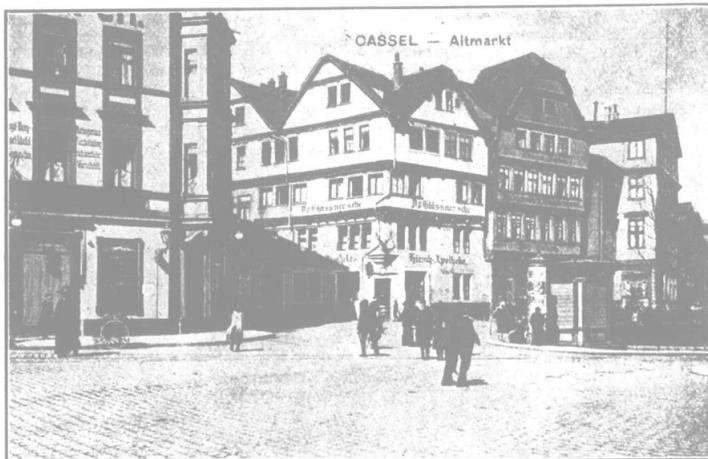
Sir James Whitney proposes an anti-treating clause as a counter policy to Mr. Rowell's scheme for banishing the bar.

A movement is afoot to introduce a local option campaign in Toronto.

The Government bill for home rule in Ireland, entitled the "Irish Government Bill," will be introduced in the British Parliament on April 11th.

Despatches from Captain Scott's Antarctic exploration party state that both coal and marble have been found in the south polar regions. The party took thousands of cinematograph films on their journey towards the Pole.

On April 1st about 200,000 bituminous coal miners and 170,000 anthracite miners in the United States suspended work. The former asked for an increase of 10 cents a ton, with a shortening of time equivalent to as much more, but afterwards reduced their demand to 5 cents.

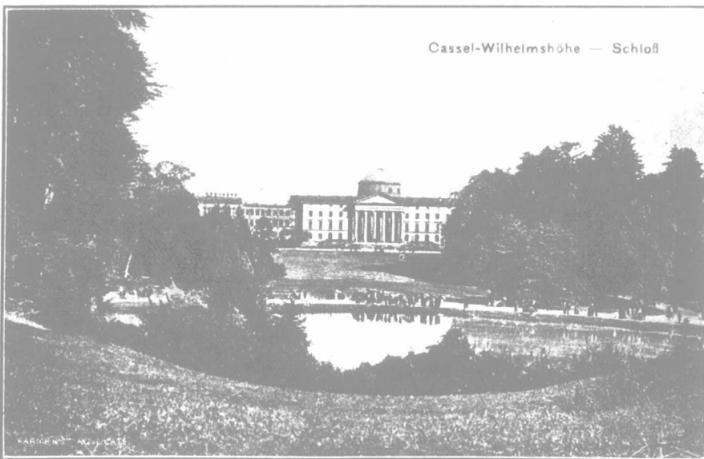


Cassel—Old Market.

who is the companion of her boys and girls, who claims her right—if possible—to have time for reading and rest, can do infinitely more to help them than if she slaved all day and every day for the sake of their bodily comfort.

Unselfishness is, of course, another name for Love. We must not love in word only, but in deed and in truth. "One can do a great deal of good in this world, if one doesn't care who gets the credit for it." That remark is rather too pointed to be pleasant. The plate is passed round in church, and we all feel uncomfortable if we have nothing to put on it. I was going to say, "nothing to give," but too often the money put on

of us—are on the lookout for appreciation. When we speak severely about the sins of our neighbors (sometimes without remembering that we live in glass houses), we are all very apt to do it cautiously enough to secure applause and safety for ourselves. Our Leader was unselfish enough to speak with awful severity about the sins of the rich and powerful, but His words were prompted by love, not by hatred,—and He spoke straight to the men He loved and whom He wished to awaken. He cared more for their spiritual danger than for His own bodily safety, and dared their wrath—the wrath which demanded His death—because He loved them "in truth." Satan was



Wilhelmshöhe.

The palace of the Wilhelmshöhe which the Emperor Napoleon III. occupied after his defeat in the Franco-Prussian War, 1870.

the plate is not "given" to either God or man, but is only a selfish attempt to appear generous. The "colletery" may be "presented" to God, while the people sing, "Of Thine Own Have We Given Thee"; and yet sometimes it may be that there is scarcely a single piece of money there that is really an offering at all. Instead of joyously presenting our gifts, we are often forced to ask forgiveness for daring to pretend, before the Searcher of hearts, that we have offered Him anything.

Then, again, we dare not claim to be loving our neighbor "in deed and in truth," when we are all friendliness before his face and eager to talk about his

soothing their uneasy consciences by reminding them that they were always careful about paying tithes to God, even from the mint in their gardens. He told them the lie that they were religious men. Did they not make long prayers? Were they not scrupulously particular about the ceremonial washings demanded by church etiquette? Did they not build the tombs of the prophets? All these things were most respectable, and while they admired their own righteousness so much, there was little chance of any improvement. So the Good Physician, in His burning love, His passionate unselfishness, was willing to endure their fierce anger if only He could arouse them to

The hard coal men asked for an increase of 20 per cent. wages.

It is estimated that the British coal strike, which lasted over a month, cost the United Kingdom \$50,000,000 a week. Although not wholly satisfied with the minimum wage bill, the men returned to work, owing to the distress and privation caused by the strike.

The arrangement by which France, Germany, the United States and Great Britain were to loan China a sum of \$300,000,000 has fallen through, owing to President Yuan Shi Kai's injudicious action in arranging secretly for a loan of \$5,000,000 from Belgian bankers. It has been represented to him that he has not kept good faith. The root of the objection is, probably, that the Belgian loan is suspected of being backed by Russian interests, a stipulation being that part of the sum is to be applied to extension of railways in Mongolia, a district over which Russia is anxious to gain commercial control.

The Beaver Circle.

OUR SENIOR BEAVERS.

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

Spring Song.

By Miss Lucy Wheelock.

Old Mother Earth woke up from sleep,
And found she was cold and bare;
The winter was over, the spring was near,
And she had not a dress to wear!
"Alas!" she sighed with great dismay,
"Oh, where shall I get my clothes,
There's not a place to buy a suit,
And a dressmaker no one knows."

"I'll make you a dress," said the spring-
ing grass,
Just looking above the ground;
"A dress of green of the loveliest sheen,
To cover you all around."
"And we!" said the dandelions gay,
"Will dot it with yellow bright";
"I'll make it a fringe," said forget-me-
not,
"Of blue, very soft and light."
"We'll embroider the front," said the
violets,
"With a lovely purple hue";
"And we," said the roses, "will make
you a crown
Of red, jewelled over with dew."
"And we'll be your gems," said a voice
from the shade,
"Where the ladies' ear-drops live—
Orange is a color for any queen,
And the best that we have to give."

Old Mother Earth was thankful and glad,
And she put on her dress so gay;
And that is the reason, my little ones,
She is looking so lovely to-day.—Sel.

The Garden Competition

Dear Beavers,—As it will soon be time to dig in the garden, I want to remind you of our garden competition. The terms will be the same as those of last year, except that you must yourselves choose the things that you wish to grow. You must, however, plant at least three kinds of vegetables and six kinds of flowers. The prizes will be given to those who, next fall, send us the best letters, with photos of the garden made, accompanying. The prizes will be as before, \$5.00, \$3.00, \$2.00.

I suppose you were all interested in the picture, shown in a recent Beaver Circle, of Lois Edmonds, the little bread-maker and corn-grower of Iowa. Now I hope you will show your mettle as Canadian girls and boys, and let us see what you can do in this garden contest.

Already there are a few names on our list for the competition: Arthur Halstead, Cashtown, Ont.; Oscar Oxley, Canfield, Ont.; Stewart Allen, Oak Ridges, Ont.; Fred White, Humber Bay, Ont.; Frank Morton, Rosemont, Ont.

Will the rest of you who wish to compete kindly notify us as soon as possible? There will probably be so many names that we cannot publish them, but we will keep the list here in the office.

Don't be afraid of this competition.

Beavers. Even if you should win a prize you will have the vegetables and flowers—and the fun of growing them—anyway.

Don't forget the address to put on the envelope when sending your application—"The Beaver Circle," "Farmer's Advocate," London, Ont.; and remember that no one over sixteen may compete.

Now, just for inspiration, I am going to give you Frank Morton's letter to read.

"Maple Grove,"
Box 66, Rosemont, Ont.

Dear Puck and Beavers,—If it is not too late I would like to enter for the garden competition that you were speaking of in "The Farmer's Advocate" some time ago. I am sorry I have not told you before now, but I have only just come up to my mind. Since then we have moved to a nice farm which is called "Maple Grove," and uncle says there is a nice spot for a garden. Last year I had a fine garden, and took some prizes at the local fair with things I grew. Our farm has a row of maple trees all round it, and is very pretty in summer. There is also a large orchard; uncle is talking of spraying it this year. I must not forget to tell you we have some beautiful black squirrels in it. They come right up to the window, and I gave them some apples which they carried into the trees and ate. We also have an owl and pigeons in the barn. All our cows have come in, and we have dandy calves. Someone asked us did we curry them. I said "No, but we do the cows." We have also a lovely colt which we call Paddy; he is just three days old. Uncle is still going to grow corn, although none of our new neighbors grow any. He is going to grow alfalfa too.

I am going to tell you what our cat will do. She will put her head into my pocket for a mouse or sparrow, and get it too. Our dog is a dandy. He will not see anything fighting, no matter if it is steers or hens, he will always part them. Another good thing, he never leaves the farm. Many a time he has aroused uncle in the night, when other dogs have been at the sheep, and so saved them from being killed altogether. Well, now, I must close.

FRANK MORTON
(Age 13, Sr. 3rd.)

Senior Beavers' Letter Box.

THE BROWN WREN.

Dear Puck and Beavers,—I suppose that the most of you are acquainted with our little friend, the Brown Wren. This bird is very useful, because it eats the larvae of the moths that fly around at night, and also the moths themselves. As with a great many other birds, only the male can sing; the female, however, makes a curious noise when disturbed, and also at other times. The song of the male bird is very sweet.

The color of the birds is brown. They are about three inches long and rather slender, and they are spotted on the wings with a darker shade of brown. They have a sharp beak, which is about three-quarters of an inch long. Their breast is gray, the female being a little lighter on the breast than the male. They have sharp claws, and they can go up a tree easily. They are so slender that they can go through a hole about an inch and a half in diameter. They are good fighters, and I have seen them drive sparrows away from their nest.

The wrens come in May and stay until about the middle of August or later. They start to build their nest soon after they come.

The place that they like for their nest is a deep hole, but it must be quite roomy. For the past three or four years I have used the crooked-necked summer squash, hollowed out and a hole put in it not very far from the top. I have hung this up in a tree in front of our veranda. But I have found that this is not substantial enough, so this year I have put up a box which is one foot long and six inches high. I have bored a hole in it one and a half inches in

diameter and about one inch from the top, and I hung this up in the tree. I think that this will be better than the squash. It would not matter if the box were longer; however, this was the best one that I could get. A stick should be placed so near the hole that the bird can hop on it just before going in the box.

The nest is made of twigs and lined with horse-hair or anything soft. They build a network of twigs, and underneath this they lay their eggs. It is amusing to see them get the twigs. Sometimes the twig falls and the bird darts down very quickly after it. If the stick will not go in easily they will work and work to get it in, turning their head sideways, and thus putting the stick in endways. I have heard the bird sing with a stick in his mouth. The nest is built almost entirely by the male bird, although the female bird sometimes helps line it.

I have not seen the eggs of the wren, because they are so far down in the nest that I could never see them. When the birds are hatched their parents fly continually to them with grubs and moths; not hairy caterpillars, for the cuckoo is the only bird that I know of that eats hairy caterpillars, and if you examine the inside of the crop of a cuckoo you will find hairs on it. The wrens seem very fond of making sham nests.

I have not a book on birds myself, but I like to watch them and learn all that I can about them. Those of you Beavers who put up a box or squash will find the wren will find it a good little friend. Be sure, though, to put it where the cat will not reach it. As this is all I know about the wren I will close, hoping that this will escape the w-p. b.

FREEMAN ELLIOTT

Culloden, Ont. (Age 13, Jr. 4th.)

This is a most interesting letter, Freeman. I wish all of our Beavers were as observant as you and as fond of the birds.

Puck and Beavers,—Ena Simpson, you don't mean to say you know Miss Montgomery, authoress of the "Anne" books, do you? Oh, how I envy you! You have often visited the "Lake of Shining Waters"! Oh, you must be "Anne" yourself. (I just imagine I see Puck curling his upper lip, and next I hear him say, "Such foolish talk!") I shall be out with it all the same, though. Ena, you are one to be envied, if anyone is. How I should like to know you. Won't you be good for once and write to me? I should be so flattered!

Well, well, Puck. It really is too bad to keep you "mad" any longer, but if you read those books you would, I am sure, join in with me and have a good jolly talk with Ena.

Puck, you said I was to imagine you a—(shall I say it), a monkey. Shame on you! Now, if I were going along the road and met you and said, "Hello Monkey," you'd be pretty mad about it I know. You'd chase me, and feel like giving my ears a good boxing.

My birthday has passed now, Ena. I was fourteen. I had a birthday party, and all had a good time they said. Well, good-bye, and Ena, don't forget to write to EFFIE GROH.

West Gravenhurst, Ont., Muskoka.

My dear Effie, an elf isn't a monkey. You'll have to make a trip to your dictionary I think.

Dear Puck and Beavers,—There are four of us going to school now. In the winter time we go across the ice to school, and in the summer we go across the bay in a punt and walk the rest of the way. The inspector, Mr. Scovell, came to our school on Monday and went away in the afternoon. I got five bulbs last fall, and they are coming into blossom now. They are very nice, but I have to prop them up, for they are top heavy.

We had so much cold weather that we did not go to school very often during the winter. I think I have written enough for this time.

DORIS PENNEY

Port Carling, Ont. (Aged 11 years.)

Dear Puck,—I received your letter some time ago requesting me to tell you and the Beavers how my dialogue came off. The one who was to play the part of

Katrina was sick and we didn't have it. It was too bad, for we did a lot of practicing at school.

We had some very cold weather here this winter, but I didn't mind it. My brother and I go to the woods on Saturdays and cut stakes. We had to cut about 200.

I have a mile to go to school. I go almost every day. I am in Grade 8, and I hope I will pass to the "D" this summer. There are about 225 acres on our farm. My father cut a few logs in the winter. They intend to cut some more, and also some furnace wood. I would like to correspond with one or two boys and girls about my age.

I am filling quite a space of room by this time, and as I should like to see this in print I will close.

H. ST. CLAIR CUTTEN, ESQ.
Lower Truro, N.S. (Age 14.)

Dear Puck,—This is not my first letter to the Beaver Circle. I have a great mind to think that the first did not escape the w-p. b., but as the saying is, "Try and try again, girls, you will succeed at last." I will try again. I just have a little way to go to school, and I come home for my dinner. The name of my school is "Pleasant Valley." The name of our teacher is Miss Crosthwaite. We like her very much. We had a lovely time on Valentine's Day. Teacher told us to make some valentines for the children; so at 4 o'clock we had two post-men who delivered the valentines. Well, I will close, wishing the Beaver Circle every success.

GLADYS SMART
(Age 11, Sr. IV. Class.)

Norwich, Ont.

Dear Puck,—I live with my uncle, Henry Jackson. We take your paper, and like it very much. We live two miles from school. I have two brothers, their names are George and William. We live on a farm of two hundred and thirty-three acres, two miles from Glenallan post office. Our house was burned to the ground on July 29th, 1911. We intend building a red brick one in the summer. There are about twelve in my class. I hope my letter is not too long. Wishing the Beavers much success.

JOHN C. HARPER
(Age 11, Book Sr. III.)

Glenallan, Ont.

Dear Puck and Beavers,—My teacher's name is Miss Kennedy, and her home is in Granby, Quebec. I live in Huntingville, Que., and am five miles from the City of Sherbrooke. For pets I have two cats, whose names are Timothy and Tiger. I have five brothers and no sisters. My brother Floyd has taken "The Farmer's Advocate" for quite a while, and we all like it very much. Wishing the Beavers every success.

BERNICE A. HUNTING
Huntingville, Que. (Book IV.)

Beaver Circle Notes.

Several letters which were written on both sides of the paper had to go to the w-p. b.

Emma Runge (age 11), Kurtzville, Ont., would like if some of the Beavers would write to her.

ALL MADE CLEAR.

A woman missionary in China was taking tea with a mandarin's eight wives. The Chinese ladies examined her clothing, her hair, her teeth, and so on, but her feet especially amazed them.

"Why," cried one, "you can walk and run as well as a man!"

"Yes, to be sure," said the missionary.

"Can you ride a horse and swim, too?"

"Yes."

"Then you must be as strong as a man!"

"I am."

"And you wouldn't let a man beat you—not even if he was your husband—would you?"

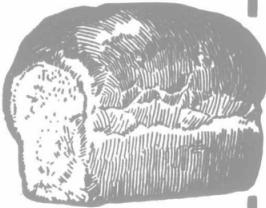
"Indeed I wouldn't," the missionary said.

The mandarin's eight wives looked at one another, nodding their heads. Then the oldest said, softly:

"Now I understand why the foreign devil never has more than one wife. He is afraid!"—Western Christian Advocate.

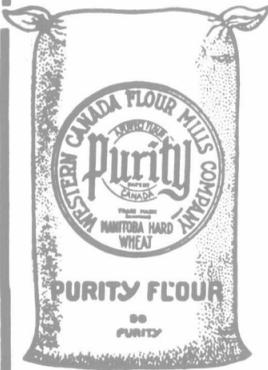
You will be proud of the bread you'll make with PURITY FLOUR

AFTER seeing a batch of big, golden-cruled, snowy-white loaves, that you have baked from PURITY FLOUR, you will, indeed, be proud of your cooking-ability—and proud of your wisdom in deciding to pay the little extra it costs to procure such high-class flour. You will admit, too, that we are justified in the pride we take in milling this superb flour.



PURITY FLOUR

"More bread and better bread"



PURITY FLOUR is milled exclusively from the best Western hard wheat—the world's finest. More than that, PURITY FLOUR consists entirely of the high-grade portions of the wheat. The low-grade portions are separated and excluded during the PURITY process of milling. Such high-class flour, of course, expands more in the baking. It makes "more bread and better bread."

It makes lighter, flakier pastry, too, if you just take the precaution to add more shortening. On account of its unusual strength PURITY FLOUR, for best results, requires more shortening than ordinary flour.

Progressive dealers, everywhere, sell PURITY FLOUR and take pride in recommending it.

Add PURITY FLOUR to your grocery list right now. 106

Returns from Money Invested in the Soil

"Many farmers would get higher interest on their money if deposited in the shape of fertilizers in the soil than if they placed it in the bank, the interest being paid in increased crops. The returns are surer than if the money were invested in a gold mine."

During the past few years a number of educative, illustrated bulletins have been prepared by agricultural experts on the use of fertilizers in Canada. Amongst these are:

- "Artificial Fertilizers, Their Nature and Use."
- "The Potato Crop in Canada."
- "Fertilizing Fodder Crops."
- "Fertilizing Orchard and Garden."
- "A Farmer's Field Tests."

FREE Copies of these bulletins as well as special expert advice as to purchasing and applying fertilizers economically may be obtained on application to

The German Potash Syndicate
1106 Temple Bldg., Toronto, Ont.

April.

(Katharine Tynan, in Tribune, London.)
What was the word the bird
Spoke in the morning chill—
The sudden magical word?
April.

What was the thing the sparrow
Said by the window-sill,
That soared and sang like an arrow?
April.

The word that troubled the grove
With the old, exquisite thrill,
As the voice were the voice of Love?
April.

Fresh as the running water
All in the grey light still,
Began the flutter and chatter—
April.

March was a roaring blade,
North and East had their will,
But April's a young fair maid,
April.

Hear the wren and the swallow
Skimming and crying shrill
Over the greening fallow,
April.

April's a golden lass
Walking on a green hill,
Treading the silk o' the grass—
April.

Her mantle of leaves a-glimmer,
Her kirtle the daffodil;
She is all a-shine and a-shimmer—
April.

She wears the bud and the blossom,
Of sweets she shall have her fill;
Her arms are full, and her bosom—
April.

Primroses under her feet,
Daisies in furrow and drill;
The blackbird's calling, Sweet! sweet!
April.

Ever shy and capricious,
Never unloving and ill,
She is a girl delicious,
April.

She is a girl to their mind,
Hear them shouting, greybill and goldbill;
They are tossing her praise to the wind—
April.

The Ingle Nook.

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

Papering.

One wonders if, anywhere, there still exists a housekeeper of the old-fashioned variety who tore up all the carpets at once, bundled all the furniture out into the halls, and through a frantic effort to get through in two or three days, got half meals and tired out her own bones and everyone else's—to say nothing of tempers. As a rule, nowadays, the rule is: "Do one room at a time, and begin at the top." If the operation covers a fortnight, or even a bit longer, what odds? No one is seriously discommoded, no one is wearied to death, the work is accomplished by degrees so gradual that, before anyone realizes it, it is all of the past.

Of course, when papering must be done, things are complicated a bit; papering is not easy work, and it is a bit mussy. However, most people do not mind that, in view of results. If you have papering to do over new walls, do not forget that they must be covered with a sizing of glue-water before the paper is put on. Likewise, if the walls are old and have been papered before, bear in mind that the new paper must never, never, be put on over the old. It is positively risky to do this, for bacterial action of a nature that may be quite injurious to health is almost sure to take place wherever there are so many layers of paper and paste. It is rare, but I have seen the very hot water, then, as soon as the paper has softened, set upon it with a just hand, to get the old paper off.

from subscribers leave it to be inferred that the subject is one of especial interest, may we repeat the few rules invariably followed by professional decorators who make a success of their work.

(1) Strong, dark colors, make a room look smaller; light ones make it look larger. (2) The "warm" tones, cream, reds, buffs, olive greens, and golden browns, should be chosen for northern rooms, or wherever the light is cold; if one wishes to give a cooler tone to southern rooms filled with sunshine, one may use "old" blues, gray-greens, and grays. (3) A paper with a large figure makes a room look smaller. At present, for rooms of ordinary size, plain or partially plain walls are in greater favor. (4) When the floor covering is figured, upholstery and walls should be plain, or, at least, covered with a very unobtrusive pattern, preferably self-toned, or in but two tones. The floor should always be darker than the walls, the walls darker than the ceiling. Cream or ivory is usually satisfactory for the ceiling, which should be plain, or practically plain, but sometimes a lighter shade of the wall-covering ground-work tone, is to be preferred. (5) When the walls are very high, the low effect so much liked now, may be given by covering the upper third of the wall with a frieze, figured or flowered, or in landscape effect, the lower two-thirds of the wall to be plain. A drop-ceiling also has the effect of lowering the apparent height of the wall. In either case, a narrow wooden moulding should cover the joining line, and the pictures should be hung below. In a very large room, a bold frieze design may be ventured upon, not otherwise. It is always wise to consider the size and character of a room before deciding upon figured designs; balance must be preserved. Also, obviously, a paper—e. g., in dainty, floral pattern—which would be charming in a bedroom, might look hopelessly out of place in a dining-room, living-room, library, or den. One must use one's reasoning powers in deciding this question. (6) If the wall is very low, and one wishes to make it appear somewhat higher, one may paper directly to the ceiling, and edge with wooden moulding there. An alternative choice is one of the panelled "crown" papers; a somewhat similar effect at less cost may be obtained by covering the wall with plain paper and dividing it into panels by pasting on a design cut from striped floral paper. A narrow border of the same, with the outline of each leaf and flower cut carefully out, should run around the top. Striped papers also have the effect of making a wall look higher, and some of the new ones with conventionalized floral pattern in stripes, or so disposed as to indicate stripes, are rather pretty. Striped papers are especially effective when combined with a drop-ceiling. (7) A leading color-tone must be decided upon for each room. This must appear harmoniously in walls, rugs, and upholstery, if any. Some decorators go so far as to use it in cushions and curtains, with good effect; of course, touches of another color are often needed to give "character" to the room. . . . May we illustrate?—Here is a room for which no color-scheme has been planned. The walls are cream with a blue figure, the carpet has tones of red and brown, curtains are green madras, cushions are in every possible color, some red, some green, some yellow.—A somewhat extreme case to be sure, but not more so than many actually in existence, right in Canada, too. Now, here is another room for which the tone chosen has been bronzy brown, relieved with old blue. The rug is an artistic combination of tones of brown and old blue; walls tobacco-brown, blending with the brown in the rug, with a marine frieze above, showing old blue in water and sky, with unobtrusive touches of pumpkin yellow in sails of vessels and at sky-line. The frieze is bordered and divided into panels by slats of brown wood. Curtains are cream, with a border of brown, old blue and pumpkin yellow. Cushions show the same combination. Furniture is chiefly brown wicker, with a few chairs of plain wood with leather or rep upholstery.—Surely one would need to be color-blind to fail to note the difference in these two rooms, and the desirability of the one over the other.

Here are a few more combinations, just by way of suggestion,—there are many others quite as good.

(1) Greenish-blue rug, greenish-blue wall, with marine frieze as above. A harmonizing green in judicious touches to give relief. Plenty of plants, and a large bowl of goldfish, should be in this room; also old brass candlesticks, etc., if one has them, to give the lustrous touch needed. (For den or living-room, preferably in a seaside or lakeside home).

(2) For dining-room with "cold" lighting. Rug a rich mahogany shade; walls a similar tone, with cream drop-ceiling. Woodwork walnut stain. Curtains cream madras. A similar scheme carried out in old blue, with relieving touches of green or green and amber, would do for a south room.

(3) Drawing-room.—Rug dark moss green; wall cream, with unobtrusive design in green (or green floral panelling); curtains cream, with green border. Some would use touches of old rose in this room.

(4) Living-room.—Wall gray-green, with landscape frieze; rug in harmonizing greens and browns; woodwork white.—Another: Walls fawn, two-toned; curtains natural pongee or linen, with insertion of same shade; rug in Oriental shades, mixture of reds, bronzes and fawns.

(5) Bedroom. (a) Rug deep indigo, wall gray-blue with upper third a frieze of harebells. (b) Rug mossy green; wall cream, with upper third a frieze of apple blossoms or roses, with green leaves; curtains cotton crepe, with trimming of chintz to match frieze; upholstery, similar to chintz. "Chintz" papers, by the way, may be bought now, and are much liked for touches such as this in bright, cozy rooms. Chintz, or flowered cretonne upholstery, it may be noted, is used quite as much for drawing-rooms as for bedrooms. It is always, if well chosen, dainty and pretty, and seems especially suited to old-fashioned or quaintly-built country houses.

So much for papering. Just here, however, it may be noted that paper is not the only wall-covering used. The flat-tone wall-finishes, alabastine and water-paint, are all good and inexpensive, and quite decorative, especially when used with frieze or wainscot of paper. If one wishes, on the other hand, to spend a considerable amount on the "background" of the house, as walls have been appropriately called, there are always the burlaps and grass-cloths, which have been so popular that burlap and grass-cloth papers, almost as pretty, have been made for those who wish the effect without spending the money.

All this has been given for those who intend to "decorate" their walls this season in hope that a hint here and there may be of use. . . There may be others who would like to re-paper this year, but cannot afford it. After all, it really does not matter. New furnishings for the house can never add in any material way to happiness. I often think that the happiest and wisest people in the world are those who would be contented to live, if necessary, in a little log house, with some good friends, some good books, and a garden. We should certainly try to keep ourselves surrounded with attractive colorings, however little be the expense by which they may be accomplished, but we should just as earnestly seek to keep out of the mad swim of wanting ever more things and yet more—"the mania of owning things" as Whitman calls it—which has carried so many people off their feet and into deep waters. Common sense, the exercise of our "gray matter," should direct us in this as well as in other things.

Many questions come in regard to wood-work. We may say that walnut, fumed oak, Flemish oak, early English, and "weathered" effects, are all considered prettier than golden oak finish. Mahogany is, of course, always in favor for drawing-room furniture, and is often combined with a white trim in the rest of the wood-work. Ivory-white paint is, indeed, especially liked by a great many for drawing-rooms and bedrooms, whatever the color-scheme chosen may be. It is always effective, and often lends the touch of brightness necessary to so many rooms.

RE STAINING.

Dear Junia,—I have come to you for information. Can you tell me where the music can be got of, "Where the River Shannon Flows," or could you publish the words?

BABY'S OWN SOAP



To help the tender skin of an infant is the Baby's Own Soap standard.

For four generations, it has won unstinted praise and today Baby's Own is the recognized leader for nursery and toilet.

Its pure, creamy, fragrant lather softens and heals, and its daily use is a renewed delight.

It's Best for Baby and Best for You.

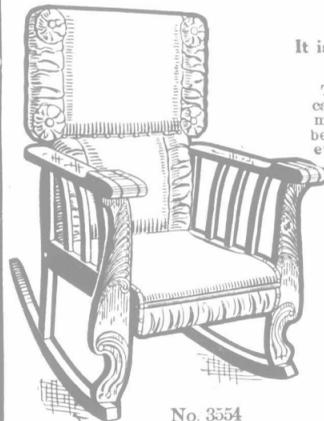
Sold almost everywhere—but insist on Baby's Own.

ALBERT SOAPS, LIMITED, Mfrs., - - - MONTREAL. 4-12

See This Rocker Before You Pay For It

Let Us Send it to YOU on 5 Days' Approval at Our Risk

It is one of the big values in furniture contained in our large illustrated CATALOGUE "7"



No. 3554

This rocker is exactly as illustrated, frame of selected quarter-cut oak, hand-carved and polished, with spring seat and buttoned back, both upholstered in moroccoline—an imitation leather that will wear like iron and can scarcely be told from genuine leather. Equal in value to any \$10.00 rocker you ever saw.

ONLY \$5.75 — FREIGHT PREPAID

to any station within and as far as 200 miles from Toronto. (200 miles freight allowance to points of greater distance.)

Cut out and send this coupon.

(Write name and address plainly.)

Name
Address

Dear Sirs,—Please ship me, freight prepaid, on 5 days' approval, one NO. 3554 Rocker. I agree to within the 5 days after receipt thereof—either remit to you the sum of \$5.75—the price of the rocker—or re-ship same to you. (This order implies no obligation on my part to purchase or bear freight charges either way.)

To the Adams Furniture Company, Toronto:

The Adams Furniture Company, Limited, Toronto, Ont.

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Helps To Keep The Boys And Girls At Home

There's nothing like plenty of light to make the home cheerful and attractive, particularly when it's that soft, white light, ACETYLENE.

Easily installed in any house, and actually cheaper, for the same amount of light, than coal oil lamps, Acetylene floods the home with the nearest approach to daylight that science has yet produced for lighting houses.

It makes reading or fine sewing delightfully easy. It enables one to follow the music score in any part of the room. It shows up the true values of the colors in pictures, wall-paper, carpets and furniture, as well as in pretty clothes, bright cheeks and flashing eyes.

The barns, too, can easily be lighted with Acetylene, and the "chores" robbed of much of their drudgery.

Let us give you facts and figures on Acetylene, its cost and how to use it. You'll be under no obligation for the information.



ACETYLENE CONSTRUCTION CO., LIMITED

9 604 POWER BLDG., MONTREAL.

Cor. McTavish and 6th Sts., Brandon, Man. — 422 Richards St., Vancouver.

Is there a possibility of staining a dark oak over mahogany? If so, please tell me what to use.

What is the newest thing in dressing iron beds?

Can you tell me of anything that will remove superfluous hair without injuring the skin?

Thanking you for past favors.

Oxford Co., Ont.

Write to any large music firm, e. g., Whaley, Royce & Co., Yonge street, Toronto, in regard to the song. We have no information about it here.

You will find it quite impossible to stain mahogany to a dark oak,—but surely you do not mean real mahogany. No one would ever dream of trying to change that.

I am not sure as to what you mean by "dressing" iron beds. They are usually enamelled in white, of very light shades. Use the enamel that comes in tins.

A specialist to whom I telephoned in regard to your last query, says that electricity is the only effective method, also that it must be applied by an expert to be sure of good results.

MAKING A REFRIGERATOR.

Dear Junia,—Like many others, I am a constant reader of the Ingle Nook, and get many helpful hints.

Housecleaning Sale of Used Pianos and Organs

Housecleaning time would be an excellent time to install "that piano or organ," because when your home is once more in order your piano will be there, and at a great saving. The list below contains 16 genuine and unusual bargains in used pianos and organs. All of them are worth more than the prices quoted. All of them are guaranteed like a new instrument. They are sent subject to your approval and can be returned at our expense if not absolutely satisfactory. A handsome piano stool is included free with each instrument. When ordering send a second

choice in case your first choice is sold. Wire at our expense to hold any instrument you want.

TERMS OF SALE.

Organs under \$50.00, \$5.00 cash and \$3.00 per month.
Organs over \$50.00, \$10.00 cash and \$4.00 per month.
Pianos under \$250.00, \$10.00 cash and \$6.00 per month.
Pianos over \$250.00, \$10.00 cash and \$7.00 per month.
10 per cent. discount from these prices for cash.

ORGANS

BELL—5-octave parlor organ, by W. Bell & Co., Guelph; in solid walnut case, with small extended top; has 7 stops, 2 complete sets of reeds, knee swell. Special Sale Price.....

DOMINION—5-octave parlor organ, by the Dominion Organ Co.; in solid walnut case, with extended top; has 8 stops, 2 complete sets of reeds, 2 knee swells. Special Sale Price.....

WILLIAMS—5-octave cabinet organ, by R. S. Williams, Toronto; in solid walnut case, with high top; has 9 stops, 2 complete sets of reeds, 2 knee swells. Special Sale Price.....

DOMINION—5-octave parlor organ, "Ville Gem" style, by the Dominion Organ Co.; in solid walnut case of attractive design; has 8 stops, 2 complete sets of reeds, 2 knee swells. Special Sale Price.....

BELL—An attractive organ in mahogany case, by W. Bell & Co., Guelph; without high top, suitable for church or Sabbath school; has 10 stops, 2 sets of reeds in the treble, one set in the bass, 2 knee swells. A modern instrument. Special Sale Price.....

\$32

37

39

41

42

BELL—5-octave organ, by W. Bell & Co., Guelph; in solid walnut case without high top but with small rail top, suitable for church or Sabbath school use; has 10 stops, 2 complete sets of reeds, 2 knee swells, mouse-proof pedals. Special Sale Price.....

\$43

KARN—A very fine piano-case organ, by D. W. Karn & Co., Woodstock; in solid walnut case of handsome design, with mirror rail top; has 11 stops, including coupler, vox humana, etc.; 2 complete sets of reeds, knee swells, mouse-proof pedals, etc. An attractive instrument in splendid order. Special Sale Price.....

76

BELL—A fine piano case organ, by W. Bell & Co., Guelph; in solid walnut case with attractive mirror rail top. This organ has also a patent swing front with ample music compartments on the inside; has 11 stops, including coupler, vox humana, etc.; 2 complete sets of reeds, knee swells, mouse-proof pedals, in splendid order. Special Sale Price.....

79

PIANOS

MASON & RISCH—A very attractive small size upright piano, by Mason & Risch, Toronto; in rosewood case, with Burl walnut panels, without carving; has double-repeating action, ivory and ebony keys, etc. Special Sale Price.....

MENDELSSOHN—An almost new Mendelssohn piano, small size, modern design, in walnut, double veneered throughout; has full-length panels and music desk, double-repeating action, 3 pedals with practice muffler. Special Sale Price.....

NEWCOMBE—7½ cabinet grand upright piano, by the Newcombe Co., Toronto; in rosewood case, with plain polished panels, carved pilasters and trusses; has double-repeating action, ivory and ebony keys, etc. Special Sale Price.....

STANBURY—7½ octave cabinet grand upright piano, by Stanbury & Sons, N. Y.; in richly figured mahogany case, handsome colonial design, without carving. The piano has been very little used and cannot be told from new. Special Sale Price.....

MENDELSSOHN—7½ octave upright piano, by the Mendelssohn Piano Co., Toronto; in nicely figured walnut case, with full-length music

\$195

205

225

235

desk, attractive panels, slightly ornamented, with no carving, colonial pilasters and trusses, 3 pedals, ivory and ebony keys, etc. Special Sale Price.....

\$243

GERHARD-HEINTZMAN—7½ octave upright piano, by the Gerhard-Heintzman Co., Toronto; in dark mahogany case with plain polished panels, full-length music desk, double-repeating action, ivory and ebony keys, etc. In just as good order as when new. Special Sale Price.....

265

McMILLAN—7½ octave cabinet grand piano, made in our own factory; of first-class material and workmanship, in attractive walnut case beautifully figured, with full-length plain polished panels, 3 pedals, in addition to practice muffler operated by lever under the keyboard. Has been used only fifteen months and could not be told from new. Special Sale Price.....

273

GOURLAY—Cabinet grand upright piano, in mahogany case richly figured, with full-length music desk and plain polished panels. This piano has been used slightly, but its use has merely served to test and develop its superb singing tone quality; is guaranteed just like a new piano. Special Sale Price.....

305

GOURLAY, WINTER & LEEMING, 188 Yonge St., Toronto

Some years ago, before I was interested in such things, someone gave a wrinkle for a homemade refrigerator, which was very useful for real warm weather. Would be very thankful if someone could tell how to make it.

MAGNOLIA

Wellington Co., Ont.

Probably the following answer to a similar question (answered by J. A. Rud-dick, Dairy and Cold-storage Commissioner), in our issue of April 28, 1910, is the one to which you refer:

"It is impossible to properly describe any system of constructing a refrigerator,

in answer to a question of this kind. The best we can do is to state briefly a few of the principles which must be followed. There are several systems by which the cooling power of ice is utilized. The circulation system is automatic in its operation, and involves less labor than any other plan. In this system there are two chambers, one for ice, and one for the articles to be cooled. Provision is made for a circulation of air between the two chambers. The ice-chamber may be above the cooling-room, or alongside. If above the circulation is controlled by having openings along the wall on either side. A false parti-

tion should carry the opening to the top of the ice, on one side, which will cause the warm air to rise at that side. The cold air will fall through the opening on the other side. If the ice-chamber is alongside the cooling-room, openings at the top and bottom of the partition between the two chambers provide the necessary circulation.

The walls require to be constructed with as nearly as possible an imperious shell outside and inside, the space between these two shells to be filled with planer shavings, not sawdust. The space for the shavings should be about one foot wide, for good results. The

floors and ceilings must also be insulated (with an air-space, in the same way). Spruce lumber should be used for the interior finish. Give it one or two coats of shellac to prevent the wood from absorbing moisture and encouraging the growth of mould.

The floor of the ice-chamber must be provided with drainage, well trapped, to carry off the water from the melting ice. The outlet must be trapped to prevent passage of air. The floor of the ice-chamber must be water-tight. Galvanized-iron covering is probably the simplest way of securing that result. Put a rack on top of the galvanized-iron to

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when they are dyed with Maypole Soap. It gives them beautiful, rich shades, fadeless in sun or rain.

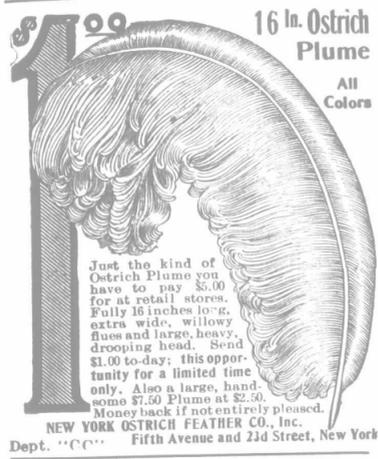
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is very easy to use, and will not stain hands or kettle. It will save you many dollars a year.

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For Sale Suffolk Punch stallion, 8 years old; bay; sired by Ontario.

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protect it from injury when the chamber is filled with ice.

"Double boards on the outside, and double boards inside, with damp-proof paper between, give a fairly good construction for the walls of the two chambers. The partition between the ice-chamber and the cooling-room should be insulated in the same manner as the walls."

A LETTER FROM WENTWORTH COUNTY.

Dear Junia,—How do you do? Will you let me come again, or did I wear your patience out last time I called? Where is Jack's Wife now? I am sure the Nookers must miss her very much, though perhaps some of them saw her article on "The Care of Hens," in a February number. I believe it was. It was very good, I think.

Well, Junia, it is almost spring, and also almost housecleaning time, which brings me to my question and trouble. We have a kitchen that is only boards on the inside, and for years we have painted them, but last year mother wanted a change, so she covered them with felt paper, tacking it on first, then pasting wall paper on that. For a while it was nice, then it started to crack, and in the autumn it was worse than nothing. For a while we patiently papered it over again, but it is quite useless doing that, so we have decided to try something else, if anything else can be obtained. Can you help us? Can you tell me whether alabastine will wash, or if it must be renewed every year?

Have any of the Nookers ever tried Pearlina and coal oil to wash paint and oilcloth? It is excellent; I found that out by experience.

Can you tell me anything to make one's hair grow? Mine is very thick, but it doesn't reach my waist in length now, though when I had a fever some time since, I could sit on it. It is also very coarse, though black and curly, and easily arranged, as all curly hair is, I presume.

SWEETHEART.

Wentworth Co., Ont.

The "Jack's Wife" who wrote about hens, is a new one. Our old friend of the Ingle Nook is away in Arizona now, keeping store. I intend to write her a big, long letter some day, just to tell her how many of our fireside circle have been asking about her. Perhaps I can coax her to visit us again.

If I had that kitchen, Sweetheart, I should go back to the painted boards again. Of course, if you wish to go to the expense, you can pull off all the felt paper and put on one of the metal wall-coverings. I have also heard of oilcloth being used for kitchen walls; it might be satisfactory.

Alabastine will not wash, but it is so inexpensive that renewing it is not at all impracticable. If it is only soiled in spots, it may be touched up with the same color, if you have a little left over.

Did you find the Pearlina and coal oil mixture at all hard on the oilcloth?

Since your hair is curly now, it may not grow very long; curly hair is usually rather short. A little vaseline well rubbed into the scalp about twice a week is said to be good to promote the growth of the hair.

MILK CHOCOLATE—COOKIES.

Dear Junia,—Being a regular reader of your Nook, I took the liberty to come to you with a request for a recipe of milk chocolate. We enjoy the discussions very much, and make use of many recipes. I will send a good cooky recipe. One cup of sour milk, 1 egg, 2 cups of yellow sugar, ½ cup granulated sugar, 1 cup of lard, 1 large teaspoonful soda, nutmeg.

A CAISTOR GIRL.

Wentworth Co., Ont.

If you mean the dainty little milk chocolate candies sold by several confectionery manufacturing firms, I am afraid I cannot help you, although I have several recipes for chocolate caramels, etc. If, however, you mean the hot chocolate drink made with milk, here is a very good recipe: Take two squares Baker's chocolate, 1 quart milk, 3 tablespoons sugar, 3 tablespoons water. Scrape the chocolate fine, put it in a granite pan, add the water, and heat slowly until the chocolate is dissolved. Meanwhile have the milk heating in a double boiler. When it is hot enough, just at boiling

point, add the chocolate and sugar and beat with a Dover egg-beater until frothy. Serve with a spoonful of whipped cream on each cup. Cocoa may be used instead of the chocolate—a good teaspoonful to each cup. A dash of salt improves cocoa. It should be boiled a few minutes before adding it to the milk.

KIND WORDS.

Dear Junia,—I quite approve of Mrs. C. C.'s request. You know that beautiful minds make the most beautiful faces, so we will look forward to seeing the photos. We prize Miss Farncomb's Quiet Hour very much, and keep it for Sunday reading; also your wise and helpful suggestions so amiably given.

"Trips Among the Eminent" are delightful. I enjoy them immensely. Glad that Sandy Fraser has taken up his pen again; we give him a hearty welcome. And Peter McArthur's racy articles are a treat. Mentally, we shake hands with him.

S. D.

Argenteuil, Que.

Thank you very much, S. D., for your encouraging words.

The Scarlet Pimpernel.

A STORY OF ADVENTURE.
By Baroness Orczy.

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(Continued from last week.)
CHAPTER XVI.
Richmond.

A few minutes later she was sitting, wrapped in cosy furs, near Sir Percy Blakeney on the box-seat of his magnificent coach, and the four splendid bays had thundered down the quiet street.

The night was warm in spite of the gentle breeze which fanned Marguerite's burning cheeks. Soon London houses were left behind, and rattling over old Hammersmith Bridge, Sir Percy was driving his bays rapidly towards Richmond.

The river wound in and out on its pretty delicate curves, looking like a silver serpent beneath the glittering rays of the moon. Long shadows from overhanging trees spread occasional deep paths right across the road. The bays were rushing along at breakneck speed, held but slightly back by Sir Percy's strong, unerring hands.

These nightly drives after balls and suppers in London were a source of perpetual delight to Marguerite, and she appreciated her husband's eccentricity keenly, which caused him to adopt this mode of taking her home every night, to their beautiful home by the river, instead of living in a stuffy London house. He loved driving his spirited horses along the lonely, moonlit roads, and she loved to sit on the box-seat, with the soft air of an English late summer's night fanning her face after the hot atmosphere of a ball or supper-party. The drive was not a long one—less than an hour, sometimes, when the bays were very fresh, and Sir Percy gave them full rein.

To-night he seemed to have a very devil in his fingers, and the coach seemed to fly along the road, beside the river. As usual, he did not speak to her, but stared straight in front of him, the ribbons seeming to lie quite loosely in his slender, white hands. Marguerite looked at him tentatively once or twice; she could see his handsome profile, and one lazy eye, with its straight fine brow and drooping heavy lid.

The face in the moonlight looked singularly earnest, and recalled to Marguerite's aching heart those happy days of courtship, before he had become the lazy nincompoop, the effete top, whose life seemed spent in card and supper rooms.

But now, in the moonlight, she could not catch the expression of the lazy blue eyes; she could only see the outline of the firm chin, the corner of the strong mouth, the well-cut massive shape of the forehead; truly, nature had meant well by Sir Percy; his faults must all be laid at the door of that poor, half-crazy mother, and of the distracted heart-broken father, neither of whom had cared for the young life, which was sprouting up between them, and which, perhaps,

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and want to get rid of it, read the following letter from a young lady in Pictou, N. S., and follow her advice:

"Having been convinced of the good which your Goitre Sure Cure has done me, I now feel it my duty to recommend it to anyone troubled with goitre. It has perfectly cured me. I cannot express in words my thankfulness for what it has done for me."

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We also carry a full stock of Oyster Shell Crystal Grit, Poultry Charcoal, etc., and can give you immediate delivery of any quantities.

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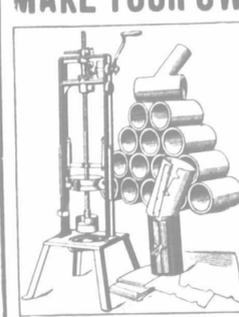
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SEED CORN

Buy Yours on the Cob

Space in "The Advocate" is too expensive to give you our ideas of the different varieties, but we would suggest that you send for our catalogue, which gives some good practical information; also read the corn article on page 581 in March 28th issue of this magazine. Secure your seed early and test it for germination. This is a very simple matter. It will pay you well. Below find our prices, ex warehouse, Toronto.

70 lbs. to the bush. of cob corn

Wisconsin No. 7,	Ontario grown, price on the cob, \$1.50 per bush., bags free
White Cap Yellow Dent,	shelled..... 1.30
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The Eureka Hand Corn Planter \$1.25 each

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Regenerated Abundance Regenerated Banner

We offer them while they last in 5 bush. lots or over at \$1.30 per bush., BAGS FREE. Less than 5 bush. lots at \$1.50, bags free. Below find list of some of our

Ontario Grown Oats

Daubeney, test 35 lbs., at \$1.25; Abundance, test 38 lbs., at 85c.; Siberian, test 37½ lbs., at 85c.; Bumper King, test 37½ lbs., at 90c.; White Auster, test 37 lbs., at 85c.; Lincoln, test 37 lbs., at 85c. We also offer good, clean Banner Oats that test 36 lbs. to the bushel, but contain a sprinkling of barley, at 75c. per bushel. BAGS FREE.

Barley

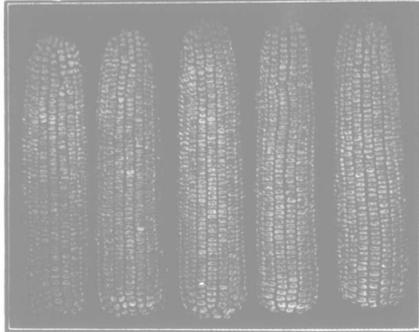
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Red Clover—	Gov't Stan.	Price
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Look at "St. Lawrence" Sugar—its perfect crystals—its pure, white sparkle—its even grain. Test it point by point, and you will see that

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is one of the choicest sugars ever refined—with a standard of purity that few sugars can boast. Try it in your home.

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their very carelessness was already beginning to wreck.

Marguerite suddenly felt intense sympathy for her husband. The moral crisis she had just gone through made her feel indulgent towards the faults, the delinquencies, of others.

How thoroughly a human being can be buffeted and overmastered by Fate, had been borne in upon her with appalling force. Had anyone told her a week ago that she would stoop to spy upon her friends, that she would betray a brave and unsuspecting man into the hands of a relentless enemy, she would have laughed the idea to scorn.

Yet she had done these things: anon, perhaps the death of that brave man would be at her door, just as two years ago the Marquis de St. Cyr had perished through a thoughtless word of hers; but in that case she was morally innocent—she had meant no serious harm—fate merely had stepped in. But this time she had done a thing that obviously was base, had done it deliberately, for a motive which, perhaps, high moralists would not even appreciate.

And as she felt her husband's strong arm beside her, she also felt how much more he would dislike and despise her, if he knew of this night's work. Thus human beings judge of one another, superficially, casually, throwing contempt on one another, with but little reason, and no charity. She despised her husband for his inanities and vulgar, intellectual occupations; and he, she felt, would despise her still worse, because she had not been strong enough to do right for right's sake, and to sacrifice her brother to the dictates of her conscience.

Buried in her thoughts, Marguerite had found this hour in the breezy summer night all too brief; and it was with a feeling of keen disappointment, that she suddenly realized that the bays had turned into the massive gates of her beautiful English home.

Sir Percy Blakeney's house on the river has become a historic one; palatial in its dimensions, it stands in the midst of exquisitely laid-out gardens, with a picturesque terrace and frontage to the river. Built in Tudor days, the old red brick of the walls look eminently picturesque in the midst of a bower of green, the beautiful lawn, with its old sun-dial, adding the true note of harmony to its foreground. Great secular trees lent cool shadows to the grounds, and now, on this warm early autumn night, the leaves slightly turned to russets and gold, the old garden looked singularly poetic and peaceful in the moonlight.

With unerring precision, Sir Percy had brought the four bays to a standstill immediately in front of the fine Elizabethan entrance hall; in spite of the lateness of the hour, an army of grooms seemed to have emerged from the very ground, as the coach had thundered up, and were standing respectfully round.

Sir Percy jumped down quickly, then helped Marguerite to alight. She lingered outside for a moment, whilst he gave a few orders to one of his men. She skirted the house, and stepped on to the lawn, looking out dreamily into the silvery landscape. Nature seemed exquisitely at peace, in comparison with the tumultuous emotions she had gone through: she could faintly hear the ripple of the river and the occasional soft and ghostlike fall of a dead leaf from a tree.

All else was quiet round her. She had heard the horses prancing as they were being led away to their distant stables, the hurrying of servants' feet as they had all gone within to rest; the house also was quite still. In two separate suites of apartments, just above the magnificent reception-rooms, lights were still burning; they were her rooms, and his, well divided from each other by the whole width of the house, as far apart as their own lives had become. Involuntarily she sighed—at that moment she could really not have told why.

She was suffering from uncomprehensible heartache. Deeply and achingly she was sorry for herself. Never had she felt so pitifully lonely, so bitterly in want of comfort and of sympathy. With another sigh she turned away from the river towards the house, vaguely wondering if, after such a night, she could ever feel rest and sleep.

Suddenly, before she reached the terrace she heard a new voice, a soft, young

gravel, and the next moment her husband's figure emerged out of the shadow. He, too, had skirted the house, and was wandering along the lawn, towards the river. He still wore his heavy driving coat with the numerous lapels and collars he himself had set in fashion, but he had thrown it well back, burying his hands as was his wont, in the deep pockets of his satin breeches: the gorgeous white costume he had worn at Lord Grenville's ball, with its jabot of priceless lace, looked strangely ghostly against the dark background of the house.

He apparently did not notice her, for, after a few moments' pause, he presently turned back towards the house, and walked straight up to the terrace.

"Sir Percy!"

He already had one foot on the lowest of the terrace steps, but at her voice he started, and paused, then looked searchingly into the shadows whence she had called to him.

She came forward quickly into the moonlight, and, as soon as he saw her, he said, with that air of consummate gallantry he always wore when speaking to her—

"At your service, Madame!"

But his foot was still on the step, and in his whole attitude there was a remote suggestion, distinctly visible to her, that he wished to go, and had no desire for a midnight interview.

"The air is deliciously cool," she said, "the moonlight peaceful and poetic, and the garden inviting. Will you not stay in it awhile; the hour is not yet late, or is my company so distasteful to you, that you are in a hurry to rid yourself of it?"

"Nay, Madame," he rejoined placidly, "but 'tis on the other foot the shoe happens to be, and I'll warrant you'll find the midnight air more poetic without my company; no doubt the sooner I remove the obstruction the better your ladyship will like it."

He turned once more to go.

"I protest you mistake me, Sir Percy," she said hurriedly, and drawing a little closer to him; "the estrangement, which, alas! has arisen between us, was none of my making, remember."

"Begad! you must pardon me there, Madame!" he protested coldly, "my memory was always of the shortest."

He looked her straight in the eyes, with that lazy nonchalance which had become second nature to him. She returned his gaze for a moment, then her eyes softened, as she came up quite close to him, to the foot of the terrace steps.

"Of the shortest, Sir Percy? Faith! how it must have altered! Was it three years ago or four that you saw me for one hour in Paris, on your way to the East? When you came back two years later you had not forgotten me."

She looked divinely pretty as she stood there in the moonlight, with the fur-cloak sliding off her beautiful shoulders, the gold embroidery on her dress shimmering around her, her childlike blue eyes turned up fully at him.

He stood for a moment, rigid and stiff, but for the clenching of his hand against the stone balustrade of the terrace.

"You desired my presence, Madame," he said frigidly, "I take it that it was not with a view to indulging in tender reminiscences."

His voice certainly was cold and uncompromising; his attitude before her, stiff and unbending. Womanly decorum would have suggested that Marguerite should return coldness for coldness, and should sweep past him without another word, only with a curt nod of the head; but womanly instinct suggested that she should remain—that keen instinct, which makes a beautiful woman conscious of her powers long to bring to her knees, the one man who pays her no homage. She stretched out her hand to him.

"Nay, Sir Percy, why not? The present is not so glorious but that I should not wish to dwell a little in the past."

He bent his tall figure, and taking hold of the extreme tip of the fingers which she still held out to him, he kissed them ceremoniously.

"I, faith, Madame," he said, "then you will pardon me, if my dull wits cannot accompany you there."

Once again he attempted to go, once more her voice, sweet, childlike, almost tender, called him back.

"Sir Percy."

"Your servant, Madame."

"Is it possible that love can die?" she said with sudden, unreasoning vehemence.

mence. "Methought that the passion which you once felt for me would outlast the span of human life. Is there nothing left of that love, Percy . . . which might help you . . . to bridge over that sad estrangement?"

His massive figure seemed, while she spoke thus to him, to stiffen still more, the strong mouth hardened, a look of relentless obstinacy crept into the habitually lazy blue eyes.

"With what object I pray you, Madame?" he asked coldly.

"I do not understand you."

"Yet 'tis simple enough," he said with sudden bitterness, which seemed literally to surge through his words, though he was making visible efforts to suppress it. "I humbly put the question to you, for my slow wits are unable to grasp the cause of this, your ladyship's sudden new mood. Is it that you have the taste to renew the devilish sport which you played so successfully last year? Do you wish to see me once more a love-sick suppliant at your feet, so that you might again have the pleasure of kicking me aside, like a troublesome lap-dog?"

She had succeeded in rousing him for the moment: and again she looked straight at him, for it was thus she remembered him a year ago.

"Percy! I entreat you!" she whispered, "can we not bury the past?"

"Pardon me, Madame, but I understood you to say that your desire was to dwell in it."

"Nay! I spoke not of that past, Percy!" she said, while a tone of tenderness crept into her voice. "Rather did I speak of the time when you loved me still! and I . . . oh! I was vain and frivolous; your wealth and position allured me: I married you, hoping in my heart that your great love for me would beget in me a love for you . . . but, alas! . . ."

The moon had sunk low down behind a bank of clouds. In the east a soft grey light was beginning to chase away the heavy mantle of the night. He could only see her graceful outline now, the small queenly head, with its wealth of reddish golden curls, and the glittering gems forming the small, star-shaped, red flower which she wore as a diadem in her hair.

"Twenty-four hours after our marriage, Madame, the Marquis de St. Cyr and all his family perished on the guillotine, and the popular rumor reached me that it was the wife of Sir Percy Blakeney who helped to send them there."

"Nay! I myself told you the truth of that odious tale."

"Not till after it had been recounted to me by strangers, with all its horrible details."

"And you believed them then and there," she said with great vehemence, "without a proof or question—you believed that I, whom you vowed you loved more than life, whom you professed you worshipped, that I could do a thing so base as these strangers chose to recount."

You thought I meant to deceive you about it all—that I ought to have spoken before I married you; yet, had you listened, I would have told you that up to the very morning on which St. Cyr went to the guillotine, I was straining every nerve, using every influence I possessed, to save him and his family. But my pride sealed my lips, when your love seemed to perish, as if under the knife of that same guillotine. Yet I would have told you how I was duped! Aye! I, whom that same popular rumor had endowed with the sharpest wits in France! I was tricked into doing this thing, by men who knew how to play upon my love for an only brother, and my desire for revenge. Was it unnatural?"

Her voice became choked with tears. She paused for a moment or two, trying to regain some sort of composure. She looked appealingly at him, almost as if he were her judge. He had allowed her to speak on in her own vehement, impassioned way, offering no comment, no word of sympathy; and now, while she paused, trying to swallow down the hot tears that gushed to her eyes, he waited impassive and still. The dim, grey light of early dawn seemed to make his tall form look taller and more rigid. The lazy, good-natured face looked strangely altered. Marguerite, excited, as she was, could see that the eyes were no longer languid, the mouth

no longer good-humored and inane. A curious look of intense passion seemed to glow from beneath his drooping lids, the mouth was tightly closed, the lips compressed, as if the will alone held that surging passion in check.

Marguerite Blakeney was, above all, a woman, with all a woman's fascinating foibles, all a woman's most lovable sins. She knew in a moment that for the past few months she had been mistaken: that this man who stood here before her, cold as a statue, when her musical voice struck upon his ear, loved her, as he had loved her a year ago: that his passion might have been dormant, but that it was there, as strong, as intense, as overwhelming, as when first her lips met his in one long, maddening kiss.

Pride had kept him from her, and, woman-like, she meant to win back that conquest which had been hers before. Suddenly it seemed to her, that the only happiness life could ever hold for her again would be in feeling that man's kiss once more upon her lips.

"Listen to the tale, Sir Percy," she said, and her voice now was low, sweet, infinitely tender. "Armand was all in all to me! We had no parents, and brought one another up. He was my little father, and I, his tiny mother; we loved one another so. Then one day—do you mind me, Sir Percy? the Marquis de St. Cyr had my brother Armand thrashed—thrashed by his lacqueys—that brother whom I loved better than all the world! And his offence? That he, a plebeian, had dared to love the daughter of the aristocrat: for that he was waylaid and thrashed . . . thrashed like a dog within an inch of his life! Oh, how I suffered! his humiliation had eaten into my very soul! When the opportunity occurred, and I was able to take my revenge, I took it. But I only thought to bring that proud marquis to trouble and humiliation. He plotted with Austria against his own country. Chance gave me knowledge of this; I spoke of it, but I did not know—how could I guess?—they trapped and duped me. When I realized what I had done, it was too late."

"It is perhaps a little difficult, Madame," said Sir Percy, after a moment of silence between them, "to go back over the past. I have confessed to you that my memory is short, but the thought certainly lingered in my mind that, at the time of the Marquis' death, I entreated you for an explanation of those same noisome popular rumors. If that same memory does not, even now, play me a trick, I fancy that you refused me all explanation then, and demanded of my love a humiliating allegiance it was not prepared to give."

"I wished to test your love for me, and it did not bear the test. You used to tell me that you drew the very breath of life but for me, and for love of me."

"And to probe that love, you demanded that I should forfeit mine honour," he said, whilst gradually his impassiveness seemed to leave him, his rigidity to relax; "that I should accept without murmur or question, as a dumb and submissive slave, every action of my mistress. My heart overflowing with love and passion, I asked for no explanation—I waited for one, not doubting—only hoping. Had you spoken but one word, from you I would have accepted any explanation and believed it. But you left me without a word, beyond a bald confession of the actual horrible facts; proudly you returned to your brother's house, and left me alone . . . for weeks . . . not knowing, now, in whom to believe, since the shrine, which contained my one illusion, lay shattered to earth at my feet."

She need not complain now that he was cold and impassive; his very voice shook with an intensity of passion, which he was making superhuman efforts to keep in check.

"Aye! the madness of my pride!" she said sadly. "Hardly had I gone, already I had repented. But when I returned, I found you, oh, so altered! wearing already that mask of somnolent indifference which you have never laid aside until . . . until now."

She was so close to him that her soft, loose hair was wafted against his cheek; her eyes, glowing with tears, maddened him, the music in her voice sent fire through his veins. But he would not

"METALLIC" Ceilings and Walls



Some of the most imposing residences in our large cities are decorated throughout with METALLIC Libraries, Dining-rooms and Kitchens. It is an artistic yet fire-proof decoration, and will save you money by reducing your insurance rates.

If building a new home METALLIC should be put on without hesitation as you will save the cost of lath, plaster and paper, besides having a cheaper yet fire-proof and vermin-proof interior.

Or you can apply them to old rooms over the plaster. Then they are so easy to keep clean—simply wipe them with a damp cloth now and again and they look as good as when first put on.

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Try METALLIC in your kitchen or bath-room, this is where its qualities are put to the severest test.

METALLIC is very artistic—hundreds of varied designs to select from—heavy beam effects, fancy scroll and panel patterns made to suit every room.

We shall be pleased to quote you if you tell us the size and shape of your ceilings or walls.

Agents Wanted in Some Localities.

THE **METALLIC** ROOFING
CO. Limited
MANUFACTURERS

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Branch Factory: WINNIPEG.
Agents in principal cities.

LONDON FENCE

Sold direct to the farmer. Freight paid to any steam railroad station in old Ontario, south of North Bay.

The Old Reliable High-grade Steel Wire, the quality that made London Coiled Wire famous.

Guaranteed to be first-class in every respect.

10 Wire **30** cents
Fence per rod

All No. 9 High-grade Steel Wire. First-class fencing never before at these prices.

For a short time only and cash with order.

Write for complete price list of Fence, Gates and Fence Material. Dept. M.

The London Fence Machine Co.
London, Ont. LIMITED

ORDER AT ONCE AND AVOID THE RUSH.

Have You Tried It?

Harab Digestive Tankage

(THE PROTEIN HOG FOOD)

The food that your hogs need. Made in Canada by

THE HARRIS ABATTOIR COMPANY, LIMITED
TORONTO, CANADA

WRITE US FOR LITERATURE, PRICES, ETC.

Facts about fencing or questions answered by the Fence Manager

Based on your experience in this business in Canada, what do you consider the most economical method of marketing fence?

The Invincible method, which includes only one manufacturing profit—one carlot freight to destination, and one distributor. Absolutely direct and economical.

What of fence makers, whose method is to sell to consumers, and the claims made in their advertisements?

The method in their case is very indirect and uneconomical, while the claims serve to obscure the issue, as to the kind of wire used, and for advertising generally.

Do these people make the wire for their fences?

Not a pound.

Then where do they get it?

Chiefly in the United States.

Does the making into fencing represent the larger part of the cost?

Not at all. Over ninety per cent. of the cost is the wire.

Then are they not themselves practically middlemen who market the product of foreign steel makers?

The reader is able to decide.

But how do they manage on small shipments to stand nearly double the freight rate which it would cost to ship fence in carlots?

Well! Of course some wire is being sold at low figures in the United States.

What kind of wire and for what reason?

Bessemer, of which there is an over supply due to several large American steel rail and structural steel makers, having recently gone into wire making in order to secure a market for the product of their Bessemer furnaces, because Railway Engineers, bridge builders, structural steel users and others who know, will no longer accept it.

Have any tests been made of Bessemer steel as applied to fencing?

Yes, at the instance of Farmers' Organization by the Department of Agriculture at Washington.

What were the results?

Their report states that the unequal distribution of impurities in Bessemer steel used as fence wire, produce an action causing rapid corrosion or rust and a tendency for the wire to "shed" its coat of galvanizing.

What steel is recommended or being used by the railway companies and others referred to?

"Open Hearth," because the process admits of accurate control and assures a product of an equal analysis throughout.

How about "Invincible Fencing"?

The makers are manufacturers of iron, steel and wire. They neither make, nor use anything but "Open Hearth Steel" in "Invincible" Fencing. Every dollar paid for "INVINCIBLE" Fence stays in Canada, going mostly to Canadian workmen who help produce it. While with one exception, beside the "INVINCIBLE," every other brand of fence sold in Canada is made from imported (and ninety-nine chances out of a hundred Bessemer) wire, and the greater part of the money paid for it goes to foreign wire makers.

Is the so-called "direct to consumer" plan economical for the user?

Impossible. As it exists in Canada, it is very indirect. For instance the

foreign steel and wire manufacturer gets the bulk of the consumers' money. Second—The railroad gets the freight from the wire mill, to where it is turned into fence. Third—The "Middleman" (?) fence maker or jobber, who is practically the industrious sales agent of the foreign wire mill, gets his "rake-off" beside his cost for weaving, which is high, compared with weaving costs in heavy tonnages at a large wire mill. Fourth—Cartage charges when shipped out, as farmers require in small lots, for delivery to the freight station. Fifth—The railways come in again for an extra handsome slice on these small lots (or anything less than carloads) frequently equal to 15 per cent. and sometimes over 20 per cent.

What is the "Invincible" sales method?

Well sir, it is the ideal one for economy. The first and foremost consideration is to produce an article so good, durable, strong, well made and dependable as to satisfy anyone.

Then just one reasonable and moderate producer's profit, one carlot freight direct to final destination, and a reasonable margin profit, for the dealer who distributes it, which he must earn by his work, trouble and outlay. We make one shipment while our local dealer makes perhaps fifty deliveries or more. He does it more cheaply and far better than we or anyone not at hand could do, and his profit is part of the money eaten up by the railways under so-called "direct to consumer" schemes.

Why has your Open Hearth Steel Fencing only so recently been put widely on the market?

The Steel Company of Canada, has taken the first possible opportunity in the course of events to thoroughly equip and man their Fence Dept., and to provide the best and only proper material, for the manufacture of this high-grade *Invincible Open Hearth Fencing* on a large scale, such as never undertaken in Canada heretofore.

Would it not be in the interests of the farmers' pockets to shut out this inferior Bessemer wire entirely?

Certainly, it would in the long run save them an immense amount of money, trouble and disappointment.

Good, responsible, hustling agents wanted in every district to sell, distribute and, if desired, to erect *Invincible Fencing and Gates*. Address Fence Department, Box 22 6

The
Steel Company
of Canada, Ltd.
Montreal Quebec



yield to the magic charm of this woman whom he had so deeply loved, and at whose hands his pride had suffered so bitterly. He closed his eyes to shut out the dainty vision of that sweet face, of that snow-white neck and graceful figure, round which the faint rosy light of dawn was just beginning to hover playfully.

"Nay, Madame, it is no mask," he

said jeily; "I swore to you . . . once that my life was yours. For months now it has been your plaything . . . it has served its purpose."

But now she knew that that very coldness was a mask. The trouble, the sorrow she had gone through last night, suddenly came back to her mind, but no longer with bitterness, rather with a feel-

ing that this man, who loved her, would help her to bear the burden.

"Sir Percy," she said impulsively, "Heaven knows you have been at pains to make the task, which I had set to myself, terribly difficult to accomplish. You spoke of my mood just now; well, we will call it that, if you will. I wished to speak to you . . . because . . . because I was in trouble . . .

and had need . . . of your sympathy."

"It is yours to command, Madame."

"How cold you are!" she sighed. "Faith! I can scarce believe that but a few months ago one tear in my eye had set you well-nigh crazy. Now I come to you . . . with a half-broken heart . . . and . . . and . . ."

"I pray you, Madame," he said, whilst his voice shook almost as much as hers, "in what way can I serve you?"

"Percy!—Armand is in deadly danger. A letter of his . . . rash, impetuous, as were all his actions, and written to Sir Andrew Ffoulkes, has fallen into the hands of a fanatic. Armand is hopelessly compromised . . . to-morrow, perhaps, he will be arrested . . . after that the guillotine . . . unless . . . unless . . . oh! it is horrible!" . . . she said, with a sudden wail of anguish, as all the events of the past night came rushing back to her mind, "horrible! . . . and you do not understand . . . you cannot . . . and I have no one to whom I can turn . . . for help . . . or even for sympathy . . ."

Tears now refused to be held back. All her trouble, her struggles, the awful uncertainty of Armand's fate overwhelmed her. She tottered, ready to fall, and leaning against the stone balustrade, she buried her face in her hands and sobbed bitterly.

At first mention of Armand St. Just's name and of the peril in which he stood, Sir Percy's face had become a shade more pale; and the look of determination and obstinacy appeared more marked than ever between his eyes. However, he said nothing for the moment, but watched her, as her delicate frame was shaken with sobs, watched her until unconsciously his face softened, and what looked almost like tears, seemed to glisten in his eyes.

"And so," he said with bitter sarcasm, "the murderous dog of the revolution is turning upon the very hands that fed it? . . . Begad, Madame," he added very gently; as Marguerite continued to sob hysterically, "will you dry your tears? . . . I never could bear to see a pretty woman cry, and I . . ."

Instinctively, with sudden, overmastering passion, at sight of her helplessness and of her grief, he stretched out his arms, and the next, would have seized her and held her to him, protected from every evil with his very life, his very heart's blood. . . . But pride had the better of it in this struggle once again; he restrained himself with a tremendous effort of will, and said coldly; though still very gently,—

"Will you not turn to me, Madame? and tell me in what way I may have the honor to serve you?"

She made a violent effort to control herself, and turning her tear-stained face to him, she once more held out her hand, which he kissed with the same punctilious gallantry; but Marguerite's fingers, this time, lingered in his hand for a second or two longer than was absolutely necessary, and this was because she had felt that his hand trembled perceptibly and was burning hot, whilst his lips felt as cold as marble.

"Can you do aught for Armand?" she said sweetly and simply. "You have so much influence at court . . . so many friends . . ."

"Nay, Madame, should you not rather seek the influence of your French friend, M. Chauvelin? His extends, if I mistake not, even as far as the Republican Government of France."

"I cannot ask him, Percy . . . Oh! I wish I dared to tell you . . . but . . . but . . . he has put a price on my brother's head, which . . ."

She would have given worlds if she had felt the courage then to tell him everything . . . all she had done that night—how she had suffered and how her hand had been forced. But she dared not give way to that impulse . . . not now, when she was just beginning to feel that he still loved her, when she hoped that she could win him back. She dared not make another confession to him. After all, he might not understand; he might not sympathize with her struggles and temptation. His love still dormant might sleep the sleep of death.

Perhaps he divined what was passing in her mind. His whole attitude was one of intense longing—a veritable prayer for that confidence, which her foolish

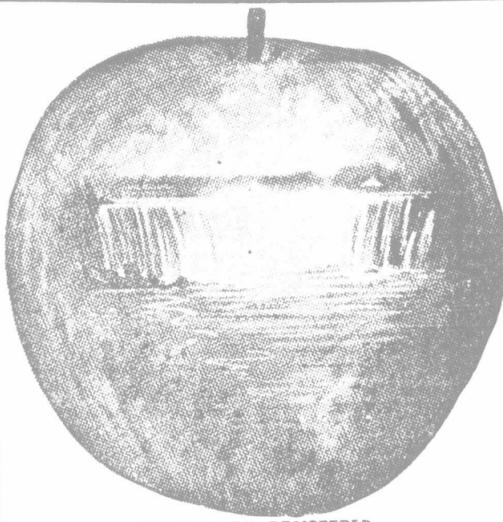
NIAGARA SPRAY

Niagara Lime-Sulphur

Has now been sold in Ontario for the past four years, and has always proved its merits as an insecticide and fungicide. Niagara shows the highest Beaume test. It is absolutely clear and uniform. **Niagara is not an experiment.** It always gives results. Our **ARSENATE OF LEAD (Swift's)** is used and endorsed by all up-to-date growers. It is guaranteed to contain **15 per cent. arsenic oxide.** It mixes easiest, sticks and kills best. **Niagara Sprays are guaranteed.** **REMEMBER**—“Wherever Fruit Excels Niagara Spray is used.” Our book on “Sprays and How to Use Them” is free.

WE SUPPLY

Lime-Sulphur, Arsenate of Lead, Raw Sulphur, Gasoline Engines, Spray Pumps (Hand and Power), High Pressure Hose, Spray Rods, Nozzles, Hydrometers and Accessories.



TRADE MARK, REGISTERED

SPRAY PUMPS

POWER OUTFITS

Bean Giant and Niagara Triplex, three-cylinder pumps of great power, capacity and durability. They spray at 250 lbs. pressure. Operated with 2½ or 3¼ H.P. Engine. **Bean Duplex**, a two-cylinder pump of slightly less capacity. Operated with 1½ or 2½ H.P. Engine. All our pumps have porcelain-lined cylinders, so are proof against corrosion. They have many excellent features.

Write for our Illustrated Catalogue.

HAND PUMPS

Three sizes of barrel pumps. **Magic No. 9 and No. 10.** The greatest hand pump in the world. Operates with one man at 140 lbs. pressure. **We keep every part in stock. We take care of our customers.**

NIAGARA BRAND SPRAY CO., LIMITED

Burlington, Ont. Trenton, Ont.

YOU CAN GROW BIGGER CROPS AND BETTER CROPS

on your land if you set about to do this in an intelligent manner. There are three points to which you must give careful and particular attention: Proper Cultivation, Crop Rotation, and the Proper Use of the Right Kind of Fertilizers. To secure best results you must attend to all three of these. No matter how well your land is cultivated, or your crops regulated, unless you use in the proper way the right kind of fertilizers, you cannot secure the best results.

Harab Fertilizers

are the right kind of fertilizers. Made from animal products, they return to the land the plant food which has been taken from it. They are organic fertilizers and for this reason act much more naturally than inorganic or chemical fertilizers. This difference in action can be very well compared to the difference between the action of a food and a stimulant on a human being.

Harab Fertilizers are Foods and will have no injurious after effects. They will **not** sour your land.

If you have tried other brands and are dissatisfied you will do well to give our goods a trial. They bring results. If you have never tried fertilizers you will be very wise to start now by trying Harab Fertilizers. Write us for full particulars. Our goods are put up as a finely ground powder in 125 lb. sacks. Can be handled without any trouble in an ordinary seed drill, or can be scattered by hand. We guarantee our goods to contain the plant foods represented, not only with you, but with the Government.

If we have no agent near you we want one. Write us for terms, prices, commission, etc.

“Harab Fertilizers”
are **Made in Canada**

by
THE HARRIS ABATTOIR CO.,
Toronto, Ontario

BEST RESULTS ARE OBTAINED FROM ADVOCATE ADVERTISEMENTS.

pride withheld from him. When she remained silent he sighed, and said with marked coldness—

“Faith, Madame, since it distresses you, we will not speak of it. . . . As for Armand, I pray you have no fear. I pledge you my word that he shall be safe. Now, have I your permission to go? The hour is getting late, and . . .”

“You will at least accept my gratitude?” she said, as she drew quite close to him, and speaking with real tenderness.

With a quick, almost involuntary effort he would have taken her then in his arms, for her eyes were swimming in tears, which he longed to kiss away; but she had lured him once, just like this, then cast him aside like an ill-fitting glove. He thought this was but a mood, a caprice, and he was too proud to lend himself to it once again.

“It is too soon, Madame!” he said quietly; “I have done nothing as yet. The hour is late, and you must be fatigued. Your women will be waiting for you upstairs.”

He stood aside to allow her to pass. She sighed, a quick sigh of disappointment. His pride and her beauty had been in direct conflict, and his pride had remained the conqueror. Perhaps, after all, she had been deceived just now; what she took to be the light of love in his eyes might only have been the passion of pride, or, who knows, of hatred instead of love. She stood looking at him for a moment or two longer. He was again as rigid, as impassive, as before. Pride had conquered, and he cared naught for her. The grey of dawn was gradually yielding to the rosy light of the rising sun. Birds began to twitter; Nature awakened, smiling in happy response to the warmth of this glorious October morning. Only between these two hearts there lay a strong, impassioned barrier, built up of pride on both sides, which neither of them cared to be the first to demolish.

He had bent his tall figure in a low ceremonious bow, as she finally, with another bitter little sigh, began to mount the terrace steps.

The long train of her gold-embroidered gown swept the dead leaves off the steps, making a faint harmonious sh—sh—sh as she glided up, with one hand resting on the balustrade, the rosy light of dawn making an aureole of gold round her hair, and causing the rubies on her head and arms to sparkle. She reached the tall glass doors which led into the house. Before entering, she paused once again to look at him, hoping against hope to see his arms stretched out to her, and to hear his voice calling her back. But he had not moved; his massive figure looked the very personification of un-bending pride, of fierce obstinacy.

Hot tears again surged to her eyes, and as she would not let him see them, she turned quickly within, and ran as fast as she could up to her own rooms.

Had she but turned back then, and looked out once more on the rose-lit garden, she would have seen that which



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

EXPERIENCED SHEPHERD WANTED—Bow Park Farm, Brantford, Ontario.

EXPERIENCED FARM HANDS WANTED—Permanent positions for right people. Bow Park Farm, Brantford, Ontario.

FARM hands and hotel help awaiting situations. Apply: 139 Front St. W., Toronto.

SCOTCH FARM HAND, with Canadian experience, wants situation on stock farm, not dairy. Capable and reliable; married. Apply: William Wilson 316 Dovercourt Road, Toronto.

VANCOUVER ISLAND, BRITISH COLUMBIA, offers sunshiny, mild climate; good profits for men with small capital in fruit-growing, poultry, mixed farming, timber, manufacturing, fisheries, new towns. Good chances for the boys. Investments safe at 6 per cent. For reliable information, free booklets, write Vancouver Island Development League, Room A, 23 Broughton Street, Victoria, British Columbia.

WANTED—Experienced married man for farm work. Yearly engagement. Home supplied. Apply: J. A. Pettit, Freeman, Ont.

WANTED—Herdsman, single man, yearly engagement. Apply: Oak Park Stock Farm Co., Brantford.

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

ANNAPOLIS VALLEY FRUIT FARM
\$3,050 Income Last Year

220 acres on salt water; splendid boating, fishing and bathing; 5 minutes' walk to P. O. and boat landing; 8 room painted house; running water; large barn; orchard producing 400 barrels apples in season; cuts 30 tons hay; besides large acreage used for crops; wood and timber valued at more than \$1,000; pasture for 40 head; extreme age of owner necessitates quick sale. Price, only \$3,200; part cash, easy terms. For set of pictures, full details and travelling instructions for this and other Nova Scotia farms, one of 29 acres for \$1,000, see page 62, Strout's New Mammoth Farm Catalogue No. 35, New England Edition; copy free; profusely illustrated and filled with an amazing assortment of money-making farms. Stock, tools and equipment included with many at big sacrifices to settle affairs quickly. Buyer's R. R. Fare Paid. E. A. Strout Farm Agency, Station 2415, Old South Bldg., Boston, Mass.

would have made her own sufferings seem but light and easy to bear—a strong man, overwhelmed with his own passion and his own despair. Pride had given way at last, obstinacy was gone; the will was powerless. He was but a man madly, blindly, passionately in love, and as soon as her light footstep had died away within the house, he knelt down upon the terrace steps, and in the very madness of his love he kissed one by one the places where her small foot had trodden, and the stone balustrade there, where her tiny hand had rested last.

(To be continued.)

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

AFTER APRIL FIFTH, eggs, 20, \$1.00; 100, \$4.50, from my famous laying Barred Rocks. R. J. Gibb, Galt, Ontario.

BUTTERCUPS—Eggs from this wonderful egg-producing breed. My stock improved by two imported cockerels. Choice, \$3 per 15; utility, \$2. J. J. Dean, Winona, Ontario.

RABY CHICKS AND EGGS—From prize-winning winter layers, Anconas and Buttercups. Write now. Free circulars. Don't delay. Edmund Apps, V.P.A.C., Box 424, Brantford.

BARRED PLYMOUTH ROCKS—Eggs for hatching; highest winners; grand utility; heavy layers. Prices reasonable. Write me. Leslie Kerns, Freeman, Ontario.

BUFF ORPINGTONS—Cockerels and pullets from imported cock. Imported cock for sale or exchange. Eggs: \$1 and \$3 per 15. James McGregor, Caledonia, Ontario.

BUFF LEGHORNS and R. I. Reds; both rose comb, from good winter-laying strains. Fine color. Eggs, \$1.25 per fifteen. Zeller Bros., Zurich, Ontario.

BRONZE TURKEY EGGS from 9 choice hens that all weigh 18 to 25 lbs. each, including the 1st Guelph pullet; also 1 won 1st and 5th on young toms and 2nd and 3rd old toms. One egg from each hen, 9 eggs for \$5. You get the same quality as I set myself. Also one choice pen of Black Minorcas, hens headed by 6th prize Guelph cockerel, no better color lot in Canada; eggs, \$3 per 15. Chas. Gould, Box 242, Glencoe, Ontario.

BARRED ROCK EGGS FOR HATCHING—One dollar per fifteen. C. H. Chalmers, Smith's Falls, Ontario.

BUFF ORPINGTONS—Winners at Guelph Winter Fair, 1911, of 1st cockerel, silver cup; specials for best shape, best male, best bird, best three cockerels and 2nd utility pen (all classes competing). Over 50% egg yield since November 1st. Eggs from pens headed by above best three cockerels, \$5.00, \$3.00 and \$1.50 per setting of 15. Mrs. E. D. Graham, Queensville, Ontario.

BARRED ROCK EGGS—From well-bred, blocky, heavy-laying, prize-winning birds. \$1 for fifteen; \$2 for forty; \$4 per hundred. Chas. Hilliker, Burgessville, Ontario.

BARRED ROCKS EXCLUSIVELY—Selected eggs for hatching, one dollar per fifteen, or four dollars per hundred. A few choice cockerels for sale; price, two dollars. W. R. N. Sharpe, Ida P.O., Ontario.

BARRED ROCKS—Exclusively, pure-bred, famous winter layers. Eggs for hatching, one dollar per fifteen. H. Reynolds, Norham, Ontario.

BARRED ROCK EGGS FOR HATCHING—Bred to lay. Eggs the year round. Two dollars per fifteen. Mrs. J. R. Henry, Waterdown, Ontario.

BARRED ROCK EGGS—From good, strong, healthy, vigorous birds, and barred to the skin, mated especially for winter laying, \$1 per 15, or \$2 for 40. Hens have large orchard run. Plenty of exercise should guarantee a good hatch. Hervey Culp, St. Catharines, Ontario.

CHARLKE POULTRY-YARDS—Celebrated Barred Rocks. Eggs for hatching from winners at the principal shows in Canada, \$2.00 per setting (cockerel or pullet matings). G. Morton, Box 130, Charlke, Ontario.

CHOICE SINGLE-COMB BROWN LEGHORNS—Famous Becker & Gurney strains. Eggs, \$1.50 per 15. David A. Ashworth, Maple Grove, Ontario.

EGGS FOR HATCHING—S.-C. White Leghorns and White Wyandottes, \$1.25 per 15, from pure-bred stock and heavy laying strain. Can supply Leghorn eggs (only), \$4 per 100. Hugh McKellar, Tavistock.

EGGS FOR HATCHING—From heavy laying strains White Wyandottes, Silver-laced Wyandottes, Barred Rocks, Single-comb White Leghorns, Rose-comb Brown Leghorns and Rhode Island Reds, \$1.50 for fifteen eggs. W. H. Farber, Dunganon Poultry Farm, Cobourg.

EGGS FOR HATCHING—From bred to lay, farm-raised White Wyandottes. Fifteen eggs, one dollar; larger orders at reduced prices. Write Marshall Smith, Palmerston, Ontario.

EGGS from thoroughbred Rhode Island Reds, excellent winter-laying strain, \$2.00 setting; also Barred Plymouth Rocks, \$1.50 setting. Lothian Poultry yards, via Ottawa 2695 F 11. Charles H. Snow, prop., Quarries, Ontario.

EGGS FROM PRIZEWINNING mating choice White Wyandottes; two dollars per thirty. J. G. Ellenton, Hornby, Ontario.

EGGS from genuine Indian Runner ducks. Mrs. Brooks' white egg strain, one fifty per setting; also choice White Wyandottes, Falls strain. J. Bertram, Vinemount, Ontario.

EGGS from high-class S.-C. W. Leghorns, two fifty per setting. For laying and prizewinners unexcelled. For laying and prizewinners unexcelled. For reference apply F. S. Burgess, 439 Yonge St., Toronto, who refused ten dollars for single birds hatched from eggs bought of me last year. Thos. McDonough, Nashville, Ontario.

EGGS from prize-winning and laying Barred Rocks, one and two dollars per fifteen; five per hundred. Jas. Coker, Jerseyville, Ont.

EGGS FOR HATCHING—White Wyandottes and S.-C. White Leghorns; mated specially for vigor. Send for mating list. P. Bartram, Grimsby, Ontario.

EGGS—S.-C. White Leghorns, heavy layers and prizewinners, \$1.00 per 15. A hatch guaranteed. \$4.00 per 100 eggs. Also two choice cockerels for sale. Geo. D. Fletcher, Binkham, Ont.; Erin Sta.

EGGS—Rose-comb Rhode Island Reds; prize-winners. Owen and Shoemakers' strains; 15 for \$2.00; 50 for \$4.50; 100 for \$8.00. H. I. Smith, Comber, Ontario.

EGGS FOR HATCHING—Ontario Agricultural College, bred-to-lay strains. Barred Rock, Buff Orpington and White Leghorn. Breeding stock bred from layers selected from trap-nest records for a number of years; 15 for \$1.50; 50 or more, \$5.00 per 100. Obasen Produce Farm, Ashburn, Ontario.

EGGS from S.-C. White Leghorns, \$1.00; Golden-laced Wyandottes, \$2.00 per setting. R. H. Sanders, Box 22, Ealing, Ontario.

EGGS—\$1.50 per setting. Barred Rocks, Indian Runner Ducks. H. N. Tisdelle, Tilbury, Ontario.

EGGS FOR HATCHING—From Barred Rocks, Partridge Rocks, Rhode Island Red, White Wyandottes, White and Brown Leghorns. Bred to lay; grow quickly; fatten readily. \$1.50 per 15; \$6.00 per 100. Norfolk Specialty Farm Co., Ltd., St. Williams, Ontario.

EGGS FOR HATCHING—Buff Orpingtons, from prize-winning stock. One-fifty per fifteen. William Groff, Beamsville, Ontario.

EGGS from exhibition Pekin, Aylesbury and Rouen ducks, \$4.00 per setting. Barred Plymouth Rock, White Wyandotte, Single-comb Black Minorcas, Light Brahma and Rose-comb Rhode Island Reds, \$3.00 per 15. Alton Stevens, Lambeth, Ontario.

FOR SALE—Pure-bred White Leghorns, cockerels and pullets. Eggs for hatching in season. Robt. Hughes, Ideal Poultry-yards, Collingwood, Ontario.

FOR SALE—Fine pen White Wyandottes, 6 pullets, 6 hens, ekl. laying, \$20. Niles Halstead, Harrow, Ontario.

FREE handsome catalogue of fancy poultry—Describes and prices fifty varieties, land and water fowls. S. A. Hummel, Box 23, Freeport, Illinois.

HATCHING EGGS—Express prepaid to your nearest express office. Turkeys, ducks and geese; also ten different varieties of poultry. Send for price list. J. H. Rutherford, Caledon East, Ontario.

FOR SALE—Ten S.-C. Brown Leghorn hens, one male, \$11.00. Ten S.-C. White Leghorn hens, \$1.00 each. F. D. March, Napanee, Ontario.

FOR SALE—Eggs, all varieties; geese and turkeys, two-fifty per eleven. Nearly all varieties ducks and poultry, dollar per thirteen. Incubator lots, six dollars per hundred. Won 9 firsts, 5 seconds, 3 thirds, 5 specials. Guelph Winter Fair, December last, on eighteen entries; 34 firsts, 19 seconds, 4 thirds, 6 specials. Mt. Forest Winter Show, January last. Mt. Forest, Ontario. Poultry-yards; Box 13.

GOLDEN-LACED WYANDOTTES—Cockerels for sale; also a few pullets. Prices right. Good stock. Peter Daley, Box 26, Seaford, Ontario.

HIGH-CLASS BARRED ROCKS—From first January to March fifteenth we got four thousand and forty eggs from one hundred and fifteen of our standard-bred heavy-laying Rocks. Pullets started to lay at five months and six days old. Eggs from a select pen, \$1.25 per fifteen. Charles Watson, Londesboro, Ont.

HATCHING EGGS—Single-comb White Leghorns. Size, vigor, productiveness; unexcelled eggs, dollar setting; four dollars hundred. E. W. Burt, Paris, Ontario.

INDIAN RUNNER DUCKS—Hatch early eggs throughout year. Howe, Box 6, Niagara-on-Lake.

I HAVE one cock in White Bearded Polish Bant, \$1.50; 1 cock, 4 hens, S.-S. Hamburgs, \$10.00; 1 Red-cap hen, \$2.00. Eggs, 10 cts. each. Robert Houser, Canboro, Ont.

MOONEYMERS—Bred to lay; S.-C. Buff Leghorns; utility and beauty combined. Eggs for hatching, \$1.50 per setting; \$5 per 50. H. H. Bazett, Springfield Farm, Dunoon, V.I., B.C.

ONE DOLLAR for fifteen Plymouth Rock eggs. Bred exclusively from Guelph College-laying strain. Mrs. Berg, Box 22, Comber, Ontario.

PURE-BRED FINE COCKERELS, \$2.00 each. Also a few pullets. Write Mrs. W. H. Clark, Toronto, Ontario.

PURE-BRED EGGS from fine farm-bred S.-C. White Leghorns. Single-comb Rhode Island Red, \$1.50 per 15; \$1.75 per 30. Frank Hayward, Toronto, Ontario.

PURE-BRED EXHIBITION BARRED ROCKS—Eggs for hatching from first winners at Elmira, Hanover, Owen Sound and Listowel. Eggs, \$1.00 and \$3.00 per 15. Write for mating list. Jas. E. Metcalfe, Hanover, Ont.

PURE-BRED WHITE ORPINGTONS—Eggs, \$2.00 for thirteen. H. Ferns, 715 William St., London, Ontario.

ROSE-COMB Rhode Island Red eggs. Bred to lay. One dollar per fifteen; five dollars per hundred. Leonard Parkinson, Guelph, R. R. No. 1.

RHODE ISLAND RED EGGS—Either comb, \$1.00 per 15; 100, \$4.50. Wm. Runchey, Byng, Ontario.

ROSE-COMB REDS—Prize stock. Eggs for hatching from number one pen, two dollars; number two pen, one dollar. Cockerels for sale. Fred Colwell, Cooksville.

REGAL WHITE WYANDOTTES—Fifty large vigorous, snow-white cockerels, at \$2 and \$3 each, worth double. Eggs from exhibition matings, \$3 and \$5 per setting; utility matings, \$9 per 100. Send 10c. for the White Wyandotte book; finest book ever published, dealing wholly with the White Wyandotte. Have won best display at New York State Fair last six years. Catalogue free. John S. Martin, Drawer F, Port Dover, Ontario.

SPRUCE GROVE Barred Rocks, R. I. Reds, White Wyandottes, S.-C. Brown Leghorns, selected matings. Eggs, \$1.50 per 15. W. J. Bunn, Birr, Ontario.

SILVER-LACED WYANDOTTES—Prize-winners. Eggs for hatching, \$1.50 a setting. Frank McDermott, Tavistock, Ontario.

SINGLE-COMBED BLACK MINORCAS—Eggs from heavy-laying strain, \$1.50 per setting; \$7 per hundred. M. H. Peterson, Norham, Ont.

SINGLE-COMB ANCONAS—Bred to lay, win and pay. Eggs: \$2 per thirty; guaranteed fertile. James Snyder, Wales, Ontario.

S.-C. WHITE LEGHORNS—Heavy-laying strain, 13 eggs, \$1.00; 12 dozen, \$6.00. T. Worrod, Angus, Ontario.

SILVER-GRAY DORKINGS—The best utility fowl. Eggs from Canada's champion flock; Pen No. 1, \$3.00 per 15; other grand matings, \$2.00 per 15. 12c. a piece for 2 settings or over. Gordon Burns, Ayr, Ontario.

SINGLE-COMB BROWN LEGHORNS—Shoemaker strain. Grand layers. \$1.50 per setting. F. Fotheringham, Ohnda, Ontario.

WHITE Wyandottes, White Rocks, Barred Rocks. Eggs from prize pens, \$2.00 per 15; utility, \$1.00; \$5.00 hundred. E. Hayes, Cannington.

WHITE WYANDOTTE EGGS—From choice matings. \$1.50 per 30; \$3.50 per 100. W. A. Bryant, Cairngorm.

WHITE WYANDOTTES—Eggs for hatching, \$1.00 per 15. W. Readhead, Lowville, Ontario.

WHITE WYANDOTTES—Cockerels, \$1.50; eggs, \$1 per 15. Bred-to-lay stock. J. A. Orchard, Shedden, Ontario.

WHITE WYANDOTTES—Eggs for hatching from pure white matings. Martin and Russel strains, good layers, \$1.25 per 15; \$2.00 per 30. Safety packed. Alex. McTavish, Chesley, Ontario.

WHITE WYANDOTTES EXCLUSIVELY—Bred for heavy egg production and standard points. Eggs: \$1.00 per 15. Good hatch guaranteed. Thos. F. Pirie, Banner, Ont.

\$6.41 PER HEN—Write for our beautiful fully illustrated catalogue. Photos from life. B. P. Rocks, White Wyandottes, R. C. R. I. Reds, S. C. White Leghorns. Eggs: \$1.50 per 15; \$2.75 per 30; \$7.00 per 100. L. R. Guild, Box 16, Rockwood, Ont.

POULTRY AND DAIRY WOMEN. With scientific and practical knowledge, would like employment on Canadian farms; also, lady cook and gardener. For particulars, address: The Guild, 71 Drummond Street, Montreal, Que.

125 Egg Incubator and Brooder BOTH FOR \$10. If ordered together. Freight paid east of Rockies. Hotwater, copper tanks, double walls, double glass doors. Free catalog describes them. Send for it today. Wisconsin Incubator Co., Racine, Wis., Box 173.

EGGS EGGS EGGS PLEASANT VALLEY FARMS. For hatching: White Wyandottes, \$5 per 100; special matings, several prize-winners, \$3 per 15; S.-C. White Leghorns, \$4 per 10; special matings, \$1.75 per 15 eggs. Grand laying strains, both varieties. GEO. AMJS & S. NS. Moffat, Ont. Private phone Milton.

FOR SALE—An imported C. S. despatch station of excellent quality and good size, satisfactory for sale. For sale at a bargain. Address: Box C, S. Farmers' Advocate, London, Ont.

TIMOTHY SEED. No. 1 Govt. Standard, 17c per lb. No. 2 " " 16c per lb. No. 3 " " 15c per lb. Good Mixed Timothy and Alsike, 16c per lb. Bag Lots. Bags weigh from 100 to 130 pounds each. Every bag tested by seed commissioner at Ottawa. Special prices to dealers. Prices F. O. B. Navan, Ont., C. P. R.

Write or wire M. RATHWELL HAY, GRAIN AND SEEDS. BOX 1, NAVAN, ONTARIO. WANTED-CREAM. Highest Toronto prices paid for cream delivered at any express office. WE—pay all charges. —furnish cans free. —pay accounts fortnightly. —engage man to collect at some points. Ice not essential. Write for particulars.

The Toronto Creamery Co., Ltd. Toronto, Ontario.

QUESTIONS AND ANSWERS. Veterinary.

LAME MARE. We bought a mare five days ago. When leading her home she occasionally went lame on right fore leg. The ankle is slightly swollen and hot, and there are several raw spots which discharge a thin fluid. F. Y.

Ans.—This is evidently a case of mud fever or cracked heels. Get a lotion made of 1 ounce each of acetate of lead and sulphate of zinc, mixed with one pint of water. Dress with this three times daily until healed. Do not wash. V.

ABSCESSSES ON PIGS' LEGS. Sow had a litter of pigs. When three days old, puffs were noticed on the legs of some of them. We lanced them, and a watery fluid escaped, but they filled up again. The stuff that is now in them is rather hard. C. H. M.

Ans.—These puffs were serous abscesses. It is hard to say what caused them. They should have been more freely opened. Make a large opening into each, cleanse thoroughly, and then flush out twice daily until healed, with carbolic acid 1 part, water 24 parts. V.

DISLOCATION OF PATELLA. Colt became somewhat stiff in hind legs. One morning he was unable to rise without assistance, and when we got him up, his hind legs went forward straight under the body, and he could not lift his feet, but he soon got all right while we were working with him. This occurred three times. Some time ago I found him unable to lift one leg, and I decided he was stifled. I pressed the bone into place and he was all right. He is not thriving well. W. O. P.

Ans.—The trouble is dislocation of each patella (stifle bone). Get a blister made of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces vaseline. Clip the hair off the front of the joints. Tie so that he cannot bite the parts. Rub the front and inside of the joints well with the blister once daily for two days. On the third day apply sweet oil. Turn loose in a box stall now and oil every day. As soon as the scales come off, tie up and blister again, and if necessary blister again in a month. V.

INCURABLE. "You say you are your wife's third husband?" said one man to another, during a talk. "No, I am her fourth husband," was the reply. "Heavens, man!" said the first speaker. "You are not a husband—you're a habit!"

"DESTRABLE." Saxon Passenger (on coach)—"Of course, you're well acquainted with the country round about here. Do you know 'Glen Ayrcon'?" Driver—"Ay, weel." Saxon Passenger (who had just bought the estate)—"What sort of a place is it?" Driver—"Weel, if ye saw the deil tethered on't ye'd just say, 'Puir brute!'"

This Washer Must Pay for Itself

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse. But, I didn't know anything about horses much. And I didn't know the man very well either. So I told him I wanted to try the horse for a month. He said "All right, but pay me first, and I'll give you back your money if the horse isn't all right."

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

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



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

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

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

I know it will wash a tub full of very dirty clothes in six minutes. I know no other machine ever invented can do that, without wearing out the clothes.

Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges nor break buttons the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might. So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

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

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

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

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in 6 minutes.

Address me personally—C. K. Bach, The 1900 Washer Co., 357 Yonge St., Toronto, Ont.

SEED Government Standard

HOME GROWN ALFALFA, bush..... 12.00
 RED CLOVER, bush..... 14.50
 O.A.C. No. 21 BARLEY, bush..... 1.10
 WHITE CAP DENT CORN, bush..... 1.20
 BAGS EXTRA. Jute 8c, Cotton 25c.

We guarantee to satisfy on arrival.

CALEDONIA MILLING CO., LTD.

Caledonia, Ontario

Island Seed Oats

The only really high-grade, absolutely safe seed oats in Canada this year. No danger frosted germs.

JOSEPH READ & CO'Y, LTD.

Summerside, P. E. Island

500 bus. O. A. C. No. 21 Barley (Six-rowed)

This is the heaviest yielding, longest and stiffest swarded barley ever grown in Ontario, and we have seen the leading growers and distributors to present one. Price, \$1.25 per bus; best bags, 25c.

JOHN ELDER & SON, Hensall Ont.

For Sale—Two registered Jersey show bulls, two and three years; grade cows. Mt. Forest, Ont., Jersey Farm, Box 15.

Essex-grown, White Cap Yellow Dent Seed Corn, \$1.00 per bushel. Money refunded if not satisfactory.

JOS. TUTTEN, North Ridge, Ont.

MENTION "FARMER'S ADVOCATE."

GOSSIP.

Imported stallions and mares, Percheron, Shire, French Coach, and Standard-bred, are advertised for sale by J. E. Arnold, Grenville, Quebec. The offering comprises many champion and gold-medal winners at Ottawa. For particulars, write Mr. Arnold.

If you are desirous of procuring a first-class young Clyde stallion to improve the quality of horses in your neighborhood, it will pay you to look up the advertisement in this issue of Jos. W. Holman, Columbus, Ont. The young stallion advertised is well-bred, of good color, and grand quality, and is sure to leave his mark on the stock of his get, being rich in the blood of Darnley and Prince of Wales.

Official records of 262 Holstein-Friesian cows were accepted for entry in the American Holstein-Friesian Advanced Registry, from March 3rd to March 11th, 1912. This herd of 262 animals, of which much over one-half were heifers with first or second calves, produced in seven consecutive days, 103,442.1 lbs. of milk, containing 3,698.188 lbs. of fat; thus showing an average of 3.58 per cent. fat. The average production for each animal was 394.8 lbs. of milk, containing 14.115 lbs. of fat; equivalent to 56.4 lbs. or over 26.8 quarts of milk per day, and nearly 16.47 lbs. of the best commercial butter per week.

HOLSTEIN-BREEDERS MEET IN QUEBEC.

The annual meeting of the Quebec Branch of the Holstein-Friesian Association of Canada was held in the Queen's Hotel, Montreal, on March 28th last. The officers for the ensuing year are: Hon. Presidents—Hon. J. E. Caron, Minister of Agriculture for Quebec; J. E. K. Herrick, Abbotsford; Dr. L. de L. Harwood, Vaudreuil. President, D. H. Brown, Berth; First Vice President, Ogden Sweet, N. Sutton; Second Vice President, Neil Sangster, Ormstown; Third Vice President, Jos. Ferland, Sorel; Fourth Vice President, R. A. Gillespie, Abbotsford. Directors—Felix Ashby, Marieville; F. J. Sally, Lachine Rapids; Jas. E. Pettes, W. Brome; Andrew Bow, Genoa; Dr. E. P. Ball, Rock Island; Adelard Forget, St. Sebastian; Antoine Ashby, Rougemont; R. P. Hurlbut, E. Hatley. Secretary-Treasurer, F. E. Came, St. Lambert. The business meeting showed the Holsteins to be gaining ground in Quebec. The proceedings were brought to a close by a banquet, at which about fifty association members were present.

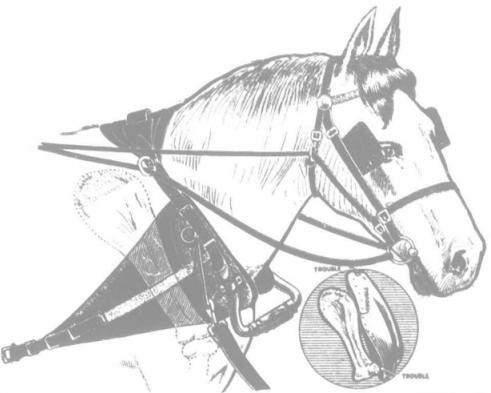
Dr. T. H. Hassard, of Markham, Ont., in his new advertisement in this issue, offers for sale a choice selection of newly-imported Clydesdale stallions, mares and fillies, also Percheron and Shire horses, large, and of the most desirable type and quality, the Clydesdales sired by such notable horses as the champion Hiawatha, Homer's Kyle, a grandson of the renowned Prince of Wales (673); Montrose Ronald, a grandson of the famous Baron's Pride; the champion Marcellus, by Hiawatha; the champion Revelanta, by Baron's Pride; Baron Rothschild, a grandson of Baron's Pride; Up-to-Time, by Baron's Pride, dam by MacGregor, by Darnley, and Moncreiff Marquis, by Prince of Carruchan, by Prince of Wales; Imperialist, by MacGregor, etc. These, as well as the Percherons and Shires, are up to a big size, with plenty of quality, and grand action. Markham is only 20 miles from Toronto, on the G. T. R., and three miles from Locust Hill Station, C. P. R. Parties looking for horses or mares of these breeds may do well to correspond with Dr. Hassard, or visit his stables, where high-class horses may be found at all times, and good bargains are always available.

TRADE TOPIC.

Drain tile is being used more largely by farmers year by year, as the benefits of the system are realized, and now is the time to make arrangements for the necessary supply, if it has not already been attended to. The W. W. Smith Brick and Tile Works, at Shallow Lake, Grey County, Ont., a station on the G. T. R. Harriston to Owen Sound branch, advertises for sale, brick, tile, fence posts, ties, wood, etc.

Whipple Humane Horse Collars

Will permit you to get more work from the horses you use than is possible from any other way. They are so constructed as to apply the greatest amount of pulling space on the animal, and yet leave all that part of the shoulder free from strain that was never intended for strain (study the illustration), and you will notice an ill-fitting collar will draw on the top and the bottom of the scapula bone. Nature intended the draft to come between these two trouble points. Whipple Humane Horse Collars work where nature intended the draft to work. See your best saddlery dealer, if he has not got them, write us, and we will tell you who will supply you.



THE ADAMS BROS' HARNESS MFG CO., Ltd.
 (FROM COAST TO COAST)
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 (Write the house nearest you)

Buy GOVERNMENT STANDARD seeds

Accept no other. You don't have to. If your dealer does not handle **SIMMERS' SEEDS**, send your orders direct to us and they will be correctly filled with seeds that conform to the standard of germination set by the Government.

THIS IS MOST IMPORTANT

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Seeds, Bulbs, Plants
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RENNIE'S SEEDS

ASK ABOUT RENNIE'S COLLECTIONS—HERE IS ONE

All Early Collection—made up specially for those desiring an early supply of vegetables.

1 pkt. BEET, Extra Early Blood; 1 pkt. CABBAGE, Extra Early; 1 pkt. CARROT, Early Scarlet; 1 pkt. CAULIFLOWER, Snowball; 1 pkt. CELERY, White Plume; 1 pkt. CUCUMBER, Slicing; 1 pkt. LETTUCE, Early Crisp; 1 pkt. ONION, Early Slicing; 1 pkt. RADISH, Early Round Red; 1 pkt. PARSLEY, Curled; 1 pkt. PARSNIP, Long, White; 1 pkt. SQUASH, Marrow; 1 pkt. TOMATO, Earliest Scarlet; 1 pkt. TURNIP, Round White Table.

Postage Paid—50 CENTS.

WM. RENNIE CO. LIMITED
 TORONTO, MONTREAL, VANCOUVER. CATALOGS FREE

Atlantic Red Engine Oil

Unsurpassed as a Lubricant for
Moderate Speed Engines and Machinery

Atlantic Red Engine Oil is just the right oil for slow and moderate speed engines and machinery. It is a medium bodied oil; works freely between the wearing surfaces, and forms a cushion that lasts.

Capitol Cylinder Oil is all lubricant. It lifts the load off the engine and saves all the wear and friction possible. Cut down your fuel bill. Lasts much longer than other cylinder oils. Equally good on all "bearing" surfaces.

S. Peerless Oil.—The best general lubricant for farm machinery on the market. Specially suitable for reapers, mowers and threshers, Uniform body. Heat and moisture do not affect it.

We have made a special study of the requirements of farm machinery. Read our "Easier Farming" booklet; free, postpaid. Call or write

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QUESTIONS AND ANSWERS. Miscellaneous.

DURATION OF MORTGAGE.

Is a mortgage, drawn for a year, legal until it is paid, interest being paid yearly, or will it outlaw in a number of years? If it will outlaw, in how many years? A SUBSCRIBER.

Ontario.

Ans.—The continued payment of interest will keep it from being "outlawed."

LEGALITY OF MEETING.

Is election of school trustees, and business done at meeting of same, legal, providing trustees before election, in posting up their notices of election, etc., either forget, or do not know enough, to fill out the date, time and place of meeting, but just merely sign names at bottom of blank, without filling in spaces left for date, place, etc.?

Ontario.

OLD TRUSTEE.

Ans.—The election and other business so attended to may be legal, notwithstanding the omissions mentioned, if, as would seem to be the case, it was the annual meeting. See Sec. 53 of the Public Schools Act, 9 Edw. VII. (1909), Chap. 89, as amended by Sec. 55 (1) of 1 Geo. V. (1911).

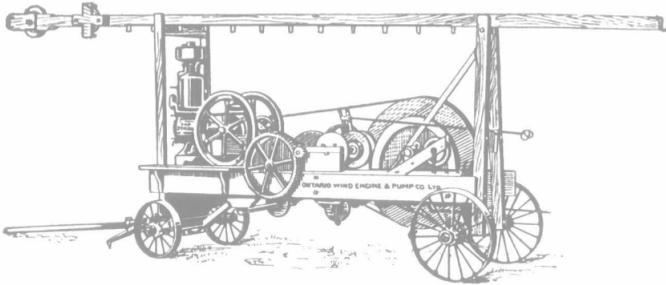
FEEDING AND HOE CROP QUERIES.

1. Up to what age is it profitable to feed whole oats to a calf?

2. What are the main rules for growing mangel seed? I planted six last spring, but got little satisfaction. Four were lower branches ripened and lodged on the ground, while the upper ones were quite green.

3. What is the proper or profitable weight of cut mangels for an ordinary,

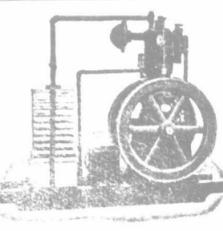
You Can Earn \$10 to \$20 a Day With This Well-Drilling Machine



Someone must drill the wells in your neighborhood. Why not you? There's big money in it, if you have the right machine. We can supply machines for all kinds of earth and rock drilling, any depth.

Also CASING and general deep-well supplies of all kinds. Be the first to get our money-making proposition. Write to-day for full particulars.

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Winnipeg TORONTO Calgary



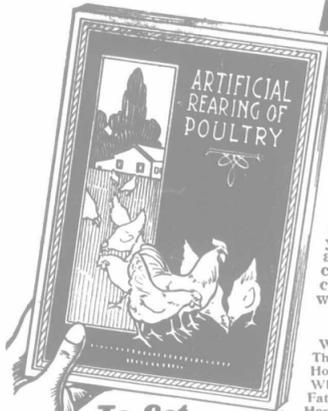
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Known the world over. Most economical in fuel. Before buying an engine for the farm, factory or power house, write us. We will give you valuable information. Don't you want our catalog?

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MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.



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FREE

Just send us your name on a postcard and we will mail you at once a complete copy of this valuable book. No poultry owner—especially beginners can afford to be without it. Nothing like it has ever been published before. It is a condensed handbook of information that tells you in plain words just what you want to know about poultry raising. It shows how the most successful poultry owners make big money—how you can make the business pay well from the start with very little capital.

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Which is the Best Breed? Colony House Methods
The Intensive or Extensive Plan Care of Brooders
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Fattening—Feeding Little Chicks Principles of Feeding
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Do it today. Thousands of dollars and years of time have been spent in finding out the secrets of poultry success which you will find inside this FREE book. Before you spend a dollar for any kind of incubator or brooder we want you to have this big book and get posted. We want every man, woman or child we start in the poultry business to make money. That's why 75 pages of this free book contain no advertising—just facts that you ought to know. We want you to see how one man made \$12,000 last year—why the most successful poultrymen use

Prairie State Incubators and Brooders

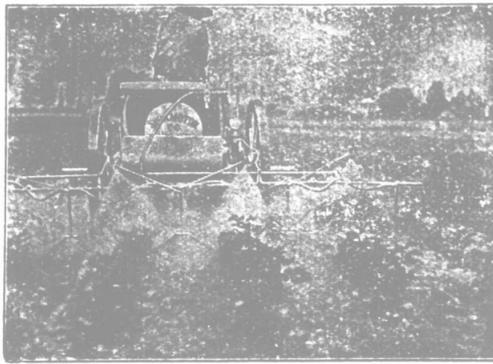
We want you to see for yourself why Prairie State machines can be depended upon to hatch "chicks that live". Learn about the Sand Tray and Universal Hover Brooder. Send for Catalog. Ship your eggs to us and get highest market prices.

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(3)

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SUCCESSFUL SPRAYING

With a Horse Power SPRAMOTOR you can spray to some purpose. High pressure ensures best results. Over 500 in use. For one or two horses. Regulation is automatic—no safety valve. Can be hand-operated. Nozzle protector, 12-gal. air tank. Nozzle control perfect for height, width and direction. Equally efficient in field, vineyard and orchard. Guaranteed against defects for a year. Write for free treatise on crop diseases.

Agents Wanted

Spramotor, Limited, 1361 Kiug Street, London, Canada

MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.

good-sized cow per day, when mixed with silage and cut straw morning and evening?

1. I planted, or, rather, laid, several rows of potato seed on grass under medium-sized apple trees once, covering with straw only. The potatoes grew all right, were fair size, and very clean, soil was clay. Had no hoeing to do. Have not tried it since; don't know exactly why. It was some years ago. I don't remember that there was anything distinctive about the weather. Would that plan likely do in any ordinary season?

J. E. W.

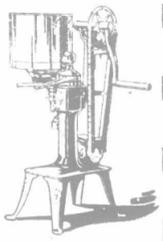
Ans.—1. There is no definite age to stop feeding grain to a calf. Whole oats are very good, but chop or meal will give good results. Calves, however, relish whole oats, and eat them readily. Calves should get grain until they go on grass after the first winter. On good pasture, little, if any, is required, but they should never be allowed to lose their calf flesh.

2. All that is necessary is to keep the roots well during the winter, preventing, as far as possible, sprouting. Plant them in the spring as soon as danger of frost is past. Give them plenty of room to grow, and cultivate or hoe frequently. Gather the seed as it ripens.

3. Much depends on the cow, and the amount of other fodder she is getting. One-half bushel, or 30 pounds daily, with a good silage ration and some concentrate material, should be about enough. If a small quantity of silage is being fed, more roots will be necessary.

4. We have known potatoes to give good results planted under straw on grass, but would not recommend the practice. Good potatoes are seldom produced under apple trees of any size. Would prefer planting in an open field, and plowing down, or covering to a depth of four or five inches.

The Right Price To Pay For a Cream Separator



WHAT is the right price to pay for a cream separator? The price of the best, of course. The first cost of the best separator is so small, compared to the profits it makes—that you ought not to hesitate about paying for it. And the difference between an IHC and the next best is so marked, that you ought not to hesitate in deciding.

IHC Cream Separators Dairymaid and Bluebell

have made records on thousands of farms. They are famous everywhere for durability, close skimming, light running and easy-to-clean advantages. They are built for hard, twice-a-day service and many years of it. They have milk and dust-proof gears which are easily accessible; a patented dirt-arrester which removes the finest particles of dirt before the milk is separated; frame and moving parts protected from wear by phosphor bronze bushings; large shafts, bushings and bearings; also many other features which you will be interested to know about.

Call on the IHC Dealer

IHC Cream Harvesters are made in two styles—Dairymaid, chain drive, and Bluebell, gear drive—each in four sizes. The IHC local agent will give you catalogue and tell you all the facts, or, write the nearest branch house for catalogues and any special information you desire.

CANADIAN BRANCH HOUSES

International Harvester Company of America (Incorporated)

At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

IHC Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to IHC Service Bureau, Harvester Building, Chicago, U. S. A.



BRUCE'S SEEDS

BRUCE'S BIG FOUR FIELD ROOT SPECIALTIES

BRUCE'S GIANT ROSE FEEDING BEET—The most valuable Field Root on the market; combines the rich qualities of the Sugar Beet with the long keeping, large size and heavy cropping qualities of the mangel. 1-4 lb. 20c., 1-2 lb. 34c., 1 lb. 55c., postpaid.

BRUCE'S MAMMOTH INTERMEDIATE SMOOTH WHITE CARROT—The best of all field carrots. 1-4 lb. 68c., 1-2 lb. \$1.24, 1 lb. \$2.30, postpaid.

BRUCE'S GIANT YELLOW INTERMEDIATE MANGEL—A very close second to our Giant Feeding Beets and equally easy to harvest. 1-4 lb. 20c., 1-2 lb. 34c., 1 lb. 55c., postpaid.

BRUCE'S NEW CENTURY SWEDE TURNIP—The best shipping variety, as well as the best for cooking; handsome shape, uniform growth, purple top. 1-4 lb. 18c., 1-2 lb. 24c., 1 lb. 40c., 4 lbs. \$1.40, postpaid.

FREE—Our handsomely illustrated 112-page catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc., for 1912. Send for it.

John A. Bruce & Co., Ltd., HAMILTON, ONTARIO.
Established Sixty-two Years.

Make Your Own Lumber. Don't Buy It

This portable machine cuts 2,500 feet per day with 6 H.P.

AMERICAN SAW MILL MACHINERY CO.
113 Hope Street, Hackensack, N. J.
1564 Terminal Bldg., N. Y. Chicago, Savannah, New Orleans

Why buy lumber for your farm when the price of one carload will pay for an "American" Saw Mill with which you can cut a carload a day from your own grove? Be independent; increase your farm income. Make your own lumber; use what you need—sell what is left. And saw your neighbor's timber for him, too, at good profit. "Making Money Off the Wood Lot" is a book which tells the whole story. Let us send you a copy. Write to our nearest office.

QUESTIONS AND ANSWERS. Miscellaneous.

OLD SEED—MUSTARD—SPAVIN.

1. I have several pounds of mangel seed and other seeds left over from last year. Would it be safe to sow them this spring?
2. Has spraying mustard been a success where tried? What is the proper time to spray, and what mixture should be used?
3. I have a roadster that developed a bone spavin. I have been for the past eight months applying a guaranteed remedy advertised in your columns. I reduced the enlargement considerably, but she is as lame as when I began the treatment. What would stop the lameness?

Ans.—1. Make a germination test of the seed by planting about 100 seeds in a box. If a good percentage germinate, it would likely be safe to sow the seed. A larger quantity should be sown than of new seed. However, this will be ascertained by testing.

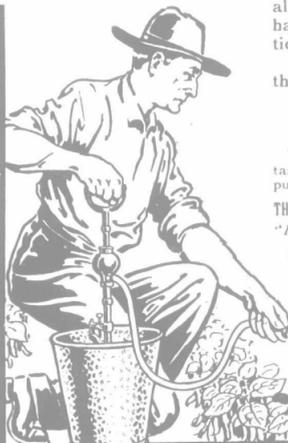
2. Yes. The material used is either copper sulphate (bluestone) or iron sulphate, the former in a solution of 10 lbs. to 40 gallons of water, and the latter 80 lbs. to 40 gallons of water. Either is effective. Apply when the plants are all up, and about four to six inches high, or before blossoming. Give a good application of the mixture, which burns the mustard, and does not injure the grain crop. Owing to the fact that mustard seed remains in the land several years without losing its vitality, it is necessary to repeat the operation several years.

3. In young animals, blistering will often cure lameness resulting from both bone and bog spavins. It might be well to try blistering, and if a cure is not effected, firing by a competent veterinarian could then be resorted to. For blisters, take 2 drams each of biniodide of mercury and cantharides mixed with 20 pieces of vaseline. Clip hair off the spot. Tie so he cannot bite them. Rub daily with the blister for two days, then wash off and apply sweet oil. Oil daily when the scale comes off, repeat the blister. A third application could be made one month after the second.

The Smallest Garden Needs a Spray Pump

but a small, light spray pump is all you need. We suggest our "Bordeaux" pump—used with a pail. It's one of the many

GOULDS Reliable Sprayers



all of which are made to withstand long, hard service and to resist the chemical action of spraying compounds.

Look for the name "Goulds." It identifies the best spray pump. Write for our book,

"How to Spray—When to Spray—Which Sprayer to Use"

You need it for the valuable spraying formulas it contains. It also gives information on all types of spray pumps, large and small.

THE GOULDS MFG. CO., 128 West Fall St., Seneca Falls, N. Y.
"Largest Manufacturers of Pumps for Every Service"
St. Catharines Cold Storage & Forwarding Co., Ltd.,
St. Catharines, Ont., (Fruit Growers' Supplies).
Agents for Goulds Sprayers.

CENTRAL NURSERIES — QUALITY STOCK

Bartlett and other Pear Trees, Duchess, Wealthy and varieties of Apple Trees. Plum, Cherry, Peach, Nut and Ornamental Trees in variety. Grape Vines. Berry Plants — verburt, St. Regis, Himalaya, Superlative and Cuthbert—think of berries from July till October. Shade Trees. Eve greens, California Privet Hedge, Shrubs and Roses—just the kinds wanted.



Send for our Priced Catalogue, and order quick for variety. No Agents.

A. G. HULL & SON
St. Catharines, Ontario

Seed Oats

offering 75c. per bushel, LINCOLN, Weighing 42 lbs. per measured bushel. Seed procured last year from Toronto seedsmen. Good cotton bags, 25 cents. **J. & D. J. Campbell,** Fairview Farm, Woodville, Ont.

Please Mention The Advocate

QUESTIONS AND ANSWERS. Veterinary.

FATALITY IN COW.

Three days after calving cow was swollen in throat, brisket, between legs and back, along the belly to the udder. I treated for garget, but she died.

S. H. F.

Ans.—The symptoms are not those of garget, in which the seat of disease is the udder, and the swelling may extend along the abdomen, but does not reach the brisket and throat. I am of the opinion that your cow had erysipelas, which often proves fatal. Treatment should have consisted in purging with 1½ lbs. Epsom salts and 1 ounce ginger, and following up with 6 drams hypsulphite of soda three times daily. Local treatment should have been bathing the swollen parts long and often with hot water, and after bathing rubbing well with camphorated liniment, keeping comfortable, and keeping up the strength by drenching with boiled flaxseed and ale.

V.

SWELLING IN FRONT OF KIDNEYS.

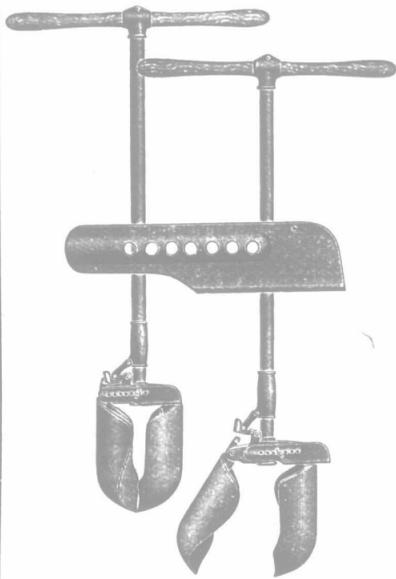
Mare has a swelling about ten inches long in front of her kidneys. She had the same trouble each spring for the last two years. My veterinarian treated it both times, but did not make a permanent cure.

A. T.

Ans.—Without a personal examination, we are unable to tell the nature or cause of this swelling. There is no specific disease that causes a swelling in this region. Your veterinarian evidently treated the former attacks successfully, and that is all that could be expected. It is not possible for him to render the mare immune from future attacks. I would suggest frequent bathing with hot water, and after bathing, rubbing with camphorated liniment, and clothing warmly. Also give her a purgative of 8 drams aloes and 2 drams ginger, and follow up with 3 drams nitrate of potash twice daily for three days.

V.

ATTENTION, FARMERS!



Twelve Reasons Why Standard Earth Augers Are Best

The STANDARD is the ONLY Auger

- That really bores.
- That will enter hard earth.
- That has an EXTENSION blade.
- That will hold fine dry sand.
- That does not bind in the hole.
- That opens to discharge the contents.
- That bores in all conditions of earth.
- That has double "V" point cutting blades.
- That is guaranteed to save half the time.
- That individually bores more than ONE sized hole.
- That individually bores NINE different sized holes.
- That is guaranteed to do the work with half the effort.

If your hardware or implement man cannot supply you, order direct from

Canadian Logging Tool Company, Limited
Sault Ste. Marie, Canada

Now Dyer Makes a Big Cut in Lawn Fences

My Crown Cabled Fence is very strong and artistic, just the thing for your home, your church, school, etc. Handsome and sturdy. Oval top pickets in heavy crimped No. 9 wire, 2 3/8 inches apart. Cabled laterals 7 inches apart. Galvanized finish. My prices beat all comers.

36 inches high **71**¢ per foot
42 inches high **81**¢ per foot
48 inches high **91**¢ per foot

Delivered free in Ontario, south of North Bay. Outside points deduct 1/2¢ per foot and you pay freight. Order to-day while my special low prices last. For fence painted green or white, add 2¢ per foot. I make fencing for every purpose. GATES—to match, 3 or 3 1/2 ft. wide, scroll top, \$3.00 each. Drive gates, 10 ft., scroll top, \$6.50 each. Satisfaction guaranteed or money refunded. Remit by money order (any kind), check, draft or registered letter, to

DYER, The Fence Man
Dept. C., TORONTO

QUESTIONS AND ANSWERS. Miscellaneous.

SWEET CLOVER FOR FORAGE.

1. What is the feed value of Bokhara (sweet) clover; first, as pasture, when small; second, as hay, when cut early?
2. Is it in any respect similar to alfalfa?
3. Would it approach or equal in any respect alfalfa for hay, if cut at the right time?

The reason I ask this question is because I have seen advertised in an American farm journal, sweet clover seed and how to grow it for hay. Now, I would not think of sowing the seed for that purpose, as I know something about it, but as I have a considerable quantity of it growing now, would like to know if it could be used profitably for hay if cut early.

Ans.—1. There has been considerable published in the American Agricultural Press of late regarding Bokhara, or sweet clover, as a crop for pasture and hay. Its foremost advocate is a man named Frank Coverdale, whose communications we have noticed in such high-class papers as Hoard's Dairyman and Wallace's Farmer. Mr. Coverdale, who has had considerable experience with sweet clover, recommends it highly as a productive pasture and hay crop, and claims that cattle soon learn to like it, and do well upon it. He has fattened steers on it with excellent results. It is a matter of observation that cattle driven along highways will come to eat with apparent relish the slender young shoots of sweet clover, though after it has become rank and old they will not readily eat it. For our own part, we have no doubt that sweet clover would be capable of profitable utilization as a bee pasture, and as a means of improving very poor hard land. No doubt, also, it could be utilized as forage, but under ordinary conditions we consider it less desirable than common clover and alfalfa.

2 and 3. Sweet clover and alfalfa leave considerable in common. The nitrogen-gathering bacteria which work on the roots of sweet clover are the same as those which work on the roots of alfalfa. In composition the two plants are rather similar, comparing as follows, according to Henry, in respect to digestible nutrients:

	Protein.	Carbo-hydrates.	Fat.
	Per C.	Per C.	Per C.
Alfalfa	11.7	40.9	1.
Sweet clover ...	11.9	36.7	0.5

The sweet clover is, however, more bitter, more coarse, and less palatable, than alfalfa or red clover, especially to unaccustomed palates.

"Sovereign" Treasure Steel Range

House cleaning season is now here, and the time and the proper time to put in a new Range.

Treasure Ranges are the best on the market to-day. Made of the very best material. No scrap used in them. Highest grade of pig iron, heavy steel, triple-plate nickel. Patent Ventilating device to prevent burning out, and ensures quick and even baking.

We manufacture a large variety of Cast Iron and Steel Ranges, with Tile or ordinary High Closets and High Shelves.

Call on your nearest dealer, or write direct to us for full information, circulars, etc. For sale in every town in Canada.

Manufactured by
THE D. MOORE CO., LIMITED, Hamilton, Can.



WITH TILE HIGH CLOSET

INTERNATIONAL FEEDS FOR ONE CENT

WE POSITIVELY GUARANTEE
that a 25-pound pail of
INTERNATIONAL STOCK FOOD
will save you \$7.00 worth of Corn or Oats

Because it promotes digestion and assimilation and enables you to cut down the grain ration 15% to 25% and still get better results. The saving of grain represents a saving of good hard cash to you.

WE WANT YOU TO FEED 100 LBS. AT OUR RISK

It will not cost you a cent if you are not satisfied. See our dealer in your town or write us for particulars. Mention this paper and the stock you own and we will send you a litho, size 16 x 22, of our three champion stallions.

Read what James L. Hill, of Fredericton, Junction, P.E.I., wrote us on February 15th:

I think International Stock Food is a great thing for stock. We wouldn't be without it for anything. It keeps our horses in top condition; in fact, every person admires them. I have such a good stock of pigs and find it easy to keep them in top condition. The Poultry Food is just what I need. My hens have been laying most of the winter. I cannot say too much for your food for stock and animals.

INTERNATIONAL STOCK FOOD CO., Limited

MENTION THE FARMER'S ADVOCATE WHEN WRITING FOR CIRCULARS

GREEN MANURING—CUTWORMS

1. We have a 20-acre field at the back of farm which has been cropped for a number of years, and it needs summer-fallowing, as there are a lot of thistles and other weeds in it. It was not plowed last fall, and we have no manure to put on it. We are thinking of plowing something down for manure and sowing fall wheat. We have 25 bushels of peas. What should we mix with them? Would oats do? How would buckwheat or rape do, as peas and oats are very dear this year? Would wheat do well if we plow a crop of this kind under? I have heard it makes the ground too warm, and rots the roots of fall wheat.

2. Last year some of our corn seemed to be cut off at the root. You could go along and pull the corn out with your fingers. Would this be the cutworm, wireworm, or the May beetle? Could we do anything to kill them, or to stop them cutting the corn off this year?

Ans.—1. From a fertilizing standpoint, the peas and oats would be the better crop to plow down, while from the standpoint of cultivation, perhaps the buckwheat would be the better, as the lateness of sowing would permit of thorough cultivation previous, which would kill the weeds. It would also be a much cheaper seeding. Peas and oats might be tried on part of the field, and buckwheat on the remainder. We have seen good crops of wheat follow the plowing down of a green crop, and if the land is in reasonably good tilth, you need have no hesitation about the results. Of course, there are many other factors entering into crop production which must be reckoned with many over which we have no control.

2. It is rather difficult to decide, from the description given, whether the injury was done by white grubs, wireworms, or cutworms, but likely the last named. Poisoned bran mash is the most effective remedy against cutworms. This is made by mixing half a pound of Paris green with fifty pounds of slightly moistened bran. Double the amount of the poison may be used. A little of this material is sprinkled around the plants. For white grubs and wireworms, cultural methods are all that can be recommended. The practice of leaving land seeded down for several years should be discouraged. This old sod fosters these pests. A rotation of crops, with thorough and clean cultivation, are the remedies. When farming is advised to combat the cutworm also, as rubbish forms a good breeding ground for these insects.

NO USE FOR THEM.
"Charley dear," said young Mrs. Torston, "did you say that man stole a case?"
"Yes, that's what I said."
"Well, I'm glad of it. There were more than our men seemed able to do anything with."

TRADE TOPICS.

THE MECHANICAL MILKER.—Many dairymen still refuse to believe that mechanical milkers are a success, and many also believe that never will such machines be perfected. A successful mechanical milker has been the goal of ambition that thousands of inventors have endeavored to reach for years past. The first machines made were not entirely successful. They were built on the "continual suction plan," and the steady application of this suction caused the teats to become swollen and congested, which, it is claimed, shut off the milk flow to some extent, injuring the cow. The adoption of the pulsating mechanism interrupted the constant suction, but still the machine was not perfect. The manufacturers of the Sharples Mechanical Milker claim that their new machine, which gives a positive upward squeeze to the teat in the interval between the suction periods, manipulating and massaging the blood and tissue back into the natural condition at every pulsation, has removed the last stumbling-block in the way of mechanical milking success. Where they have been in use for two years in large dairy herds, they are reported a success, the cows showing no discomfort, some even claiming an increase in output. One man operating the machine can milk from 40 to 60 cows per hour, a great saving of time and labor, thus helping to solve the dairyman's hired-help problem. See the advertisement of the Sharples Mechanical Milker in this issue, look up information about them, and write them for further particulars.

VERY LOW RATES AND SPECIAL TRAINS FOR HOMESEEEKERS.—Those taking advantage of the Homeseekers' Excursions should bear in mind the many exclusive features offered by the Canadian Pacific Railway in connection with a trip to the West. It is the only all-Canadian route. Only line operating through trains to Western Canada. No change of depots. Only line operating through Standard and Tourist Sleepers to Winnipeg and Vancouver. All equipment is owned and operated by Canadian Pacific Railway, affording the highest form of efficiency. Dining car service unsurpassed. Homeseekers' rates will be in effect April 2, 16, 30; May 14, 28; June 11, 25; July 9, 23; August 6, 20; September 3, 17, and round-trip second-class tickets will be issued via Canadian Pacific Railway from Ontario points at very low rates. For example, Winnipeg and return, \$34.00; Edmonton and return, \$42.00, and other points in proportion. Return limit 60 days. For the accommodation of Canadian Pacific Railway passengers, a special train will leave Toronto 2 p. m. on above dates, comprised of Tourist and Colonist Sleepers. Colonist Sleepers may be occupied free of charge. Passengers, however, must provide their own bedding. Tourist Sleeping cars will be operated through Edmonton via Saskatoon, also through to Winnipeg and Calgary. A moderate charge is made for berths in the Tourist cars. Both Tourist and Colonist cars are provided with cooking ranges, which trainmen have instructions to keep in condition. Full particulars from any Canadian Pacific Railway Agent. Ask for copy of Harvesters' Booklet.

SO SIMPLE WHEN YOU KNOW.
There is reason to believe that the lady mentioned in this bit from the Cleveland Plaindealer knew more about cooking than about navigation, or, to put it naturally, was more at home in the galley than on the quarter-deck.
The lady was reading a nautical novel. She struggled along bravely for a few minutes, but finally had to appeal to her husband.
"Gerald," she said, "the author says that the boat was sailing 'wing and weather.' What does that mean? I've been on a yacht, but I never heard that before."
"That means," answered Gerald, rejoicing in the fact that he, too, had spent several hours on a sailing vessel, "that means that the schooner had her mains'l out to port and her fores'l out to starboard—or vice versa."
"Oh, I see!" cried the lady. "It's just like a chicken—a wing on each side. Now I understand why they call those little sails in the middle 'jibs.' It's sails for 'jiblets,' of course. Isn't sailing interesting?"

Put Your Feet in a Pair at Our Risk!

STEEL SHOES

Will Surprise and Delight You With Their Lightness, Neatness and Comfort—Their Almost Unbelievable Durability

We want you to slip your feet into a pair of Steel Shoes—to feel and see and know how much lighter, neater, stronger, more comfortable they are than any other work shoes in existence. Hence we are making this special **Free Examination Offer**, merely asking a deposit of the price, while you are "sizing up" the shoes. If they fail to convince you **immediately** you can notify us to send for them at our expense and we will refund your money.

Must Sell Themselves

We ask no favors for Steel Shoes. Compare them with the best all-leather work shoes you can find. Give them the most rigid inspection inside and out. Let them tell their own story. It's no sale unless, of your own accord, you decide that you must have them.

Better Than the Best All-Leather Work Shoes

Steel Shoes are the strongest and easiest working shoes made. There's more good wear in one pair of Steel Shoes than in three to six pairs of the best all-leather work shoes. The leather is waterproof. The Steel Soles are wear-proof and rust-resisting. They are lighter than all-leather work shoes. Need no breaking in. Comfortable from the first moment you put them on. Impossible to get out of shape. They keep the feet dry. They retain their flexibility in spite of mud, slush or water. They cure corns and bunions, prevent colds and rheumatism—save doctors' bills and medicines.

Thousands of Farmers Shout Their Praises

The enthusiasm of users knows no bounds. People can't say enough for their comfort, economy, lightness and astonishing durability. The introduction of Steel Shoes in a neighborhood always arouses such interest that an avalanche of orders follows. Here is the way Steel Shoes are made: The uppers are made of a superior quality of leather, as waterproof as leather can be tanned. Wonderfully soft and pliable—**never gets stiff!** The soles and sides are made out of one piece of special, light, thin, springy, rust-resisting Steel. Soles and heels are studded with adjustable Steel Rivets, which prevent the bottoms from wearing out. Rivets easily replaced when partly worn. 50 extra rivets cost only 30 cents and should keep the shoes in good repair for at least two years! No other repairs ever needed! The uppers are tightly joined to the steel by small rivets of rust-resisting metal, so that no water can get between. The soles are lined with soft, springy, comfortable Hair Cushions, which absorb perspiration and odors and add to ease of walking.



FREE!

Send for Book "The Sole of Steel," or order Steel Shoes direct from this ad.

For Men—Sizes 5 to 12

Steel Shoes, 6 inches high, extra grade of leather, black or tan color, \$3.50 per pair.
Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$5.00 per pair.
Steel Shoes, 12 inches high, extra grade of leather, black or tan color, \$6.00 per pair.
Steel Shoes, 16 inches high, extra grade of leather, black or tan color, \$7.00 per pair.

For Boys—Sizes 1 to 4

Boys' Steel Shoes, 6 inches high, \$2.50 per pair.
Boys' Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$3.50 per pair.

N. M. RUTHSTEIN, The Steel Shoe Man

DEALERS' NOTE—Give your customers a square deal by handling Ruthstein Steel Shoes. Write for terms today to Blatchford Davis & Co., Ltd., 60-62 W. Front Street, Toronto. To Western Dealers—Write to George G. Lennox, 87 King Street, Winnipeg, Manitoba.

Overwhelmed by the World-Wide Demand

The success of Steel Shoes is almost startling. Within three years we have established Steel Shoe factories in Racine, Wis.; Toronto, Canada, and Northampton, England. These great factories, running at full capacity, can scarcely keep up with the demand from all over the world. The public is rapidly learning that Steel Shoes are

Good for the Feet! Good for the Health! Good for the Bank Account!

These shoes are better for the feet, better for the health, better for the pocketbook than heavy work shoes or rubber boots.

You Actually Save \$5 to \$10 a Year

by wearing Steel Shoes. Figure it out for yourself. One pair will outlast 3 to 6 pairs of ordinary work shoes. They save all repair bills and keep your feet in perfect condition.

Free Examination

And Your Money Back Promptly if It Looks Better Than the Shoes!
You use it to yourself to investigate. Get a pair of Steel Shoes for Free Examination by sending the price, which will be returned if you and your own feet are not convinced of their merits.

WHY WAIT? SEND NOW!

No risk! No bother! No obligation! Don't hesitate! Act while this offer is open! Simply state size of shoe you wear, enclose the price and get the shoes for Free Examination.

For general field work we strongly recommend our 6-inch high Steel Shoes at \$3.50 per pair or the 9-inch at \$5.00 per pair. For all classes of use requiring high-cut shoes our 12 or 16 inch high Steel Shoes are absolutely indispensable.

Dept. 296A Toronto, Canada
United States Factory: Racine, Wisconsin
Great Britain Factory: Northampton, Eng.

Write for terms today to Blatchford Davis & Co., Ltd., 60-62 W. Front Street, Toronto. To Western Dealers—Write to George G. Lennox, 87 King Street, Winnipeg, Manitoba.

Come to Canada!
SASKATCHEWAN
THE GOLDEN

"The Land That Pays for Itself in a Single Season"
—Prof. THOMAS SHAW.

WILLIAM PEARSON of Winnipeg, known as "Last Mountain Pearson"

THOUSANDS of Eastern Canadians—some, your own former neighbors—are now in Golden Saskatchewan. They were struggling along five years ago, "back home"—just like you are to-day. Many were renters—didn't own a square foot of land. To-day they could buy out the richest farmer in your county. Not because these men are smarter or work harder than you, but because they now live where an industrious man has a fair chance.

Last Mountain Valley

Saskatchewan farmers in Last Mountain Valley grow 40 bushels of wheat on \$30 land. **Result: "Land cleared in one year."** They are making money hand over fist. Crop failures? **We don't have 'em here!**

Seven great railroads form a veritable network over this district. You're right in civilization. And whoever saw a finer place to live! **Good neighbors, fine climate, phones, railroads, churches, schools, rural mail, stores, good roads, fishing, hunting, etc.**

Two Big Land Openings—New Settlers Pouring in by Thousands

Last year 351,593 settlers came to Canada—and fortune. This year will see 500,000 follow them. The bulk of them are bound for the Prairie Provinces. And they'll never go back! They'll never leave this land of health, happiness, sunshine and fortune.

We are putting on two gigantic new land openings—one at Raymore, in Last Mountain Valley, on the main line of new Grand Trunk Pacific—finest wheat land in the world.

WM. PEARSON CO., Ltd., 807 Temple Court, Minneapolis, Minn.

MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.

New Telephone Directory

The Bell Telephone Company of Canada is soon to print a new issue of its **Official Telephone Directory** for the district of Western Ontario, including

LONDON

Parties who contemplate becoming subscribers, or those who wish changes in their present entry should place their orders with the Local Manager at once to insure insertion in this issue.

Connecting Companies

should also report additions and changes in their list of subscribers, either to the Local Manager, or direct to the Special Agent's Department, Montreal.

The Bell Telephone Company of Canada

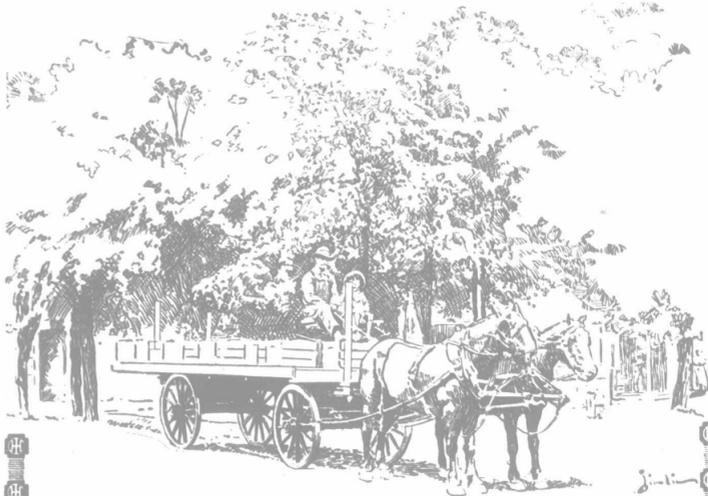
You Try It Free

in your own home. Send us \$25 for an "Automatic" Vacuum Cleaner—use it—test it—for durability, ease in operation and perfect work. If you do not think it the best Hand-power Vacuum Cleaner on the market, return it and we will refund your money. The "Automatic" draws out all dust from carpets, rugs and upholstered furniture—and holds all the dust in the inner tank. Carpets are really clean, through and through, when gone over with the "Automatic," and there is no dust to dust.

The air in the room is clean—the woodwork is clean—when you clean with the "Automatic."

Write to-day for our free circular.

Onward Mfg. Co., Berlin, Ont.



Every IHC Wagon is Inspected Four Times

HOW do you buy a wagon? Do you wait till you need one and then take the first that's offered you, or do you find out in advance which wagon will give you best service, and buy that one? Why not get as much as you can for your money? Buy the wagon that will stand up for the longest time and be easiest on your horses. That wagon is an IHC wagon. Here is why: Each IHC wagon is thoroughly inspected. IHC wagons—

Petrolia Chatham

have just one standard—the highest. The lumber used is selected from large purchases. Every stick of this lumber is carefully inspected. Another inspection is made when the parts are ready for assembling. This inspection assures perfect shaping and ironing.

The third inspection, when the wagon is ready for the paint shop, covers all the points of superior construction for which IHC wagons are famous. Bearings are tested, every bolt and rivet is gone over, the pitch and gather of the wheels are verified. When this inspection is finished, the wagon is up to standard everywhere, good enough to be stamped with the IHC trademark.

The final inspection is made when the wagon is ready for delivery. Four inspections to make sure that you get everything you pay for.

All these inspections are for your benefit, so that any farmer who owns one can say with truth, "My IHC wagon is perfectly satisfactory." The IHC local agent will show you the wagon best suited to your needs. He will supply you with literature, or, we will send it if you write. Address—

EASTERN BRANCH HOUSES

INTERNATIONAL HARVESTER COMPANY OF AMERICA

(Incorporated)

Hamilton, Ont. London, Ont. Montreal, P. Q.
Ottawa, Ont. Quebec, P. Q. St. John, N. B.

IHC Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to IHC Service Bureau, Harvester Building, Chicago, U.S.A.

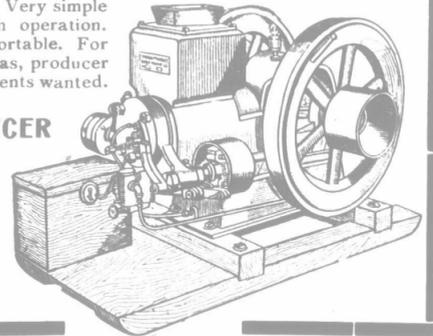


Reliable help for the farmer

Farm labor is scarce. Wages are high. All the more need for a BARRIE ENGINE. Soon pays for itself in time and labor saved. Grinds grain, shells seed corn, pumps water, cuts straw, threshes beans, saws wood, drives churns, separators and washing machines. Does many other things, too.

BARRIE ENGINES WORK LONG

hours without getting tired. Very simple in construction. Reliable in operation. 3 to 100 h.-p. Stationary or portable. For gasoline, distillate, natural gas, producer gas. Write for catalogue. Agents wanted.



The CANADA PRODUCER & GAS ENGINE CO., Ltd.
Barrie, Ontario, Canada

Distributors:
James Rae, Medicine Hat;
Canada Machinery Agency,
Montreal; McCusker Imp.
Co., Regina

The Oil You Need for Your Separator

STANDARD HAND SEPARATOR OIL

Never Gums. Never Rusts. Never Corrodes.



Standard Hand Separator Oil feeds freely into the closest bearings and gives the best possible lubrication.

It makes your separator last longer and do better work as long as it lasts.

One-gallon cans. All dealers, or write to:

The Queen City Oil Company, Limited
Head Office, 63 Bay Street, TORONTO

Also offices at Ottawa, Hamilton, London, Kingston, Stratford, St. Thomas, Windsor, Brockville, Owen Sound, Sault Ste. Marie

QUESTIONS AND ANSWERS. Miscellaneous.

BOUNDARY LINE.

Some forty years ago a field was sold off the farm I now occupy. The field, according to the deed, contained twelve acres. But by actual measurement it contains fifteen acres, and my farm is short this much. If it can be shown that the line fence is not in its proper place, can it be put so after this length of time?

Ontario.

Ans.—Judging from the foregoing statement of the case alone, we should say, no. But it is possible that there are circumstances in the case such as would warrant a different conclusion. We would, therefore, suggest that you have a personal consultation with a solicitor.

WATER SUPPLY.

1. With pump and engine, how many could an air pressure tank be put on house cellar 200 feet diameter, and supply house with water?

2. What fixtures, such as faucets, wash cocks, etc., would be needed on such pipe, and what sized pipe?

3. Could pressure be maintained on pipe at pump?

4. Would a concrete tank be able to develop enough pressure?

5. A supply pipe is laid from house to this by a two-way connection.

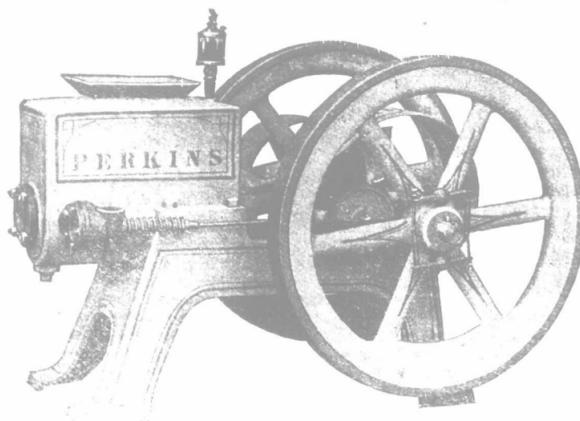
6. Are air-pressure systems satisfactory?

7. Could a person handy with tools do this up himself?

PERKINS' WINDMILL & ENGINE CO.

(Established 1860)

Greatest value ever offered to the Gasoline Engine public



Perkins engines are guaranteed to develop their fully-rated horsepower, and are built strong and durable.

The power for a windmill station in Ontario: 2 1/2 h.-p. Perkins' Farm Engine, mounted on a cast-iron base, \$100; 5 h.-p. Perkins' Farm Engine, mounted on a cast-iron base, \$150; 7 h.-p. Perkins' Farm Engine, on skids, \$200.

These are the best values you can afford to own. Write us today.

PERKINS' WINDMILL & ENGINE COMPANY
LONDON, CANADA

MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.

8. Would a 120-ft. bored well, through rock and brick-clay, cased ten feet on surface, situated on high land in stable, be considered a pure water supply?

9. Would it be practicable to erect a 150-ft. line shafting to transmit power from barn to dairy, to churn and separate with?

10. What percentage of power would be delivered at the end of this shafting?
W. C.

Ans.—1. Yes. But care should be taken to have the joints in the pipes perfectly tight.

2. A check valve between the pump and the tank would be required. If you are pumping by engine, a 1 1/4-inch pipe will do nicely, but if by hand, 1 1/2-inch would be better.

3, 4 and 5. Yes.

6. Yes, if properly installed.

7. He should be able to.

8. It is doubtful if any well situated as stated, and cased only 10 feet down, could be considered a perfectly safe well. If cased 50 feet down, it would be reasonably safe.

9. A line shafting as indicated would be practicable, but I am inclined to think that a small gasoline engine of, say, 1 to 2 h.-p., and situated in the dairy, would be more convenient and economical.

10. It is impossible to state the percentage loss due to friction from the data given. As the power required for churning and separating is very small, I am inclined to think that the loss in transmission due to the friction of the shaft would probably be as great as the power used to run the churn or separator.
WM. H. DAY.

GOSSIP.

Essex-grown White Cap Yellow Dent seed corn is advertised for sale by Jos. Totten, North Ridge, Essex County, Ontario, at one dollar per bushel. Money refunded if seed is not satisfactory.

White-belted Hampshire swine, and hatching eggs of pure-bred turkeys, ducks, geese, and ten varieties of poultry, are advertised in this issue for sale, by J. H. Rutherford, Caledon East, Ont. See advertisement, and send for price list.

At an auction sale of Percherons, by L. E. Austman, of South Dakota, on March 30th, four stallions brought an average of \$1,192, and twenty-three mares an average of \$532. The four-year-old stallion, Raymond, sold for \$2,500; another for \$1,026, and four others for over \$700 each.

Fairfield Farm, of the late G. E. Cresswell, situated in the Township of Tucker-smith, Huron County, Ontario, one of the best farming sections in the Province, is advertised for sale in this issue. The property is one of the most highly improved in the county, and the location is very desirable. Is being offered for sale by the executors in closing the estate.

A. J. Howden & Co., Columbus, Ont., write: Our herd of Shorthorns have come through the winter in good condition, and anyone wishing to select foundation stock will find good-doing, high-class individuals in the herd, which at the present time number more than sixty head, representing the most fashionable tribes. Among the younger things are some very high-class two-year-old heifers, including Clarabelle 3rd, a roan Kinellar Claret, by Lord Lavender =70558=; the Roan Lady Marjory 2nd, a good, thick specimen, by the same sire, dam by Imp. Lord Kintore; the red, Duchess of Gloster, a member of that famous tribe, as her name suggests, and a good specimen of the breed, also by Lord Lavender; Crimson Beauty 2nd, a roan Crimson Flower, by the Missie bull, Bedford Hero, and in calf to Lord Lavender; Lady Butterfly, a red Cruickshank Village Girl, by Benholm Butterfly (imp.), and bred to Lord Lavender. There are several other heifers equally as good in breeding and individuality. The yearling heifers include Missie Countess, a Marr Missie, by Lord Lavender, dam Broadhooks Missie, by Broadhooks Golden Fame (imp.). Another of the same family is Missie Lady, by the same sire, dam by the great sire, Prince Gloster. A September yearling is Lady Anne 9th, a Marr Emma, by Lord Lavender, dam Imp. Lady Anne 8th. Crimson Fuchsia 37th is by Imp. Spicy Count, and the red, Nonpareil Countess, is by the same sire. Crimson Beauty 3rd is a red of good scale, by Lord Lavender, dam Crimson Maude 3rd, a massive cow. Nonpareil Gem is a beautiful, light roan, and a show heifer every inch of her, sired by Lord Lavender, dam a Nonpareil, by Butterfly King (imp.). There are also a number of heifer calves, a high-class lot, of the Missie, Miss Ramsden, Village Girl, Duchess of Gloster, and other fashionable sorts. Some good young cows in calf, and with calves at foot, are included in the female offering, mostly bred to Lord Lavender, than which there are few better all-around bulls in Canada to-day, and he is stamping his high-class, thick, mellow type on his progeny, which are remarkably uniform. The young bulls for sale include Lord Claret, a red Kinellar Claret, by Lord Lavender, dam by Prince of Pine Grove; Statesman, a red seven-months-old son of the stock bull, out of Imp. Lady Anne 8th, a Marr Emma; Nonpareil, a dark roan seven-months-old son of Uppermill Omega, dam Nonpareil Countess, by Spicy Count (imp.). These, along with others of about the same age, comprise the bull offering at present. Anything in the herd is for sale, and parties wishing to see our cattle will be met at Brooklin, G. T. R.; Myrtle, C. T. R.; or Oshawa, C. N. O., if they notify us when to do so.

"It Took Me Fifty Years to Know How to Give You Better Roofs than any other Man"

"I tell you, every farmer in Canada should realize the big share a good roof has in making a good barn. That is my life-work—making roofs. I have been making my roof better and better for more than fifty years. What I have done for farm roofs is one of the biggest things ever done for people who farm."



This Took 50 Years

"You are beginning to see something of the big work I have done. I have made a low-cost roof that stands terrific cold and heat, that stands tremendous rains, that stands ice, that stands earthquakes. In fifty years, I have made Pedlar roof better and better by little points added every year. It has world sales to-day, just because it is the best roof in the world at its very moderate price."

chemists worked with me to get it. I stuck to it just as carefully as I had stuck to bettering my roof. And I got it at last. That's the metal I use to-day."

You Get the Benefit "My roof is the only roof in the world with this kind of non-rusting iron in it. I am the only man a farmer can come to and say, 'I want a hundred-year roof at about the price I would pay for cedar shingle.' I am the only man that can deliver that kind of goods."

"My roof will not rust to the leaking point within 100 years. It saves the barn and its products from the weather. It saves the barn from thaw-water and lodged ice, because the seams cannot be gouged apart. It saves the barn from fire, because sparks cannot burn it. A burning stick on the roof will not harm it, or harm the barn under it. Lightning cannot burn a barn with my roof on it. My roof is a perfect conductor of electricity. My roof has 'give' in it to defy heat and frost, and protects in winter and summer. It protects even though the rafters sag. Wind cannot blow my roof off a barn. This is because it is a ventilated roof. It keeps your barn ventilated and stands the heaviest winds safely."

"You ask me why a barn roof is so important. I will tell you. You build a barn and expect the roof to protect it many years. You put thousands of dollars' worth of produce under that roof while it lasts. Every pound of this produce costs you hard work. If a poor roof lets it get spoiled by wet, you lose money year after year. This lost money is many times the roof cost. Some roofs will last for several years. Some roofs will last if they are kept

years. A roof that will do that is worth going after a good long ways."

Stands the Arctics

"This roof is so good that the Canadian Government Bernier Arctic Expedition used it for the Arctic regions. Here is immense cold and sweeping winds and ice and poor foundations to stand up under. The North-West Mounted Police use it. The Canadian Government has found no better roof for them. My roof is a good roof for the Arctic Circle. It is a still better roof in the milder climate of the rest of Canada."

A Roof for any Man See What a Good Roof Can Do!

"I have spent my life making a low-cost roof that any man or his tinsmith could lay right. This roof of mine saves the stuff stored under it. It saves the barn framing and beams. It saves the foundation. This roof of mine doesn't need special roof timbering at all."

Stands the Tropics

"But that is not all. My roof is used in the West Indies. Here is a temperature of 135 degrees at Port us, Jamaica. My roof stands it. In Jamaica during rainy season at Montego Bay, rain falls 10 inches in a single day. My roof stands it. In Ontario rain falls 30 inches in a whole year. My roof in Jamaica stands in 24 hours the rainfall it has easily 4 months for in Ontario. Is that a good roof? Is a roof that stands the severe conditions in both Arctics and Tropics good enough for you? You get exactly the same article, made on the same machines."

Good for 100 Years

"The big point about my roof is that it cannot develop leaks after you have had it up a year or two. It is a real roof from the first year it is on your barn to the last year. And do you know when that 'last year' will be? You will use that barn, and your grandson will use that barn before that 'last year' comes. I want to pound the fact home to you that when you get a roof from me, you get a roof that is good for one hundred years. Think of getting a roof that makes your barn good for a hundred years. And that at about the price of an ordinary roof."

"That is why I say, 'I have helped the farmer more than any man ever did.' My roof will protect a good \$100,000 of produce in your barn in 100

Used All Over the World

"Not only that, go down to South Africa. Go to the farms there. Go around Port Elizabeth, or Durban, or up in the Transvaal. You'll see my roof there. People will go around the world for my roof, because it is the best roof in the world. It will last 100 years. People use my roof in Japan—an earthquake country. They get it from me. They have searched the world for a roof that would stand earthquake straining. My roof will."

MY LATEST TRIUMPH

"Then, a few years ago, I put my finishing touch that made my roof wonderful. I had been troubled, not by my roof design, but by the metal in it. It seemed impossible to get a metal which would not rust. I had to take the best metal I could get. The design was all right. I had been making that design better for fifty years. At last I struck a clew in Europe."

"You know they have cathedrals there that are hundreds of years old. Yet the iron hinges on the doors are as good as ever to-day, though they were hammered out hundreds of years ago. I said to myself, 'Why not make up my roof in this peculiar kind of iron, so my roof will last like those door hinges?' Well, sir, that was a hard job. It was hard to get that iron duplicated. I worked for a long time and my

Get My Barn Book

"I want to send you my book, 'ROOFING RIGHT.' This lets you dig into more facts about the Pedlar roof. You will see how clean it is. It gives the best eastern water you can gather, as it is self-cleaning. This book shows scores of good barn designs—the best barns in Canada. Every one has my roof on it. You will get big help from my book, and I will send it free for a post-card, because you can plan your barn from it, whether you use my 100-year roof or not. Write to-day

The PEDLAR PEOPLE Limited, of Oshawa Established 1861

HALIFAX ST. JOHN QUEBEC MONTREAL OTTAWA TORONTO LONDON CHATHAM 16 Prince St. 42-44 Prince William St. 127 Rue du Pont 421-3 Craig St. 425 Sussex St. 111-115 Bay St. 86 King St. W. 200 King St. W. PORT ARTHUR WINNIPEG REGINA CALGARY EDMONTON VICTORIA 45 Cumberland St. 76 Lombard St. Room 7, Crown Block 563 Third St. W. 108 Alexander St. 434 Kingston St. Address our nearest warehouse. We want agents in some sections Write for details. Mention this paper. 375

WHEN WRITING ASK FOR PEDLARIZATION BOOK NO. 150

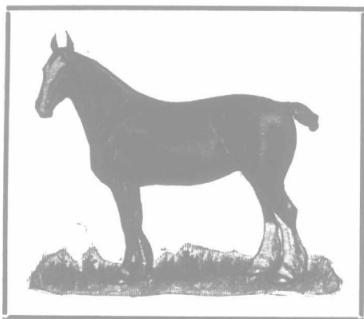
ATTENTION! THOSE WHO SPRAY FREE REX BULLETINS Information for the asking REX LIME AND SULPHUR SOLUTION The original and oldest brand of commercial solution on the market. REX always has led, the others follow. REX ARSENATE OF LEAD Guaranteed under the U. S. Insecticide Act of 1910. Send your name and address plainly written, and state the number and kind of trees you have. We will send you our spray books. CANADA REX SPRAY CO., LTD. Brighton, Canada

WE PAY THE DUTY \$147.50 Six Horse Power Gasoline Engine \$147.50 A slow speed, heavy duty engine constructed on the only correct principle. One-third less weight, one-third less bulk and one-third stronger than any other engine in the world. Write for catalogue and special proposition United States Engine Works 1538 Canal Street, Chicago, Ill. Duroc - Jersey hogs for breeding purposes, property of Thos. Johnson & Sons, sold at auction March 5th, at Columbus, Ohio., brought high prices. The boar, Instructor, sold to a Kentucky buyer for \$605; another, nine years old, for \$500, and the entire offering for an average of \$85.

MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.

New Importation!
Just Landed!

CLYDESDALES PERCHERONS and SHIRES



Clydesdale stallions are sons of Hiawatha, Marcellus and Revelanta. Mares by such noted sires as Homer's Kyle, Hiawatha, Montrave Ronald, Baron Rothschild, Imperialist, Up-to-Time, Armadale and Moncrieff Marquis. Included in the lot are fourteen stallions, Clydesdales, Percherons and Shires. Also nine mares, seven of them safe in foal. All extra big and fine quality. Prices right and terms to suit intending purchasers.

T. H. HASSARD, Markham, Ont.

Locust Hill Station, C. P. R. Markham, G. T. R.
Just 20 miles from Toronto.

Cairnbrogie Clydesdales

Our first importation for 1912 are in our stables—Stallions from 1 year up to 6, Fillies from 1 year up to 3. We have the size, breeding, conformation, character, quality and action that win in any company. Many of them were winners in Scotland. We have now the biggest and best selections for intending purchasers in Canada. We never had a better lot. If you want a winner for either the stud or show ring let us hear from you. True representation and a square deal is our motto.

Long-Distance 'Phone

GRAHAM BROS.

Cairnbrogie Farm, Claremont P. O. and Stn.

POLES OF STERLING QUALITY

Michigan White Cedar Telephone Poles

W. C. STERLING & SON COMPANY

Oldest Cedar Pole Firm in Business
Producers for 32 Years

1880

MONROE, MICHIGAN

1912

Please Mention The Advocate

QUESTIONS AND ANSWERS. Veterinary.

WIND SUCKER, ETC.

1. Mare has the habit of hanging back in her stall, resting jaws on halter shank, groaning, and grinding her teeth. Her teeth are worn down, but she does not grab the manger.
2. What is the difference between a wind sucker and a cribber?
3. Would a foal out of the above mare be likely to inherit the habit?
4. Would you advise breeding a running mare to a Percheron stallion?

J. A.

Ans.—1. This is wind sucking; a habit that is hard to check. By buckling a strap tightly around the throat (not tight enough to prevent her swallowing), she will be unable to suck wind, as the throat cannot expand, but so soon as the strap is removed, she will very likely again suck wind. There is no known means of permanently checking the habit.

2. A wind sucker acts like your mare, while a cribber grasps something with his teeth, and then sucks wind and groans.

3. There would be a probability of such inheritance, but it does not necessarily follow. The habits of the dam are always liable to be inherited by her progeny.

4. Certainly not. The cross is too violent, and while occasionally such crosses give good results, the probabilities are strongly against it.

V.

PARTIAL DISLOCATION OF PATELLA.

Three-year-old draft filly has always been slightly stiff in stifle joint. There is a soft lump the size of a goose egg just below the joint. Will she be fit to work, and would it be advisable to breed her this season?

J. M.

Ans.—Her stifle bone (patella) slips partially out of joint. She should make a reasonably useful mare for slow work, but will never be right. The joint can be strengthened by repeated blistering, which should have been done when the trouble was first noted, but it is not too late yet to benefit her. Get a blister of 1½ drams each of biniodide of mercury and cantharides, mixed with 2 ounces of vaseline. Clip the hair off the front of the joint. Tie so that she cannot bite the parts. Rub the front and inside of the joint well with the blister once daily for two days; on the third day apply sweet oil. Let head loose now, and oil every day until the scale comes off, when it would be well to tie up and blister again. The blistering may now be repeated every month as long as considered advisable. As to breeding, there is no reason why she should not be bred this season. Of course, the condition of the stifle is largely due to a congenital weakness, and there is a danger that she will produce foals with a similar predisposition.

V.

Miscellaneous.

POWER QUESTIONS.

1. I intend erecting cement house over well. What size would you recommend, large enough for gasoline engine, cream separator, washing machine?
2. Which is the best, engines that run by gasoline or coal oil?
3. Which is the better, water-cooled or air-cooled? What is the difference?
4. Which do you think is the best for pumping, engine or windmill?

A. M. A.

Ans.—1. We question the advisability of placing such a room over the well for fear of contaminating the water supply. We do not say that it would be impossible to avoid this, but it would require very careful construction, and even then we would not feel too safe. As regards you can best judge for yourself. It will depend a good deal upon the position of the washing machine and separator. Do you have or intend to buy, the motor for the room crane?

2 and 3. These are questions of a proprietary nature, and as we do not do our own line of engines, we do not feel free to give an opinion. It is almost certain that you can get a good engine of either type safely, anywhere.

4. The gasoline engine is the better in a favor of the engine with a water tank, the water being pumped out of the tank.

Trinidad Lake asphalt

Asphalt-saturated wool felt

Trinidad Lake asphalt

**Avoid roofings that
crack like old shoes,
because—**

the oils of their pores dry-out after short exposure to sun and air, and leave the roofing lifeless and leaky. Get the permanent roofing—

Genasco
THE TRINIDAD-LAKE-ASPHALT
Ready Roofing

The natural oils of Trinidad Lake asphalt are lastingly stored in it. That's the difference between natural and artificial.

They keep Genasco pliable—always ready to resist every condition of weather that attacks it.

Put Genasco on the roof of all your farm-buildings, and forget it.

Mineral or smooth surface. Several weights. In handy rolls. Ready to lay—and easily done by anyone. Ask your dealer for Genasco. Write us for the helpful Good Roof Guide Book and sample—free.



The Kant-leak Kleet, for smooth-surface roofings, makes seams watertight without cement, and prevents nail leaks.

The Barber Asphalt Paving Company
Largest producers of asphalt, and largest manufacturers of ready roofing in the world.

Philadelphia

New York San Francisco Chicago

Canadian Distributors:

Caverhill Learmont & Company
Montreal, Quebec and
Winnipeg, Man.

D. H. Howden & Co., Ltd.
200 York St., London, Ont.

150-Acre Farm FOR SALE

In the Township of Tuckersmith, in the County of Huron, one and one-half miles from the town of Sardinia, which is one of the best markets in the Province of Ontario. Twenty acres hardwood bush, balance cleared. Well fenced, tile underdrained, good water and a never-failing spring creek. There is an excellent orchard of ninety trees, mostly water apples. Soil clay loam. There is a ten-roomed brick house, with all modern conveniences, including hot-water heating; telephone, woodshed and 2000 bushels of wood. Good bank barn, piggery, implement shed, a new trap and other outbuildings. Selling for an estate.

R. E. Cresswell, Egmondville, Ont.

LAMBTON FARMS

IMMEDIATE SALE

\$2 900 51 acres; sugar beet land; house, cement foundation; barn; well; water; well fenced; partly tiled; fields wheat, clover; water half mile from M. C. R. siding, 100 Springs.

\$4 900 100 acres; clay loam; house, barn, outbuildings; two water wheels and two windmills; orchard, hay, two fields; water; well fenced; about five miles from M. C. R. siding, about one mile from M. C. R. siding.

S. G. MONCRIEFF, Petrolia, Ont.

FOR SALE

CLYDESDALE STALLION

Charles [1853] dark bay; foaled 1907; 1st sire Fiscal Member (1214); 2nd sire Cornstone (11016); sound, strong and of splendid quality and action. Come and see him, or write.

DR. W. HOLMAN, Columbus, Ontario
C. P. R. or Brocklin G. T. R.



Don't Pay for This Sheep Shearing Machine Until You See and Examine it

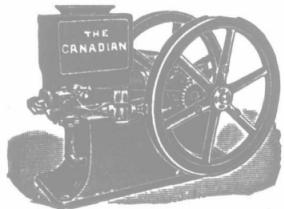
Most dealers have it. If yours hasn't, ask him to get one for you, and when it comes have it set up and try it. If you are convinced that it is what you want, buy it and try it on your sheep with the distinct understanding that it must do the work O. K. or no sale.

This STEWART BALL BEARING MACHINE No. 9

is just the easiest of all shearing machines to turn. A boy can run it all day without tiring. It is ball bearing throughout, including a ball bearing shearing head, shears quick and evenly all over. The price including four sets of knives is only \$15 75. It is really a wonderful machine and you will be agreeably surprised at the work it does.

Get your dealer to send you, or if you prefer send \$8 and we will ship C. O. D. for balance and you may try the machine and if not satisfied we will refund all you paid out. Send for copy of new 1912 catalogue and Expert Instructions on shearing sheep.

CHICAGO FLEXIBLE SHAFT COMPANY
110 La Salle Ave. CHICAGO



THE BEST

For every purpose is the CANADIAN ENGINE. Most simple, durable and economical. Sizes, 1 1/2 h.-p. to 35 h.-p.

The Canadian-American Gas & Gasoline Engine Co., Ltd.
Dumville, Ontario

FROST & WOOD CO., LTD., Smith's Falls, Ont.
Exclusive selling agents for Eastern Ontario, Quebec and Maritime Provinces.

EUREKA Harness Oil

KEEPS YOUR HARNESS SOFT AS A GLOVE TOUGH AS A WIRE BLACK AS A COAL
SOLD BY DEALERS EVERYWHERE
The Queen City Oil Co., Limited.

For Sale Clydesdale Stallion

ONE EXTRA FINE
Four years old, by Benedict. He is a beauty and sure foal getter. AND TWO TWO-YEAR-OLD STALLIONS. VERY CHEAP.
Willowdale Stock Farm, Lennoxville, Quebec

Clydesdale Stallions and Fillies

Our past record for many years in the leading show-rings of Canada and in the yearly increase in volume of business is our best recommendation. This has been our best year. We have still some of the best of last year's importation in both stallions and fillies. We solicit your trade and confidence.

SMITH & RICHARDSON, Columbus P.O., Ont.
Brooklin G. T. R. Myrtle C. P. R. Ottawa C. N. R.

Clydesdales, Stallions and Fillies, Percheron Stallions
My 1911 importation have arrived—20 Clyde stallions, 18 Clyde fillies, 6 Percheron stallions. I have many winners at Old Country shows. Big, choice, quality stallions and mares, bred from the champions, and the best Percherons in Canada. Prices right.
Long-distance phone. T. D. ELLIOTT, Bolton, Ont.

Mount Victoria Stock Farm, Hudson Heights, P. Q.
We have for service this season the Champion Imp. Clydesdale stallions Netherlea, by Pride of Blacon, dam by Sir Everard; also Lord Aberdeen, by Netherlea, and the Champion Hackney stallion Terrington Lucifer, by Copper King. For terms and rates apply to the manager.
T. B. MACAULAY, Prop. ED. WATSON, Manager.

IMPORTED CLYDESDALES
I have for sale mares and fillies, from foals up to 5 years of age; richly bred and big in size; a number of them in foal; matched pairs, the kind to make you money. They will be sold at prices that defy competition.
L.-D. phone. ALEX. F. McNIVEN, St. Thomas, Ont.

Imp. Clydesdale Stallions of Size and Quality
Our latest importation of Clyde stallions include several that were 1st prizewinners in Scotland. We have them from one year old up, of choicest breeding, big, flashy quality fellows, full of draft character. Our prices are the lowest, and our terms the best.
L.-D. phone. CRAWFORD & McLACHLAN, Thedford P.O. and Sta.

Clydesdale Stallions with both size and quality, all prizewinners and breeding of the best blood in Scotland. Prices and terms the best in Canada.
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CLYDESDALES OF SIZE AND QUALITY
I have for sale Clydesdales, imported and Canadian-bred, toppers and prizewinners, including championships; big flashy stallions from 1 year up to 4; mare and fillies up to 1,900 lbs. in weight; all of them with size, quality and breeding, some with six registered dams.
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Peachblow Clydesdales and Ayrshires
I am offering some choice young heifers and cows due to freshen in January in half to the stock bull Sir Favorite of Hemmingford, 27732. In Clydesdales, I am offering for sale the imported horse Harrier, 6123, and the yearling stallion Nessmore, 11032. They are both good animals and will be sold worth the money. For prices write:
R. T. BROWNLEE, Peach Blow Farm, Hemmingford, Que.

16 Clydesdale Stallions and Fillies
5 years and under. Some winning in Scotland and Canada. Bred from such noted sires as Hiawatha, Everlasting, Prince of Carruchan and Baden Powell—horses that will make a ton, with quality. Prices right. W. B. ANNETT, ALVINSTON, ONTARIO
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Sixty miles from Ottawa on C. P. R. North Shore line, and one mile from C. N. R.
J. E. ARNOLD, Grenville, Que.

QUESTIONS AND ANSWERS.
Miscellaneous.

BELGIAN OR CLYDE.

I have two partly Clyde mares that weigh about 1,100 pounds. How will they cross with a Belgian horse?

J. C.

Ans.—They will, in all probability, mate more successfully with a Clydesdale.

PERMANENT PASTURE.

I wish to seed down a permanent pasture for sheep. Could you advise me a suitable mixture for same? The ground consists of sandy soil, hillside, facing the west. What quantity shall I require per acre?

R. A. G.

Ans.—Alfalfa, 5 lbs.; alsike clover, 2 lbs.; white clover, 2 lbs.; meadow fescue, 4 lbs.; orchard grass, 4 lbs.; tall oat grass, 3 lbs.; meadow foxtail, 2 lbs., and timothy, 2 lbs. This makes 24 lbs. per acre. No blue grass is mentioned, but there is scarcely a farm in Ontario on which these will not grow naturally, and in a few years there will be a large percentage of them in the pasture, even without sowing them.

PEA WEEVIL.

Would be pleased to learn, through the columns of your paper, at as early a date as possible, if there is any treatment that is effective in killing the bug in peas that are intended for seed?

W. T. F.

Ans.—Fumigate with carbon bisulphide. A tight box, or coal-oil barrel covered with a blanket, will answer the purpose of a fumigating box. A barrel will hold about five bushels, and three or four ounces of carbon bisulphide are necessary. Place it in an open dish on top of the peas, and cover tightly with a blanket and a cover weighted down for 48 hours. The bisulphide changes to gas, which, being heavier than air, settles among the peas and kills the weevils.

HICKORY LUMBER.

Would you let me know, through the medium of "The Farmer's Advocate," the price of hickory wood? I have cut down five trees, and delivered them in eleven logs of 12 feet each to the saw-mill, waiting instructions as to the sawing. In the event of being unable to dispose of same at the moment, I should like to have them sawn to the best advantage, and take into stock until I can find a market. The mill in question is only a temporary erection, otherwise I could let them stay over until I found a purchaser.

I. H. B.

Ans.—We are advised by a London lumber dealer that the best method of disposing of hickory is to sell it in the log to some of the handle factories, to be cut by them as they see fit. Cut into ordinary lumber, there is very little market for it, and lumber dealers do not care to handle it. For small work, as handles, etc., first-class hickory should bring around forty dollars per thousand.

CROSSING CLOSED.

There lies in the County of Dundas a farm that was owned by one man when the C. P. R. went through. They bought their way through, but a crossing was reserved by the owner of the land. The farm is now divided between A and B, each one owning the land on his side of track. The C. P. R. men come along and offer A and B so much money for the crossing, but they refuse to sell, but the C. P. R. shuts up the crossing. Now, what I want to know is this:

1. Can they do so when they do not own the land where crossing is?
2. If A rents B land, can he compel the C. P. R. to open the crossing? If so, in what way, as A wants to rent or buy the land from B?
3. What steps would A have to take to have the crossing opened?
4. If A cuts the wire and goes through, can the C. P. R. have him taken for damages?

A SUBSCRIBER.

Ans.—Write the Dominion Board of Railway Commissioners. They will adjust the matter for you.

Irish bulls, Shorthorns, sold well at the annual spring sale at Belfast, March 20th, 96 head bringing an average price of \$145, the highest price, \$761, being realized for the first-prize winner in the class for junior yearlings, calved on or after April 1st, 1911.

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Should Have Made a Will

Children Neglect Aged Mother
A sad case was brought to the attention of a charitable society recently, when they received an application for relief from an elderly woman.

Her husband had been prosperous, but died without leaving any will. The widow did not insist on her rights to a third of the estate, but turned everything over to the children, believing that they would look after her for the balance of her life. She had lived with one after another of her married sons and daughters, and her story of the way in which she was treated causes a very serious reflection on the ingratitude of children.

The main point is, however, that it is not fair for a man to leave an unprotected and inexperienced woman the responsibility of deciding on purely business affairs. It was the plain duty of the husband, as it is the duty of every person, to make a will. There is no excuse, because it is no longer necessary to employ a lawyer or incur large expense—the BAX Will Forms can be obtained for 35 cents. Accompanying each form is a specimen will properly filled out and full instructions for your guidance.

The BAX Will Form filled out and witnessed by two friends is absolutely binding and indisputable.

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SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

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Sure in Results.



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THE BEST FOR BLISTERING.

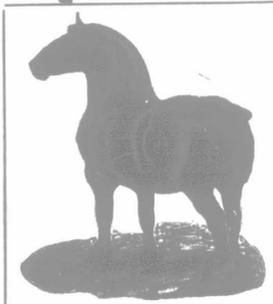
I have used GOMBHAULT'S CAUSTIC BALSAM quite a good deal, and for a blister it's the best I ever used. I wish your remedy every success.
CHAS. MOTT, Manager,
Mayfield Stud Farm, Leesburg, Va.

CURED CURB WITH TWO APPLICATIONS.

Have used your GOMBHAULT'S CAUSTIC BALSAM to cure curb. I blistered it twice, and there is no sign of it any more. The horse is as good as ever. —DAN SCHWAB, Evergreen, Ill

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Prizewinners. We still have a few Percheron stallions to offer, among them being the first-prize three-year-old at the Toronto Exhibition last September, and the first-two-year-old at the Dominion Exposition, Regina, last August.

We don't sell all our best horses first, and can show intending buyers ton horses of the finest quality, both blacks and greys, and right in every way.

We are not looking for fancy prices, and these horses will be all sold worth the money.

Guarantee and terms the best obtainable.

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A large importation of specially-selected 2-year-old stallions, fillies and show mares. Will arrive early in May.

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Shire Stallions and Mares, Shorthorn Cattle (both sexes); also Hampshire Swine. Prices reasonable.

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MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.

QUESTIONS AND ANSWERS.

Miscellaneous.

PASTURE—CORN—SILO.

1. What is the best mixture to sow on low ground for hay and pasture, and the amount per acre?
2. What is the best variety of corn to sow for a good yield of ears, the corn to be put through a cutter before being fed, and would you plant in hills or sow in rows?
3. Do steel silos give satisfaction?

E. N.

Ans.—1. We presume a crop is wanted which is suited for either hay or pasture. If so, red clover 6 lbs., alsike, orchard grass, meadow fescue and timothy 3 lbs. each, would make a good seeding. This can be used as hay crop the following year, and pasture afterward. If the land is very low, try orchard grass, meadow fescue and red top, 4 lbs. each, and timothy, meadow foxtail, alsike and white clover, 2 lbs. each.

2. If a flint corn is required, Compton's Early, Longfellow, Genesee Valley, give fair yields of fodder, and good yields of grain. Salzer's North Dakota is a heavy fodder yielder. All things considered, we prefer planting in hills.

3. Steel silos have given fairly good satisfaction, but there has been difficulty in getting a suitable coating on the inside of the building to prevent rusting, etc.

UMBILICAL HERNIA.

I have a horse colt coming a year old in July; has a small navel rupture. I would like to know whether I should have him operated on, or is there any other treatment I could do for this? I got a bottle of liniment from my veterinarian to rub on him, but it did not seem to do any good. G. W.

Ans.—In most cases nature effects a cure of umbilical hernia in foals or colts under one year of age. Apply a truss or bandage with an elevation about the size of half a baseball on it. Place so the elevation presses against the rupture. Arrange truss with straps or strings passing forward and attached to a strap around the colt's neck, so as to prevent truss from slipping backwards. Keep the truss on for three or four weeks, and if this does not effect a cure, have your veterinarian operate. Most veterinarians use a clam in cases that a truss will not cure. It is applied by casting and securing the colt on his back, returning the intestine carefully into the abdomen, and applying a clam tightly on the loose skin, letting the patient up and allowing the clam to slough off. None but a veterinarian should attempt this operation.

CAPPED HOCKS.

1. I have a colt rising four that has a capped hock. She is a Clyde; a well-built, low-set chunk; is lively and active. Worked a few half-days last fall, has been hitched once this winter, is quiet, and easy handled, has a comfortable stable, cement floor, stalls planked on top of cement, seems to have plenty of width and length. Is out every day the weather is favorable. They appear on both hock joints on hind legs, have just become noticeable and seem to be growing fast; are quite soft. I want to work her this spring. Kindly give cause and cure as soon as possible.

2. Is it better, or any advantage, to put granulated sugar in butter when packing for winter use? If so, what are the proportions? A. R. L.

Ans.—1. It generally takes a good deal of time and patience to remove an enlargement of this kind. The daily application of compound iodine ointment with smart friction will sometimes reduce it in time. If not effective, repeated blistering will remove it in time. Make a blister of 2 drams each of bichloride of mercury and cantharides mixed with 2 ounces of vasoline. The so she cannot bite the parts. Clip hair off the parts, rub blister wax in daily for two days, and on the third wash off and apply sweet oil instead of vasoline after the seal comes off.

2. We see no advantage in putting sugar in the butter.

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REPLACE the pestilent, draughty, dangerous and offensive out-of-doors closet with an indoors closet which requires no sewer, no plumbing, and no flushing system. Have city conveniences in your home. Safeguard family health by installing a

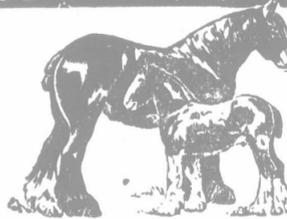
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will clean them off without laying the horse up. No blister, no hair gone. \$2.00 per bottle delivered. Describe your case for special instructions and Book 3 L. free. ABSORBINE, P.E., liniment for mankind. Removes Painful Swellings, Enlarged Glands, Goitre, Venas, Bruises, Varicose Veins, Varicosties, Old Sores, Allays Pain. Price \$1 and \$2 a bottle at druggists or delivered. Manufactured only by W. F. YOUNG, P.D.F., 258 Lvmans Bldg., Montreal, Ca.

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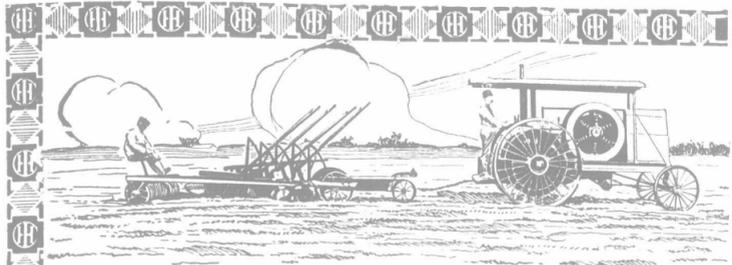
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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to IHC Service Bureau, Harvester Building, Chicago, U. S. A.



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THE first chance and the last chance this season for you, Mr. Percheron Stallion Buyer, to get the goods at the lowest price on record, considering quality; and as I am cleaning out to make room for new importation, I am offering your choice of six perfect horses at unheard prices. Providing you come here and take a look. It will pay you to come 2,000 miles to see me on this offer. Remember, I stand on past performances, and I have a record not to be ashamed of. I have the goods, don't forget that, and if you are thinking of buying a horse, don't overlook me. Here is an offer: Come here, take a look, if you don't buy I will pay your way one way, if you do buy I will pay your way both ways. If you have money or credit you can take home the best horse in Canada for the money. Remember, I have the big horses.

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In my late importation of Clydesdale stallions and fillies I have exceptionally choice breeding idea draft characters; as much quality as can be got with size, and I can undersell any man in the business. Let me know your wants. GEO. G. STEWART, Howick, Que. L.-D. Phone. Our new importation has arrived safely, and we are now in a position to supply the trade with stallions from 1 year old up to 4, with more draft character, big, strong, flat bone, and better breeding than any other firm in the trade. Prices and terms as favorable as any other importer in Canada. BARBER BROS., GATINEAU PT., QUEBEC, NEAR HULL.

QUESTIONS AND ANSWERS. Miscellaneous.

SILO FOR BREWERS' GRAINS.

I have been thinking of building a small silo and filling it with brewer's grains, as we can get them in the months of July and August for the drawing, and would like your opinion as to whether they would keep, and be fit to feed to dairy cows in the winter time.

A. M.

Ans.—Before building a silo for the purpose, we would suggest that you try it on a small scale in a silo already up. Get someone who has a silo to put a small quantity in, and if they keep well it might be tried on a larger scale. We are doubtful whether it would be found successful.

ABSENCE OF OESTRUM.

1. I have a valuable pure-bred Short-horn heifer 22 months old that has never shown signs of being in season, though closely watched. Could an amateur, by a manual examination per vagina, determine if she will ever breed? If so, in what condition will the female organs be found? In a heifer, should (in normal cases) the os (I think this is what you mean by it, a cartilageous organ perhaps two inches long and about ten inches from vulva) be tightly closed? Is this the only entrance to the womb? A neighbor was over and stated, after examining this heifer, that she would never breed, as this (the os) was firmly closed. Was he right? F. H.

Ans.—The os being closed should not have any effect upon the heifer's coming in season. Allow the heifer to run with a bull for some time. This may induce oestrum. The administration of 2 drams of nux vomica three times daily has often apparently had the desired effect by stimulating the nervous system. It is worth a trial. If the os is closed, get a person who understands the anatomy of the parts to open it, and if she shows signs of oestrum, breed her about an hour after opening. Feed liberally.

CEMENT FLOOR.

1. Would you advise me to put in cement floor in old henhouse which has earth floor? The hens keep scratching up the dirt in the litter, and in three or four hours the litter is mixed with half dirt, so that they don't scratch as much as they should.

2. How much gravel and cement, for henhouse 12 x 16 feet, and cost of cement? 3. How long would it take one man to cement it? Also give directions as to mixing cement, and laying of the gravel, etc. G. E. L.

Ans.—1. Cement floors are the cleanest, and give good results. The only serious objection to them is cost. Ground floors are more in favor than board floors.

2. About two-thirds cord of gravel, and about 3 1/2 barrels of cement.

3. This depends on the man. It would not be a long job in any case, as it is all straight work. Mix the gravel, sand and cement for the floor about one of cement to eight of gravel and sand, and put on a thin putty coat, one to two or three. Mix on a platform, use plenty of water, and shovel over thoroughly.

ANNUAL PASTURE.

Would you please give me what information you can regarding the sowing of Amber sugar-cane, or sorghum, with oats and wheat for pasture. Do you know of anyone who has sown any quantity and pastured it continually. I had about half an acre last year, and turned the milch cows on it every evening with good results, and would like to sow about eight acres this year for pasture, as grass land is very scarce, and soiling the cattle in the stable all summer incurs considerable labor, and help is very scarce and dear. L. A. M.

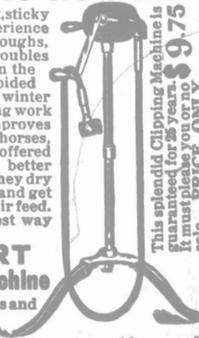
Ans.—We can recommend nothing better than Prof. Zavitz's annual pasture mixture of 51 pounds of oats, 30 pounds of Early Amber sugar-cane, and 7 pounds of red clover. Sown the first week in May, this mixture is usually ready for use about June 20th. The oats are early and rapid in growth, the sugar-cane is later, stools well, and thrives in hot weather, and the clover forms the chief autumn pasture. Good seedings of clover for hay the following season have been obtained in this way. An acre will a little more than feed one cattle beast continuously throughout the season.

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By standing in a wet, sticky coat of hair. Experience proves that the coughs, colds and other troubles that affect horses in the spring, can be avoided by clipping off the winter coat before the spring work begins. Clipping improves the appearance of horses, they bring more if offered for sale, they do better work too, because they dry out quick, rest well and get more good from their feed. The easiest, quickest way to clip is with a

STEWART Ball Bearing Machine

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About the udders and flanks of all cows should be clipped every three or four weeks so the parts can be kept clean when milking. Complete \$9.75

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EXPORTERS OF PEDIGREE

Live Stock of all Descriptions.

During the spring months we shall be shipping large numbers of Percherons, Shires, Belgians, Clydesdales, Suffolks, etc., and all those who wish to buy imported stock should write us for full particulars.

Angus Bulls for sale—if you want a nice young Angus bull at a reasonable price enquire of

J. W. BURT & SONS Aberdeen Farm Coningsby P. O., Ont.

Aberdeen - Angus

Now is the time to buy a bull; eleven for sale; also females any age or price. WALTER HALL, Drumbo station, Washington, Ont.

Shorthorns, Berkshires, Cotswolds

Nine bulls from 9 to 11 months, cows, heifers and heifer calves; over 50 head on hand. No Berkshires to offer at present. A few shearing ewes for sale.

Chas. E. Bonycastle, P. O. AND STA., CAMPBELLFORD, ONT.

GEDARDALE SHORTHORNS—

Shorthorns of all ages, pure Scotch and Scotch topped, imp. and Canadian-bred, choice heifers, choice young bulls, also the stock bull Lord Fyvie (imp.); anything for sale.

Dr. T. S. Sproute, M. P., Markdale, Ontario

Spruce Lodge Shorthorns and Leicesters

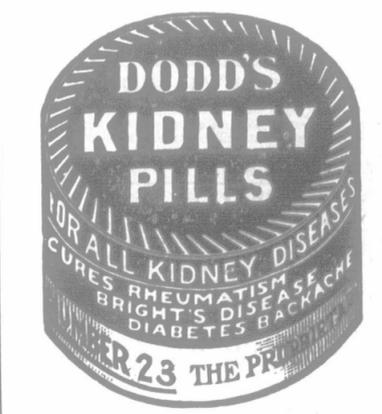
Will price cheap young bull from 6 to 14 months; also 1 and 2-year-old heifers, some from imp. sires and dams. Leicesters at all times of both sexes for sale. Phone. W. A. Douglas, Tuscarora, Ont.

Shorthorns—

Nine bulls and a number of heifers for sale at very reasonable prices. Robert Nichol & Sons, Hagersville Ont

Photographer—"You are right now, except your expression. Please look pleasant."

Jay Green—"Hang it, man, I can't! I'm bow-legged, an' am trying to hold my knees together so's it won't show. When I smile I forgit all about my knees, an' when I pay attention to my knees I forgit to smile."





A Little Money-maker

We guarantee chicks will prove profitable whether you want them for early market, egg production or prize winners, if they get **Pratts Poultry Regulator** from the start.

Pratts Poultry Regulator

keeps the digestion in perfect order, prevents and cures disease, makes fowl mature quickly, saves time and feed and is a wonderful tonic and egg producer.

Satisfaction Guaranteed or Money Back

Our dealers will promptly refund your money if dissatisfied. Make any test you desire to prove its value and you are to be the judge.

25 lb. pails \$2.60. Also in smaller packages and 100 lb. bags.

Pratts Lice Killer kills lice on fowls, animals and plants. If you raise little chicks, you need **Pratts Gape Remedy** and **Pratts White Diarrhoea Remedy**. If your dealer hasn't them, we will supply you. Regular full size box, 50 cents, trial size, 25 cents.

Ask for our **New Poultry Book**. Mailed free.

Pratt Food Co. of Canada, Ltd., Dept. 62 Toronto

Pratts Animal Regulator the great stock tonic improves horses, cows, calves, hogs and sheep.

Scotch Shorthorn Bulls

Have a number of good, thick-fleshed bulls of up-to-date type and breeding, from 8 months to 14 months old, all cows and heifers at reasonable prices. Write to, or call on

H. J. DAVIS
Woodstock, Ontario
Breeder of Shorthorns and Yorkshires.

C. P. R. and G. T. R. Long-distance Bell 'phone.

"The Manor" Scotch Shorthorns

Present offering: Three choice yearling bulls. Young cows in calf. Yearling heifers: Clippers, Minas, Wimples, Julias, etc. Inspection solicited. Prices moderate. Phone connection.

J. T. GIBSON, DENFIELD, ONTARIO

Woodholme Shorthorns

I have for sale a number of choice-bred Scotch Shorthorn heifers and several young bulls, all of high-class quality and sired by Imp. Dorothy's King =5509=, a Lady Dorothy. I am also offering this bull for sale.

G. M. FORSYTH, North Claremont P.O. & Sta

IMPORTED BULL FOR SALE

Our Green Grove herd of Shorthorns is headed by the two imported bulls Imp. Spectator =5094= and Imp. Royal Bruce =55038=. Present offering: Stock bull Imp. Spectator and two choice young bulls, herd headers, fit for service; also good females **Geo. D. Fletcher Binkham Ont. Frin Sta C.P.R.**

OAKLAND SHORTHORNS I

Our present offering: Bulls from 8 months to 22 months, roans and reds; all got by Scotch Grey 72,692. Prices from \$75 to \$150.

JOHN HLDER & SON, HENSALL, ONTARIO

MAPLE LODGE STOCK FARM
1854-1912

Have two very desirable Shorthorn bulls for sale, a red and a roan. A handsome young Clydesdale stallion for sale, and the Leicesters are doing splendidly.

A. W. SMITH, Maple Lodge, Ontario
Lucan Crossing, G. T. Ry., one mile.

Shorthorns of Show Calibre

Only one bull for sale now, but 13 grand heifers by Mildred's Royal must be sold, as we have no bull to breed them to. Come and see them, or write.

GEO. GIER & SON, Grand Valley, Ont.

SPRING VALLEY SHORTHORNS

Herd headed by the two imported bulls, Newton Ringleader, =73783=, and Scottish Pride, =36106=. The females are of the best Scotch families. Young stock of both sexes for sale at reasonable prices. Telephone connection.

KYLE BROS. - - Ayr, Ontario

Clover Dell Shorthorns

Real bargains in females. Dual-purpose a specialty. **L. A. Wakely, Bolton, Ont.** Bolton Sta., C. P. R.; Caledon East, G. T. R. 'Phone.

QUESTIONS AND ANSWERS.
Miscellaneous.

SILO DOORS.

Just now I am greatly interested in silos, and am reading up everything I see which I feel would be of any help to me in the erection of ours this coming summer. Yours at Weldwood proved of great interest and benefit to me until I got to the roof, where I thought I must draw a line, but what I want to ask is your opinion of leaving an opening two feet wide from the bottom (or within three feet of the bottom) to the top of a forty-foot cement silo, with iron bars about six feet long, and curved to suit circumference, sunk into the cement, and placed eighteen inches apart to serve as a ladder next to the chute, the spaces between the rungs to be covered by two-inch plank set inside in grooves left in the cement for that purpose, these pieces of plank being put in place as the silo is being filled. Would this opening, strengthened by the bars and plank, be sufficiently strong to resist the pressure? I thought this would make a neat, cheap, permanent ladder, and a much smaller chute would be required.

I cannot be grateful enough to you for the help in running the farm I've derived from "The Farmer's Advocate." It was always in my father's home, and I've never regretted the day your agent called and I welcomed back my old friend.

M. A.

Ans.—Some silos are built in the way you suggest, but after considering the matter carefully, we decided to build with five separate doors. We think it makes a stronger silo, and tends to reduce the chances of deterioration of silage next to the opening, though this will not be great where the fit is good and the corn is properly tramped at filling. One disadvantage of the continuous opening is that many pieces of plank are required, and these are not always convenient to store and put up at filling. It is true that your rods would serve as rungs of a ladder, but unless pretty stout they would bend. Also it would be inconvenient crawling between them to get into the silo unless they were spaced pretty widely, when they are awkward to climb. We would much prefer a separate ladder at the side of the chute, which, however, could be made much narrower than ours, except right at the bottom, where it should be wide enough to admit a silage cart. You may very well leave the roof for a year or two, but when you do put one on, build a good one.

BOOK REVIEW.

TRAINING AND BREAKING HORSES.

"Since the effectiveness of the horse and the safety of the master and his family depend so largely upon the understanding between man and horse, it seems worth while to give the methods of establishing agreeable relationships careful consideration." With this view in mind, "The Training and Breaking of Horses" was written by M. W. Harper, Assistant Professor of Animal Husbandry, New York State College of Agriculture, Cornell University. Beginning with the foal, each class of horse is considered, and a separate chapter devoted to the education of the more common classes. Special attention is given to the training and subduing of wild horses, and the overcoming of vicious habits. Several breaking appliances are described.

"The horse is often accorded man's most faithful servant, and because of this, no doubt, his intelligence is often greatly overestimated. The horse cannot reason." Many drivers forget this in training their horses.

Mr. Harper gives four objects of horse training, viz.: To render him quiet both in and out of the stable; to teach him to obey the signals and orders of his master with promptness and precision; to create and establish in the animal the habit of applying his powers to the best advantage to correct any fault, whim or vice that detracts from his usefulness; to be as possible to subordinate the good, in order points in the book here. The book comprises nearly 100 pages, is handsomely bound, illustrated, and clearly written, and would form a valuable addition to the bookshelves of students of agriculture. It is published by The Macmillan Company of Toronto, Ltd., Toronto, and may be had through this office at \$1.75, postpaid.



The Feed That Makes The Cream

Livingston's Oil Cake is the cheapest feed for cows—cheaper than corn, shorts or even hay. Because it actually increases the richness of cream—and also increases the amount of butter that you get out of the milk.

Test your cows before and after feeding Livingston's Oil Cake for a month—and your "butter money" will show its economy.

Fine Ground, Coarse Ground, Pea Size and Notted Grindings. If your dealer cannot supply you write us for prices and samples.

DOMINION LINSEED OIL CO'Y, LIMITED
Manufacturers J. & J. Livingston
Brand Oil Cake
BADEN, ONTARIO

DAVIES'

Slaughter-house by-products, **Bone, Blood, Tankage**, etc., are thoroughly sterilized, practically deodorized, then utilized in the preparation of

HIGH GRADE ANIMAL FERTILIZERS

Brands specially suited for **Potatoes, Tobacco, Corn, Beans, Orchards, Grains, Vegetables, Greenhouse Crops, Grass Lands, Lawns, etc.**, are being manufactured at our Toronto factory. There is no doubt as to their superiority over mixtures of purely chemical compositions. Professors Harcourt, Blair, Cumming and Gamble highly commend them in their opinions expressed in our booklet. Samples of the raw materials may be seen on the **FARMING SPECIAL** now being run by the Ontario Government. (We will supply you with these raw materials if you prefer to do your own mixing—the economy is doubtful, however.) **We pay freight on all orders of 200 lbs. or more, in the Provinces of Ontario and Quebec—all other quotations f.o.b. factory.** Payments in the fall. Don't be satisfied with any brand your dealer happens to handle—demand Davies', and if he isn't "up-to-date in the Fertilizer line," order direct from us. It will cost you no more. Don't waste your money paying 10% duty on imported brands—we give you that in extra plant food. Increase your yields, profits and happiness for years to come by writing us for our assistance.

The WM. DAVIES COMPANY, Ltd., 521 Front St. East, Toronto, Canada
ESTABLISHED 1854

ORCHARD GROVE HEREFORDS

Champions of 1911 shows, winning both senior and junior herds at Winnipeg, Brandon, Regina, Edmonton, Toronto and London; also fifteen championships. Young stock, both sexes, for sale at reasonable prices.

L. O. CLIFFORD Oshawa, Ont.

Suffolk Down Sheep—Shearing rams and ewes; also lambs. **James Bowman**
Elm Park
Aberdeen-Angus Cattle—Extra good young bulls, the best in Canada. **GUELPH, ONTARIO**

Springhurst Shorthorns—I can now supply a number of one and two-year-old heifers bred the same as my many winners were and equally as good, show propositions among them; also a couple of right nice young bulls.

HARRY SMITH, Hay P.O., Ont. Exeter Sta. L-D. 'Phone.

Shorthorns and Clydesdales—We are offering 10 choice young bulls, serviceable age, or exchange. In Clydes our present offering are two stallions rising 3 and 4 years old; big quality horses, from imported sires and dams; also cows and heifers, mares and fillies. Write us, or come and see them. **A. B. & T. W. DOUGLAS, Strathroy, Ont.** Farm one mile north of town.

Scotch Shorthorn Females for Sale I am offering at very reasonable prices, females from one year to five years of age. The youngsters are by my grand old stock bull, **Scottish Hero (imp.) =55042= (90065)**, and the older ones have calves at foot by him, or are well gone in calf to him. Their breeding is unexcelled, and there are show animals amongst them. **A. EDWARD MEYER, Box 378, GUELPH, ONT.**

Pleasant Valley Farms Shorthorns For Sale: Scottish Signet, best son of imp. of the best Scotch breeding, at prices to suit everyone. Write us for exactly what you want, or visit us. Farm 11 miles east of Guelph, C. P. R. Half mile from station. **Geo. Amos & Sons, Moffat, Ont.**

SALEM SHORTHORNS Headed by (Imp.) Gainford Marquis, undefeated in Britain as a calf and yearling, and winner of junior championship honors at Toronto, 1911. Have on hand two yearlings and a number of bulls under a year for sale at reasonable prices.

J. A. WATT, Salem, Ont. Elora Sta, G. T. R. and C. P. R.

Scotch Shorthorns FOR SALE—One of our imported herd bulls and eight heavy-boned, deep-bodied, low-down bull calves, 12 to 16 months old. Also twenty-five heifers and young cows bred to imported bulls.

Farm 1/4 mile from Burlington, Ont. **MITCHELL BROS., Burlington, Ont.**

BLAIRGOWRIE STILL TO THE FRONT

SHORTHORNS 2 red bulls, 12 and 15 months; 1 red bull, 9 months; 2 roan bulls, 12 and 14 months. **CLYDESDALES**—Our mare in foal, one filly rising three, two filly foals in expectation of birth.

John Miller & Son, L-D. 'Phone. JOHN MILLER, JR., Ashburn, P.O.

MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.

Trusses Like These Are A Crime



If you want RELIEF from all pain—a CURE instead of constant danger—strength instead of weakness—if you want to be rid of the old, unsatisfactory and uncomfortable Leg-strap appliances and Spring Trusses—send to-day for our FREE Book of Advice. It took us 40 years to learn the facts it contains, and tells you just how the Cluthé Self-Massaging Pad STRENGTHENS the weakened muscles, HOLDS with ease and CURES Rupture. Waterproof, durable, hygienic; easy under Guarantee Trial. Remember—NO body-spring, NO plaster, NO leg-strap. Write NOW for this free Rupture Book and 4000 Public Endorsements. Just address—

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BIBBY'S CREAM EQUIVALENT

CALF MEAL

No other food except fresh milk itself contains so much nutriment for calves and young pigs as this meal. The Government test shows a much higher percentage of real (fat) value than others. Not a "drug," but an extremely wholesome food. Made in England by an honorable firm—the largest manufacturers of Oil Meal in the world.

50-lb. bags, \$2.25, at all dealers.

CANADIAN REPRESENTATIVES: WM. RENNIE CO., Limited, TORONTO

REASONABLE RESTRAINT.

Jones—"Is it necessary for you to send your daughter to Europe to complete her musical education?"
Brown—"Yes—I can't stand the infernal racket here any longer."

IF THE LIVER IS LAZY

STIR IT UP BY THE USE OF MILBURN'S LAXA-LIVER PILLS.

They stimulate the sluggish liver, clean the coated tongue, sweeten the breath, clean away all waste and poisonous matter from the system, and prevent as well as cure all sickness arising from a disordered condition of the stomach, liver and bowels.

Mrs. Matthew Sullivan, Pine Ridge, N.B., writes:—"I had been troubled with liver complaint for a long time. I tried most everything I could think of, but none of them seemed to do me any good, but when I at last tried Milburn's Laxa-Liver Pills I soon began to get well again; thanks to The T. Milburn Co. I would not be without them if they cost twice as much."

Milburn's Laxa-Liver Pills are 25 cents per vial, or 5 vials for \$1.00, for sale at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

GOSSIP.

HOLSTEINS ENTERED IN CANADIAN RECORD OF PERFORMANCE SINCE LAST REPORT.

Canaan Moseeta (8527), at 2 years; 9,701 lbs. milk, 336.93 lbs. fat; average per cent. of fat, 3.47; number of days in milk, 366. Owned by F. E. Came.

National Queen De Kol (10134), in two-year-old class; 14,735.5 lbs. milk, 506.16 lbs. fat; average per cent. of fat, 3.43; number of days in milk, 316. Owned by E. Laidlaw & Sons.

Lady Calamity Pauline (11248), in two-year-old class; 10,369.81 lbs. milk; 332.73 lbs. fat; average per cent. of fat, 3.20; number of days in milk, 365. Owned by Cecil W. Hagar.

Doris Lee Pietertje (9011), in two-year-old class; 11,324.75 lbs. milk; 404.96 lbs. fat; average per cent. of fat, 3.57; number of days in milk, 327. Owned by S. J. Foster.

Jean F. De Kol (5480), in mature class; 15,654.6 lbs. milk, 523.64 lbs. fat; average per cent. of fat, 3.34; number of days in milk, 362. Owned by S. G. Carlyle.

Aaggie Emily of Riverside (10253), two-year-old class; 14,376.5 lbs. milk, 455.27 lbs. fat; average per cent. of fat, 3.16; number of days in milk, 365. Owned by L. W. Hutchinson.

Kate Castleton (4512), in mature class; 18,713.5 lbs. milk, 580.58 lbs. fat; average per cent. of fat, 3.10; number of days in milk, 365. Owned by F. S. Passmore.

Buffalo Girl Butter Maid (11851), at two years old; 13,114.4 lbs. milk, 443.34 lbs. fat; average per cent. of fat, 3.38; number of days in milk, 328. Owned by Tig Wood.

Nellie's Pet (7489), in four-year-old class; 12,677 lbs. milk; 421.03 lbs. fat; average per cent. of fat, 3.32; number of days in milk, 289. Owned by Tig Wood.

Bessie De Kol of Niagara (9354), in two-year-old class; 13,439.18 lbs. milk, 462.86 lbs. fat; average per cent. of fat, 3.44; number of days in milk, 365. Owned by John C. Brown.

Niagara Maid (9353), in three-year-old class; 13,650 lbs. milk, 511.31 lbs. fat; average per cent. of fat, 3.74; number of days in milk, 365. Owned by John C. Brown.

May Echo (3372), in mature class; 23,707 lbs. milk, 833.64 lbs. fat; average per cent. of fat, 3.51; number of days in milk, 365. Owned by F. R. Mallory.

Johanna Mercedes of Riverside (10858), in two-year-old class; 11,520.7 lbs. milk; 377.56 lbs. fat; average per cent. of fat, 3.278; number of days in milk, 336. Owned by C. Duff Nelles.

Belle Mercedes Posch (12117), in two-year-old class; 9,265.75 lbs. milk, 295.74 lbs. fat; average per cent. of fat, 3.19; number of days in milk, 365. Owned by Elias Ruby.

Aaggie De Kol (7928), in four-year-old class; 13,119.37 lbs. milk, 513.54 lbs. fat; average per cent. of fat, 3.91; number of days in milk, 338. Owned by J. W. McCormick.

Korndyke Pauline De Kol (9320), in three-year-old class; 9,501.37 lbs. milk, 357.46 lbs. fat; average per cent. of fat, 3.7; number of days in milk, 347. Owned by J. W. McCormick.

Pauline Aaggie De Kol 2nd (5889), in mature class; 11,647.43 lbs. milk, 436.80 lbs. fat; average per cent. of fat, 3.7; number of days in milk, 357. Owned by J. W. McCormick.

Utica Teake De Kol (9009), in two-year-old class; 10,440.5 lbs. milk, 363.71 lbs. fat; average per cent. of fat, 3.48; number of days in milk, 365. Owned by A. J. Tamblin.

Princess Concordia (11415), in two-year-old class; 11,101 lbs. milk, 375.96 lbs. fat; average per cent. of fat, 3.29; number of days in milk, 365. Owned by A. J. Tamblin.

Alice Neilsen (2223), in mature class; 10,731.18 lbs. milk, 361.17 lbs. fat; average per cent. of fat, 3.37; number of days in milk, 300. Owned by S. Lemon.

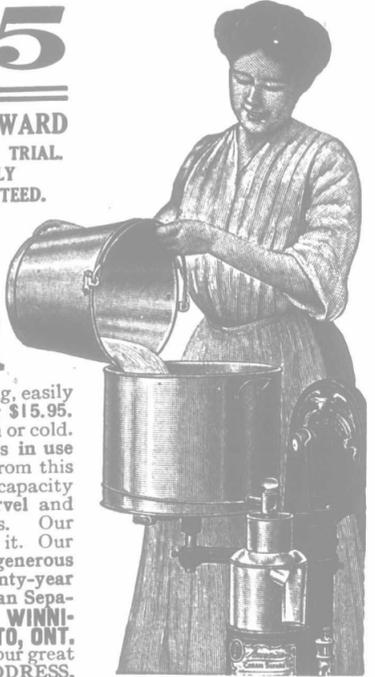
Boutsje Posch De Boer (8644), in two-year-old class; 10,299 lbs. milk, 391.4 lbs. fat; average per cent. of fat, 3.6; number of days in milk, 365. Owned by S. Lemon.

Agnes Evered (11248), in two-year-old class; 9,124 lbs. milk, 321.67 lbs. fat; average per cent. of fat, 3.52; number of days in milk, 365. Owned by S. Lemon.

\$15.95 AND UPWARD SENT ON TRIAL FULLY GUARANTEED.

AMERICAN SEPARATOR

A brand new, well made, easily cleaned, perfect skimming separator for \$15.95. Skims one quart of milk a minute, warm or cold. Makes thick or thin cream. Thousands in use giving splendid satisfaction. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel and embodies all our latest improvements. Our richly illustrated catalog tells all about it. Our wonderfully low prices on all sizes and generous terms of trial will astonish you. Our twenty-year guarantee protects you on every American Separator. Shipments made promptly from WINNIPEG, MAN., ST. JOHN, N. B., and TORONTO, ONT. Whether your dairy is large or small get our great offer and handsome free catalog. ADDRESS,



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Standard Wire Fence



In the "Standard" Wire Fence, you get the durability that comes with strength. Made of all No. 9 Hard Steel Wire, well galvanized—which means no rust and long wear.

"The Tie That Binds" hooks on the running wire and locks smooth on both sides. Then—there's the Standard Steel Fence Posts that hold the wires without staples—won't rot and are very durable.

We make a specialty of Galvanized Gates, too. Our new books are chock full of fence facts. Write for free copies and sample lock.

The Standard Wire Fence Co. of Woodstock, Limited
Woodstock, Ont. Brandon, Man.



Brampton Jerseys

Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 6 now being bred. Brampton Stockwell the sire. A few good cows and some calves for sale. Production and quality.

B. H. BULL. & SON, BRAMPTON ONT.

Balaphorene A. J. Jerseys—Foundation stock, St. Lambert, Coomassie. Combination; stock from a grandson of Bim of Dentonia; also a grandson of the great Blue Blood of Dentonia, for sale. W. Wyandotte eggs, \$1 per 13. Joseph Seabrook, Havelock, Peterboro Co., Ont.

High Grove Stock Farm
No better Jersey blood in Canada. Stock all ages and both sexes for sale.
Arthur H. Tufts, P. O. Box 111, Tweed, Ont.

Don Jersey Herd

Offers young bulls and heifers for sale; heifers bred to Eminent Royal Fern.

D. Duncan, Don, Ont., Duncan Sta., C.N.R.

Phone Long-distance Agincourt.

Calves Raise them without milk. Booklet free. CLOUGH & CO., Lennoxville, Que.

SPRINGBANK AYRSHIRES The world's leading herd of Record of-Performance Ayrshires. Contains more champion milk- and butter-producers than any other herd. Also big cattle, big udders and big teats a specialty. A few bull calves, true to color and type, from R. O. P. dams, for sale at reasonable prices. A. S. TURNER & SON, Ryckman's Corners, Ont. Three miles south of Hamilton. Visitors welcome. Trains met by appointment.

SPRINGBURN AYRSHIRES Imp. and Canadian bred. Oldest established herd in Canada. We are offering a limited number of young bulls rising 1 year of age, sired by the Auchenbrain in spring calving cows. Gift imp. Females of all ages. A specialty L.-D. phone. Carr's Crossing station on G. T. R. McMILLAN & LEGGAT, TROUT RIVER, QUE.

STONEHOUSE AYRSHIRES Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers. HECTOR GORDON, Howick, Quebec.

Ayrshires of production, type and quality. I can supply Ayrshires that will please the most exacting critic. Young bulls or females of any age, the kind that swell the bank account. R. M. Howden, St. Louis Sta., Que. L.-D. phone.

Choice Ayrshires 10 choice cows and heifers for quick sale. Good teats, heavy producers, high testers. Prices low considering quality. WILLIAM THORN, Trout Run Stock Farm, Lynedoch, Ont. Phone in house.

Ayrshires and Yorkshires—We have still some good young bulls. Now is the time to buy for the coming season, before the best go. We have females any age, and can fill orders for carlots of Ayrshires. Pigs of either sex on hand. ALEX. HUME & CO., Menie, Ont.

City View Ayrshires—One very choice bull, 29 months old; four 1911 bulls, all grand individuals, and from R. O. P. ancestors; could spare two or three more cows. Write or phone. JAS. BEGG, R. R. No. 1, St. Thomas.

HILLCREST AYRSHIRES—Bred for production and large teats. Record of Performance work a specialty. Fifty head to select from. Prices right. FRANK HARRIS, Mount Elgin, Ont.

Burnside Ayrshires Champions in the show ring and dairy tests. Animals all ages and both sexes for sale. Long-distance phone in house. R. R. NESS, Howick, Quebec

ber of days in milk, 344. Owned by S. Lemon.

Tillie Acema (6775), in four-year-old class; 12,666.6 lbs. milk, 42.93 lbs. fat; average per cent. of fat, 3.338; number of days in milk, 365. Owned by H. J. Allison.

Quora 4th (6372), in four-year-old class; 14,850 lbs. milk, 447.87 lbs. fat; average per cent. of fat, 3.01; number of days in milk, 328. Owned by H. J. Allison.

Korndyke Pauline De Kol 2nd (11573), in two-year-old class; 8,975 lbs. milk, 361.59 lbs. fat; average per cent. of fat, 4.25; number of days in milk, 333. Owned by J. W. McCormick.

Korndyke De Kol Queen (14134), in two-year-old class; 7,548.75 lbs. milk, 290.35 lbs. fat; average per cent. of fat, 3.84; number of days in milk, 307. Owned by J. W. McCormick.—G. W. Clemons, Secretary.

QUESTIONS AND ANSWERS. Miscellaneous.

WHITEWASH.

Could you give a recipe for whitewashing the inside of the stable which will not rub off?

J. M. H.

Ans.—Take one-half bushel of lime, slake with boiling water, make into a milk and strain through a fine sieve. Add to this a peck of salt dissolved in warm water, three pounds of rice boiled to a paste and stirred in while hot, half a pound of Spanish whiting and one pound of glue previously dissolved in a glue-pot over slow fire. To this mixture add five gallons of hot water, stir it in well, cover, and let stand for a few days. This mixture is best applied hot, and a pint will cover a square yard. Poultry houses and stables should receive a yearly application, as it is a good disinfectant.

ALFALFA ON OLD SOD.

I have a piece of steep clay hill which I would like to get in alfalfa. It is in old sod which is in fair condition. I am giving it a light coat of manure. I wish to get it into alfalfa as soon as I can. Which would be the best, to seed it early and take a crop of oat hay, and then plow and work it up and sow the alfalfa alone, or work it up well and sow it with a light nurse crop with the alfalfa?

H. A.

Ans.—You must make every effort to get the grass out of this land before seeding to alfalfa else the latter will soon be choked. We should advise following this field very thoroughly until some favorable time about the middle of July, then sowing the alfalfa alone.

UNFRUITFUL TREES. SHOE CALK.

1. Could you please inform me as to what my cherry and plum trees require? Since we came to this place, which I bought two years ago, they have borne scarcely any fruit. In fact, some trees none at all, especially the plum trees. The soil is light sandy loam, well cultivated for gardening purposes, and the trees look to be all right.

C. K.

2. Kindly give me a prescription for a shoe calk on a horse.

C. K.

Ans.—1. It may be the fault of the variety, and the trees may need fertilizing.

2. Keep the wound clean, and dress it three times daily with carbolic acid 1 part, water 25 parts. If proud flesh appears, apply butter of antimony with a feather once daily until it disappears.

AVIAN TUBERCULOSIS.

We have some hens that are sick. We killed some, and their livers were dark, with white spots. What is the disease they have, and what is a good treatment?

C. K.

Ans.—Raised white spots on the liver of chickens is a post-mortem symptom of tuberculosis. This is undoubtedly the disease from which your birds are suffering. Kill and burn all those showing well-marked clinical symptoms. Remove all healthy birds to new quarters, and thoroughly clean and disinfect the old pen. Give the fowl plenty of out-door run, good feed, a dry, well-ventilated, light pen, and good care. If a large proportion of the flock is affected, it might be better to clean them all out and start with a new flock in the renovated pen, or in a new pen.

Save Time, Money and Bother By Buying All Your Dairy Supplies from DRUMMOND

Write right away for our catalogue—do your buying by letter from the largest dairy supply house in Canada. Any of the following shipped promptly on receipt of price.

BEAVER Cattle Instruments



are the results of nearly 100 years of practical experience. They are made by the largest concern of its kind in the world. Beaver Instruments and Remedies are used and endorsed by the leading livestock raisers and the most prominent milk producers of this country.

Beaver Cattle Case No. 2

containing \$3.00 milk fever outfit and eight other cattle instruments needed by every dairyman, complete in case \$10.00; regular value \$15. Sent complete with full directions for use on receipt of \$10.00.

- Cattle trocars for bloot \$1.50
Milk fever outfit, complete 3.00
Hard milker outfit, complete 3.00
Teat expander .50
Plain milking tubes, 3 inches .30
Self-retaining milking tubes, 3 inches .40

Beaver Garget Outfit

the only proper and successful treatment of Garget. Complete outfit, including Garget Remedy (30 treatments), with full "Easy to Use" directions, sent on receipt of \$4.00.



Read Our Guarantee

We guarantee all our goods to be and do as we say. If you have trouble in getting results or if there is any defect in what you buy, let us know and we will adjust it satisfactorily.

Write Now for FREE Catalogue

The Dairy Car on the Ontario Government Demonstration Train was Equipped Entirely with "Drummond" Supplies. 103

Straight Spring Scale

Neat, convenient, thoroughly reliable and durable. To weigh 25 lbs. or less .38 To weigh 50 lbs. or less .59

Decimal Automatic Scale

is made especially for weighing milk in the pail. A loose indicator on the dial is set back by a thumb-screw when the pail is on the hook. Then when the pail is weighed this indicator gives the exact net weight of the milk. Can also be used for weighing anything by tenths.

- 30 lbs. by oz. \$3.50
30 lbs. by tenths 4.00
60 lbs. by oz. 4.50
60 lbs. by tenths 5.00

Beaver Milk and Cream Shipping Cans

- Heavy Railroad Shipping Milk Can, Umbrella Cover, drop handles. No. 297-8, 8 gallons, 27 1/2 lbs. \$3.50
No. 297-10, 10 gallons, 31 lbs. 4.50
No. 298, 8 gallons, 22 1/2 lbs. 3.00
Cream Cans, Umbrella Top, a good strong can for shipping cream. No. 291-4, 4 gallons. Each 2.50
No. 291-5, 5 gallons. Each 2.75
No. 291-6, 6 gallons. Each 2.90
Can Seals. Per 1,000 1.50



W. A. DRUMMOND & CO.

217 King Street E. Toronto

Fairview Farms Herd

Is where you can see a son of Pontiac Korndyke, admitted by all breeders to be the greatest sire of the breed, through his sons. Every son of Pontiac Korndyke that has daughters old enough to milk is a sire of good ones. We can offer you several young ones that will give you great daughters.

E. H. DOLLAR, HUEVELTON, N. Y.

LAKEVIEW HOLSTEINS!

Young bull, sired by Count Hengerveld Fayne De Kol, and out of Ross Rattler, 24.19 pounds butter in seven days. This calf was born 25th March, 1911, is well marked, about one-half black. Another, by the same sire, calved March 24th, 1911, out of Inka Sylvia 4th De Kol, 21 pounds butter in seven days, and 88 pounds in 30 days. Send for prices on these and several others equally good.

E. F. OSLER, BRONTE, ONTARIO

SUMMER HILL HOLSTEIN CATTLE and YORKSHIRE HOGS

Our senior herd bull, Sir Admiral Ormsby, is the sire of the world's record 2-year-old for yearly butter production. Also sire of the three highest record four-year-olds in Canada. The dam of our junior herd bull made 34 60 lbs. butter in 7 days, and gave 111 lbs. milk per day. Come and make your selections from over 70 head.

In Improved English Yorkshires we have won 95 per cent. of all first prizes at Toronto Exhibition for ten years. We are still breeding them bigger and better than ever.

Buy Summer Hill Yorkshires, the big, quick-maturing kind, and double your profits.

D. C. FLATT & SON, R. F. D. No 2 Hamilton, Ontario, 2471, Hamilton.

Centre and Hillview Holsteins—We are offering young bulls from Sir Ladie Cornucopia Clothilde, the average of his dam sire dam and grand dams is 662.8 lbs. milk and 30.58 butter, 7 days, and 2,750.80 milk and 114.6 butter in 30 days; also Brookbank Butter Baron, who is a proven sire. He is sire of champion 3-year-old 30-day, 2-year-old 7-day and 2-year-old 30-day. Long-distance phone. P. D. EDE Oxford Centre P.O. Woodstock Sta.

Evergreen Stock Farm—High class Registered Holsteins for Sale. A splendid lot of heifers rising one year old, and heifer calves, good enough for foundation stock. Come and see them, or write for what you want. Satisfaction guaranteed.

A. E. HULET, Norwich, Ontario

Maple Hill Holstein-Friesians—Special offering: Bulls from one to fifteen months old. The growing kind that will give good service. One from a son of Evergreen March, and all from Record of Merit dams. Write for particulars.

G. W. CLEMONS, St. George, Ont.

IMPERIAL HOLSTEINS—I can supply bulls ready for service and younger ones, also heifers out of R.O.M. cows, and sired by Tidy Abbekerk Mercena, whose seven nearest female relatives have records averaging 27.19 pounds. W. H. SIMMONS, New Durham P.O., Oxford Co.

Woodbine Holsteins—Herd headed by King Segis Pontiac Lad, whose sire's dam is the champion cow of the world. Sire's sire is the only bull that has sired five four-year-olds that average 30 lbs. each. Dam's sire is the bull that has sired two 30-lb. three-year-olds. His two greatest grand sires are the only bulls in the world that have sired two 37-lb. cows. Bulls and bull calves for sale.

A. KENNEDY, Ayr, Ontario.

HOMESTEAD HOLSTEINS

Headed by Canary Rachel Clothilde, whose dam, sire's dam and two grand-dams average over 27 lbs. butter in 7 days. Yearling bulls and bull calves, also one bull rising two for sale.

G. & F. GRIFFIN, Box 43, Burgessville, Ont.

Holstein Bulls for sale—Springbank farm is offering two choicely bred Holstein bulls for sale at reasonable prices. For particulars write to: Wm. Barnett & Sons, Living Springs, P. O., Ont. Ferguson station, C. P. R. and G. T. R.

The Maples Record of Holstein Herd

A few choice bulls ready for service, sired by King Poach De Kol; also a few young bull calves, sired by Prince Aggie Mechtildie, whose dam won first at Toronto, 1911, and sire's dam first in dairy test at Guelph, 1908 and 1909; his three nearest dams average over 25 lbs. butter in 7 days.

WALBURN RIVERS, FOLDEN'S, ONTARIO

Evergreen Stock Farm offers a choice lot of bulls ready for service, from high-testing, deep-milking Record of Merit ancestors. Also a few females for sale. Herd headed by Francy Sir Admiral; dam's record 26.71, sire Sir Admiral Ormsby. Write for prices. F. E. PETTIT, Burgessville, Ont.

Purebred Registered Holstein Cattle. The most profitable dairy breed, greatest in size, milk, butter-fat and in vitality. Send for FREE illustrated descriptive booklets. HOLSTEIN-FRIESIAN ASSO. F. L. Houghton, Sec'y, Box 127, Brattleboro, Vt.

Holsteins of Quality. Write us to-day for our proposition, telling you how any good dairyman may own a registered Holstein bull from a Record-of-Performance cow without investing a cent for him. Monroe & Lawless, "Elmdale Farm," Thorold, Ont.

Welcome Stock Farm Holsteins. Out of "Netherlands Pride" (gave 55 lbs. milk as a three-year-old), by "Wi nier Court Pasma," a nice straight, well grown, bull calf, quality all over, considerably more white than black, and nicely marked. Should be ready for light service soon. First check of \$45 takes him. C. BOLLERT, R.R. No. 6, Tavistock, Ont. J. LEUSZLER, R.R. No. 1, Cassel, Ont.

Maple Soil Stock Farm. High-Testing Holsteins—I have at present some bull calves, with dam and sire; dam averaging over 25 lbs of butter in 7 days, testing better than 4 per cent. Phone connected.

H. C. Holtby, Belmont P. O., Ont. Belmont Stn., C.P.R., or Glenworth Stn., G.T.R. Elmwood Holsteins. Chocely bred, registered Cows, Heifers, Calves, Spring Crop 1912. March, April and May delivery; Sired by Imported Y Rema Sir Poach and Elmwood Sarcastic, Grandson of Sarcastic Lad. Best breeding, right prices. Express pre-aid. Safe delivery guaranteed. E. D. GEORGE & SONS, Putman, Ont.

Ridgedale Farm Holsteins—We have four bull calves left for sale, from high-testing dams; sired by Imperial Pauline De Kol, whose 15 nearest dams average 26.20 lbs. butter in 7 days. Shipping stations: Port Perry, G. T. R., and Myrtle, C. P. R., Ontario County. R. W. WALKER Utica, Ont.

Maple Line Holsteins and Yorkshires—Herd headed by Homestead Colantha Sir Abbekerk 2nd, whose dam, sire's dam, g. dam, average 29.61 lbs. butter 7 days. For sale at bargain prices, choice bull calves from R.O.P. cows. W. A. BRYANT, Middlesex Co., Cairngorm, Ont.

Maple Grove Holsteins—Herd headed by Hengerveld, the greatest 30 lbs. back butter bred bull of the breed in this country. For stock of this kind, address: H. BOLLERT, Tavistock, R. R. No. 5, Ont. Glenwood Stock Farm 5 BULL CALVES fit for service, out of big milking strains, at low figure for quick sale. THOS. B. CARLAW & SON, WARKWORTH, ONT. Campbellford Sta.

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CURES ALL SKIN DISEASES

Any one troubled with any itching, burning, irritating skin disease can place full reliance on Burdock Blood Bitters to effect a cure, no matter what other remedies have failed.

It always builds up the health and strength on the foundation of pure, rich blood, and in consequence the cures it makes are of a permanent and lasting nature.

Mrs. Richard Coutine, White Head, Que., writes:—"I have been bothered with salt rheum on my hands for two years, and it itched so I did not know what to do. I tried three doctors and even went to Montreal to the hospital without getting any relief. I was advised to try Burdock Blood Bitters, so I got three bottles, and before I had the second used I found a big change; now to-day I am cured."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Southdown Sheep

Orders taken now for this season's delivery. A few choice lambs and shearlings on hand. Every animal shipped is guaranteed.

Angus Cattle

Write, or come and see my young bulls and heifers. They are going at farmers' prices.

ROBT. McEWEN, Brion, Ont.

A LITTLE DUBIOUS.

There was a new baby up at Johnny Bilkins', and everybody in the neighborhood seemed much interested in the newcomer. On his way to school in the morning Johnny was frequently stopped by passers-by, with inquiries as to the state of things at home. The last individual of record to inquire was the clergyman, who reports the following:

"Ah, Johnny, my lad," said the reverend gentleman, "I understand that you have a bouncing boy up at your house." "I dun'no," said Johnny. "I ain't never seen him bounce—I don't think they've thrown him down hard enough to find out yet."

The clergyman smiled broadly, and went on to the next question.

"Well, I hope he is a good baby," he suggested.

"Oh, I guess he ith," said Johnny, dubiously. "He don't smoke or drink any, but sometimes he seems to me to swear some."

RESULTS HE GOT WERE PERFECT

Sam Mallette's Bright's Disease Cured by Dodd's Kidney Pills.

He Suffered Tortures and the Doctor Failed to Give Relief, but Three Boxes Cured Him.

Rutter Station, Ont., April 8.—(Special.)—"I got perfect results from Dodd's Kidney Pills." So says Mr. Sam Mallette, of this place. And he has a reason.

"My sickness started from a strain," Mr. Mallette continues, "and for a year I did not know a well day. My sleep was broken and unrefreshing, my appetite was fitful, and my limbs would swell.

"Then rheumatism set in, and neuralgia, backache, headache, and other ailments added to my tortures. I was attended by a doctor, but he was of no lasting good.

"Finally, when I had no more hope in its grasp, I decided to try Dodd's Kidney Pills, and after three boxes, I was as well as ever. I have now in my life. I have had no more of the kidney disease to take Dodd's Kidney Pills and be cured."

Mr. Mallette's case shows what neglected kidney disease will result in, and what splendid results Dodd's Kidney Pills give.

QUESTIONS AND ANSWERS. Miscellaneous.

PIGEONS.

Please describe habits, and method of training homer pigeons. Also state value and market for them. W. R.

Ans.—We are not familiar with the training of these birds. Write some pigeon fancier for the information.

BLACKBERRIES.

By what name is the blackberry known today, which I read of in the book published by Orange Judd Co., "Ten Acres Enough." It is named in this book as the Lawton Blackberry. Are they not planted now so much? If so, where can the roots be had? G. W. O.

Ans.—The variety is still known by the name you have quoted. In the bulletin, "Fruits of Ontario," obtained free from the Department of Agriculture, Toronto, you will find this reference: "A variety that has done much to popularize the blackberry as a market fruit, but now supplanted by other and better kinds," such as Agawan and Kittatinny. Correspond with nurserymen advertising in these columns.

DISHONORED NOTE.

Over a year ago I held an auction sale of live stock and implements. I gave ten months' credit to parties providing approved joint notes. One man gave his note for \$340, and it has not been paid yet. I have not taken any action to collect it.

1. What action should I take?
2. Can I collect interest on the overdue note? The maker of the note is in fairly good circumstances financially. Ontario.

Ans.—1. You should first write the man requesting payment, and warning him that unless you receive same by a date to be stated in the letter, you will place the note in suit. In the event of this failing to bring the money, you should hand the note to a lawyer with instructions to sue upon it.

2. Yes.

ROADSIDE TREES.

A rural telephone company has poles erected on highway, and wires strung on them by permission of Township Council. Some ratepayers have trees planted along highway on other side of fence. The limbs are extending onto highway and interfering with wires. These ratepayers have forbidden the telephone company to interfere with their trees in any way. The wires are seven or eight feet from the line fence.

1. Has the company legal power to trim these trees?

2. If not, has the Township Council power to grant this privilege?

3. Some parties claim the trees can be trimmed to the line fence. Are they right in their contention?

Forester's Falls. W. R. KIRK.

Ans.—1 and 2. The company may trim, reasonably.

3. Yes.

WIREWORMS.

Can you advise me regarding destruction of wireworms? I have been told by two experienced farmers that one, or at most, two crops of buckwheat, will kill them. Any information regarding this will be thankfully received.

J. H. F.

Ans.—Wireworms are the larvae of a large family of beetles known as click beetles. It takes from two to four years, according to species, for the larvae to develop into the mature form. The best known remedy, or, rather, prevention, is a short rotation of crops in which the land is not left down to sod more than two years. Fall plowing is also recommended, with frequent cultivation.

We have not heard of the insect attacking buckwheat and there is a possibility that there were no other roots in the soil to attract the larvae.

It is also possible that the wireworms would also destroy other crops, but I have not heard of this.

It is also possible that the wireworms would also destroy other crops, but I have not heard of this.

YOU CAN TRUST

Ewing's Reliable Seeds to give you the best crops which your soil, with your tilling, can produce.

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faithfully reproduce the selected grains, vegetables and flowers from which they were grown. They are clean, vigorous and healthy—sure to grow big crops under all reasonable conditions. By doing this for over forty years they have earned the name "Reliable".

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the coming season, or any other breed. Breeders wishing to get a few head of their favorite breed should write at once to us. One of the firm selects in person, and will select yours if you write us stating just what you want. We are in the market for Oxford rams, and will buy from one up to any number. State price, age and it recorded or eligible.

PETER ARKELL & SONS, TEESWATER, ONT.

Imported Sheep

I am leaving for England about the middle of April to personally select my sheep. Anyone wanting imported sheep will do well to write me.

Will import any breed. On account of my connections in England, I can import cheaper than any other importer. Write me at once for all information.

C. HODGSON,

Box 92, Brantford, Ont.

Hilton Stock Farm Holsteins and Tamworths.

Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes; pairs not akin. R. O. MORROW & SON, Hilton, Ont. Brighton Tel. & Sta.

MENTION "FARMER'S ADVOCATE."

ELMHURST LARGE ENGLISH BERKSHIRES

Present offering: Select sows bred for spring farrow. Choice boars ready for service and younger stock, the get of Duke of Somerset imp., and out of imported dams. Satisfaction and safe delivery guaranteed. H. M. VANDERLIP, Breeder and Importer CAINSVILLE P. O. Langford station, Brantford and Hamilton Radial.

Newcastle Tamworths and Clydesdales

Present offering: 15 boars, from 2 mos. to 1 year. Sows same age, some bred, others ready to breed. Several yearling sows that have raised one litter each. All by imp. boar, dam by Colwill's Choice, Canada's champion boar, 1901, 2, 3 and 5. Also one or two choice Clydesdale fillies for sale. L.-D. Phone. A. A. COLWILL, NEWCASTLE, ONTARIO

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Maple Villa Yorkshires and Oxford Downs.

We offer 30 splendid service boars; 50 strictly choice sows, bred and ready to breed; also ewes of quality bred to imp. rams.

J. A. CERSWELL, Bond Head, Ont.

Hampshire Hogs

We have the greatest prize-winning herd of Hampshire Swine in Canada, bred from the best strains of the breed; stock of both sexes not related. Hastings Bros., Cross III P. O., Ont., Linwood Sta., C.P.R., Newton Sta., G.T.R. Telephone in residence.

Morrison Tamworths

Bred from the prize winning herds of England; choice stock for sale; also Shortorns of the deep milking strain. CHAS. CURRIE, Morrison, Ontario

Woodburn Berkshires

We are offering for sale 100 head of young Berkshires of both sexes and any size required. We can supply pairs or trios not akin; our Berks are not d. for strength of bone, length, depth and quality, conforming to bacon type. Sow and breeding stock a specialty.

E. BRIEN & SON, Ridgetown, Ont.

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Ontario's banner herd. Prizewinners galore. For sale are: Young sows bred and others ready to breed, and younger ones. A number of young boars coming on. JOHN S. COWAN, Donegal, Ont.

SWINE OF ALL BREEDS FOR SALE.

Yorkshires, Tamworths, Berkshires, Hampshires, Chester Whites, Poland-Chinas, and Duroc-Jerseys. I have constantly on hand both sexes of all ages. Show stock a specialty. John Harvey, Frelightsburg, Que.

Hampshire Pigs

Get acquainted with the best bacon hog in existence. Both sexes for sale from imported stock. Write for prices. Long-distance phone. J. H. RUTHERFORD, Box 62, Caledon East, Ont.

For Sale—Ohio Improved Chester Hogs.

Sired by first-prize hog at Toronto and London. Also reg'd Jersey Bulls, from 8 to 10 months, from high-testing stock. Write: CHAS. E. ROGERS, Ingersoll Ont.

SUNNYSIDE CHESTER WHITE HOGS—I am

now offering some very choice young things of both sexes, of breeding age. A few Shropshire sheep of both sexes. Also Mammoth Bronze turkeys. W. E. WRIGHT, Gleanworth P. O., Ont.

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Bred from prizewinning stock of England and Canada. Have a choice lot of young pigs of guaranteed satisfaction.

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Fertilizers of Guaranteed Analysis

Fertilizers pay—and pay enormously—provided you use the right kind—get guaranteed quality.

Buy straight Fertilizing Chemicals—deal with a reliable Canadian house, thus saving duty—mix your fertilizers to suit each crop and soil—and you will make big money out of fertilizing.

The materials for home mixing:

Vanco

- MURIATE OF POTASH—guaranteed 50% actual Potash
- SULPHATE OF POTASH—guaranteed 48% actual Potash
- NITRATE OF SODA—guaranteed 15% Nitrogen
- ACID PHOSPHATE—guaranteed 14 to 16%

Write for the "Vanco" Book—it will give you tables for mixing fertilizers and the kind of fertilizers for each crop.

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Special Trains leave Toronto 2.00 p.m. on
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Second class tickets from Ontario stations to principal Northwest points at

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TOURIST SLEEPING CARS

through to Edmonton via Saskatoon, also to Winnipeg and Calgary via Main Line on all excursions. Comfortable berths, fully equipped with bedding, can be secured at moderate rates through local agent.

Early application must be made.

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ONLY DIRECT LINE NO CHANGE OF CARS

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"NINE LIVES" ELECTRIC FLASHLIGHT

with its bright but economical little Tungsten incandescent lamp. Compact, handy, and safe! Easily carried in your pocket or under your arm. Simply press the button and you have instantaneous flash. Can't set fire to anything.

We'll send you a "Nine Lives" Electric Flashlight, fully prepaid. Pocket type for \$1.50. Tubular type for \$2.00. It's too convenient to be without—write to-day.

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AGENTS AND DEALERS WANTED

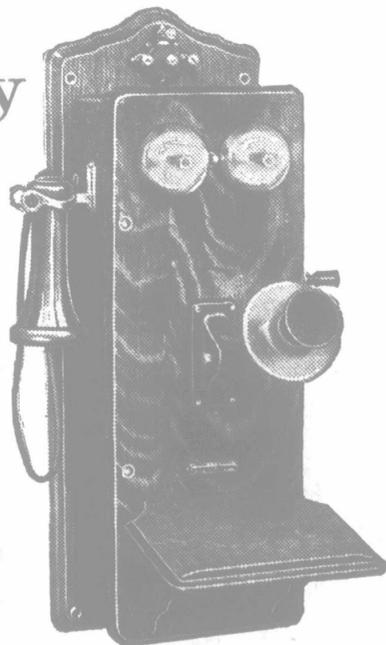
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IN Ontario where the fight for business is keenest—where all telephone manufacturers enter into competition—this company has assumed a commanding position. Last year The Majority of municipalities and new companies entering the independent telephone field selected our telephones and equipment.



QUALITY WINS

Price cut no figure in securing the business of these companies. Other telephones were offered for less. SUPERIOR QUALITY won us the victories.

Our telephones were selected not only by new systems, but by those who had been using other makes, because they were proven to be the clearest-talking, strongest-ringing, simplest and best constructed. They were given the severest tests, the most minute and rigid examinations. They established their superiority beyond question.

BUSINESS DOUBLING

Between 400 and 500 Independent Canadian Telephone Companies are buying their supplies from us. Our business is again repeating last year's record, when it doubled in volume. What better guarantee of satisfac-

tion could a municipality or local telephone company want than the evidence of the satisfaction we are giving others?

10 YEARS' GUARANTEE

Everything we sell is guaranteed. Our Telephones are guaranteed for 10 years against defects in material or workmanship. Our Side Blocks and Top Pins are made specially for us, so as to insure uniform quality. In No. 12 Galvanized Line Wire we never carry anything but the best.

We stock nothing but first quality materials. And we stock them in large quantities.

Notwithstanding our large increase in business, our facilities are such that we are able to handle all orders promptly and satisfactorily. A Price List will be mailed on request.

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Our latest book on telephones has just been printed. It contains the latest, most authentic information on construction and operation of telephone lines. Also shows the most up-to-date equipment. Ask for the No. 3 Bulletin.

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Prove the "BISSELL" by Its Work

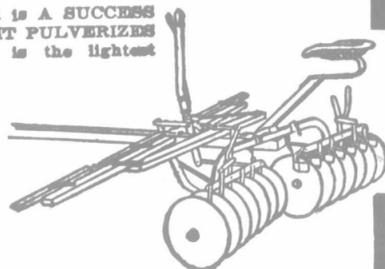
Do the gangs on your Harrow crowd together and raise out of the ground if it is hard? They won't do this on the "Bissell." The "Bissell" is so designed that THE GANGS CAN'T CROWD OR BUMP together no matter how hard the ground may be.

Tough soil won't stick the "Bissell." It stays right down to its work and pulverizes the ground thoroughly.

We ask you to take a "Bissell" out into the field and test it beside other Harrows. Then you

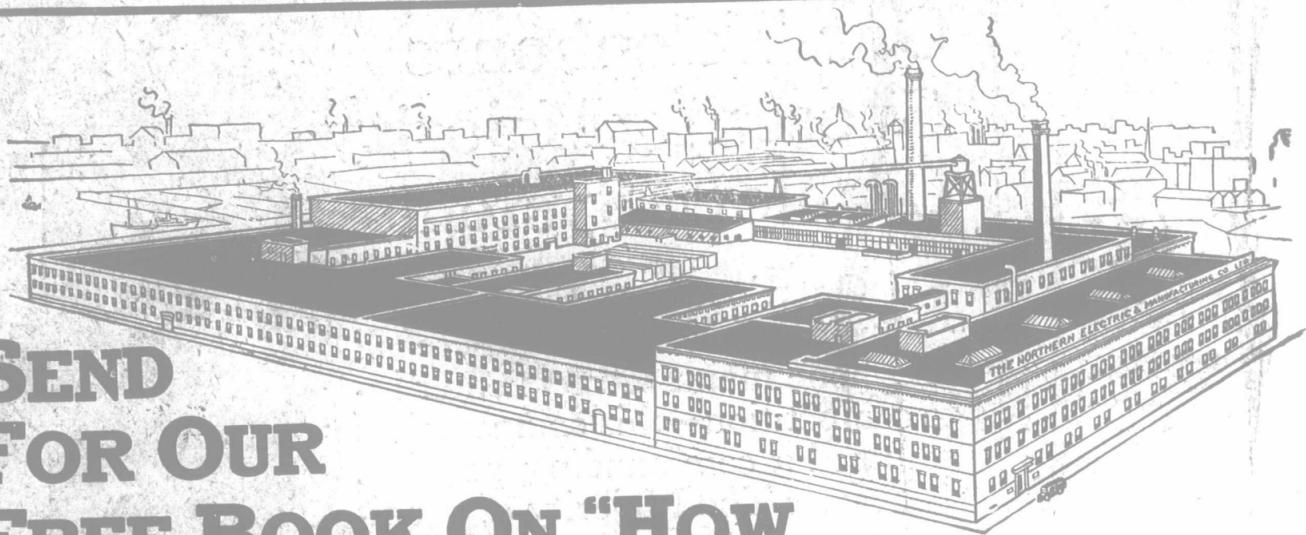
will HAVE PROOF that it is A SUCCESS ON HARD LAND—THAT IT PULVERIZES THE BEST—and that it is the lightest draught.

Post yourself fully on Harrows before buying. We put our name on every Harrow so that you will know it is genuine. Ask your local dealer, or write to Dept W for free catalogue.



T. E. Bissell Company, Limited, Elora, Ont.

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YOU do not need to know anything about company organization or telephone line construction to start a telephone company in your own community. "How to Build Rural Telephone Lines" will tell you absolutely everything you need to know. When you have read this book you will be amazed at the simplicity of the whole proposition and wonder why you and your neighbors have not had a telephone system of your own long ago. Sooner or later someone is going to start a telephone system in your neighborhood. Whether you or one of your neighbors chances to be that "someone," you owe it to yourself to be fully informed on the subject.

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THE full details of company organization are described in this book. Mutual and stock companies are explained fully so that you can go out among your friends and neighbors and show them just exactly what has to be done.

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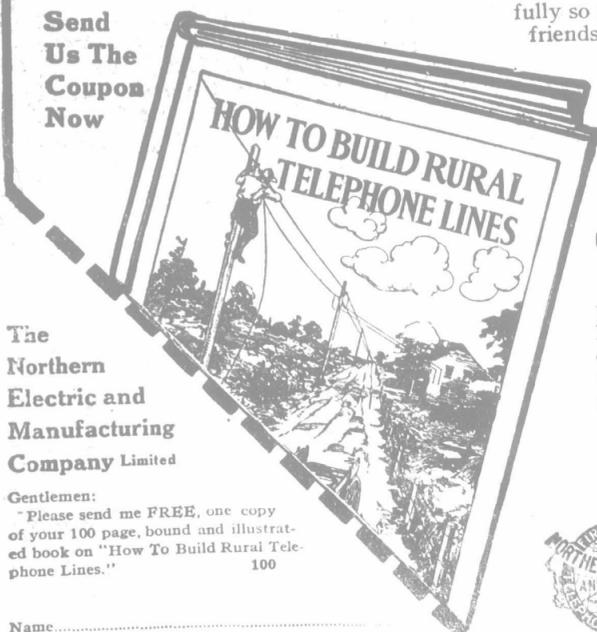
THE expert advice of high salaried telephone engineers is back of you in every detail of your line construction. With the help we give, you do not need to employ expert linemen but can keep down the cost by doing your own construction work. One chapter of

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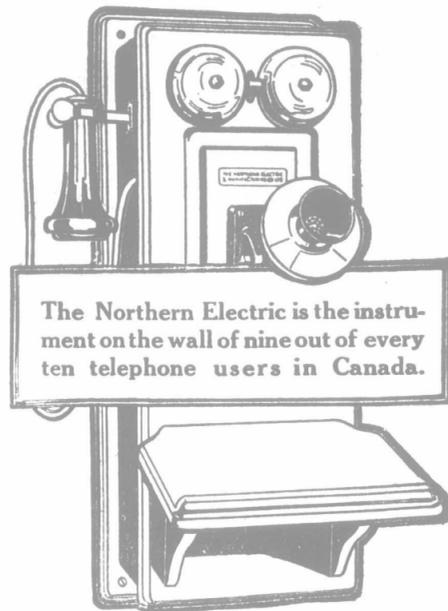
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