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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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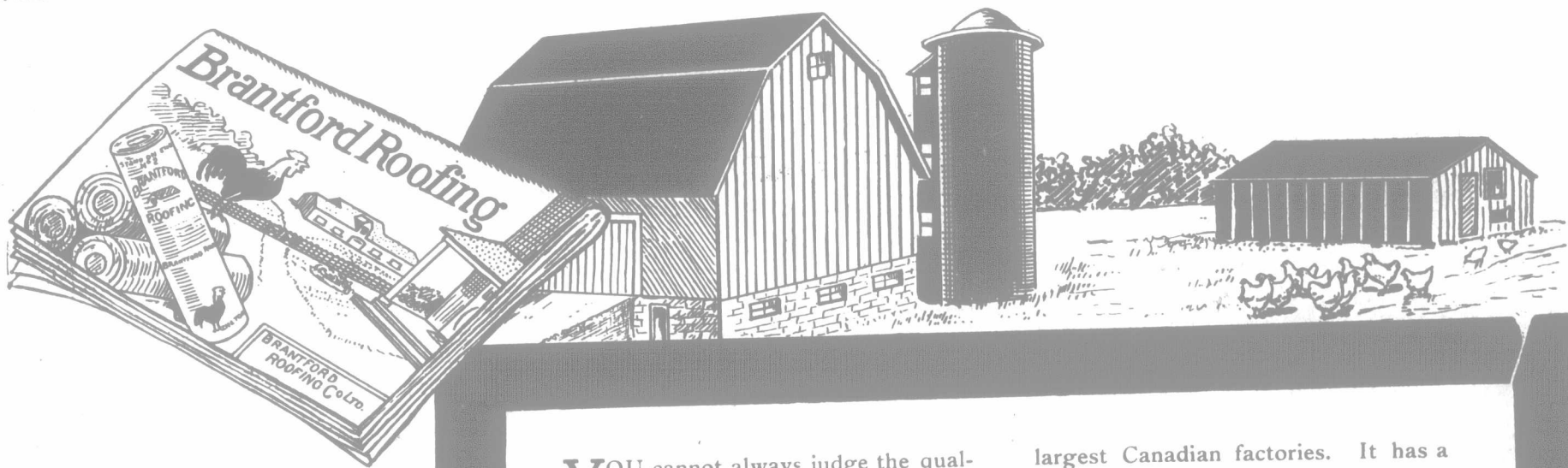
* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE. *

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VOL. XLVI.

LONDON, ONTARIO, MARCH 23, 1911.

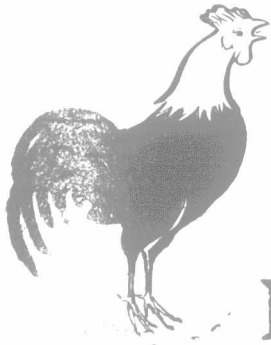
No. 965



YOU will like to read our big roofing book. It contains so much information of real value to farmers who have buildings to roof. Many say it is the most interesting roofing book they've read. By all means send for a copy. It's free.

And when buying roofing remember to look for our two trade-marks. They are on every roll of the genuine Brantford Roofing.

BRANTFORD ROOFING CO., LTD.
BRANTFORD, CANADA



Our
two
Trade
Marks

YOU cannot always judge the quality of the roofing by the price.

Low-grade ready roofings are often sold at about the same price as high-grade. So it will pay you well to buy roofing with a reputation for quality, such as is possessed by Brantford Roofing.

Leading architects and builders recommend Brantford Roofing. It is accepted by the City Architect and Chief of Fire Dept. for use in the most congested district in Toronto. It has been chosen time and again, after the severest tests, for roofing many of the

largest Canadian factories. It has a quality-reputation second to none.

Brantford Roofing is made by men with long experience in making roofing. The Brantford Roofing Co. was one of the pioneers in the roofing industry.

When we started we determined to make a line of roofing goods that would in time create for us a high reputation. We have stuck to that determination through thick and thin. To-day we are reaping our reward. People have confidence in the quality of Brantford Roofing. Our business is increasing at a wonderful rate.

Brantford Roofing

Asphalt — Rubber — Crystal

WHETHER you choose Brantford Asphalt, or Rubber, or Crystal, you secure the quality that has made our products famous.

The same pure wool felt is used for each. This felt is made to our own rigid specifications. It costs us $33\frac{1}{3}$ per cent. more than ordinary felt. It is saturated with 99 per cent. pure Asphalt. So-called "Trinidad" Asphalt is only about 45 per cent. pure. Brantford Asphalt Roofing has the

popular fine silicia sand finish. Brantford Rubber is a smooth-surface roofing. Both are made in three weights.

Brantford Crystal has a mineral surface. It requires no painting. It is made in heavy weight only.

Samples of Brantford Roofing will be mailed free to your address if you will send us a post-card request. Send it by next mail, so you won't forget it.

Fertilizers

(FREEMAN'S BRAND)

Compounded with the very highest grade materials. For prices and full information, write to:

THE W. A. FREEMAN CO.
Limited
Hamilton, Canada.

GRAND TRUNK RAILWAY SYSTEM

Are You Going West This Spring?

If so, there are abundant opportunities to do so via Grand Trunk Railway System to Chicago, and thence connecting lines. Low rates every day to MANITOBA, SASKATCHEWAN and ALBERTA. Exceedingly low rate, each Tuesday, March 14th to April 25th, inclusive, to principal points in SASKATCHEWAN and ALBERTA, including points on Grand Trunk Pacific Railway.

Reduced rates for one-way tickets, daily, until April 10th, inclusive, to

VANCOUVER, B. C.
SPOKANE, WASH.
SEATTLE, WASH.
PORTLAND, ORE.
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LOS ANGELES, CAL.
MEXICO CITY, etc.

Before deciding on your trip, consult any Grand Trunk Agent, or address 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.

"LONDON"

Cement Drain Tile Machine

Makes all sizes of tile from 3 to 16 inches. Cement Drain Tile are here to stay. Large profits in the business. If interested send for catalogue. **London Concrete Machinery Co., Dept. B, London, Ont.** Largest manufacturers of Concrete Machinery in Canada.

AGENTS Here It Is

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That's what Ed Hopper calls it. Sold 97 in few days. He's pleased. Retails at 100% PROFIT. If you want a quick seller, one that gets the money easy, send now for confidential terms and FREE BOOKLET. "Inside information on the agency business." A few hours a day means many a dollar in your pocket. Send a postal to A. MATHEWS 6144 Wayne Street, DAYTON, OHIO.

INVENTIONS

Thoroughly protected in all countries. EGERTON R. CASE, Registered U. S. Patent Attorney, DEPT. E, TEMPLE BUILDING, TORONTO. Booklets on Patents and Drawing Sheet on request.

PLEASE MENTION THE ADVOCATE.

Which Fence Do You Prefer?


One that protects, or one that does not?

Do you prefer the strong, serviceable, made-to-last IDEAL FENCE which does not take up valuable ground, does not harbor weeds, never needs repairs, saves worry, protects your crop, and which improves the appearance of your farm.



—OR—

Do you prefer to keep that unsightly crooked rail fence which covers too much valuable ground, harbors weeds, causes worry, is really no protection, always in need of repairs, and which certainly detracts from appearance of the farm?



Do you know that you can trade that old unsightly rail fence for IDEAL FENCE, with absolutely no outlay on your part?

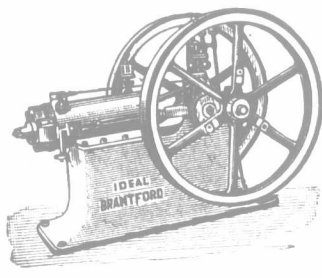
Write for our Rail Fence Booklet No. 121 telling you how to do it and giving you valuable fence information.

The McGregor Banwell Fence Co., Ltd.
Walkerville - Ontario

IDEAL GASOLINE ENGINES

1/2 TO 40 HORSE-POWER

Windmills
Grain Grinders
Pumps
Tanks



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Water Boxes
Concrete Mixers
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BRANTFORD, CANADA.

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It requires only one team and man to plant your crop. Its automatic cup device does not puncture or bruise the seed in any way; handles it almost as carefully as by hand.

Write for our 1911 Catalogue.

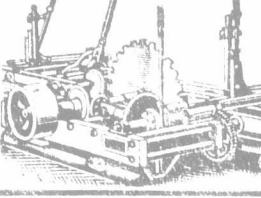
Canadian Potato Machinery Co., Ltd., 145 Stone Road, Galt, Ont.

AMERICAN SAW MILLS

There's Money In Lumber

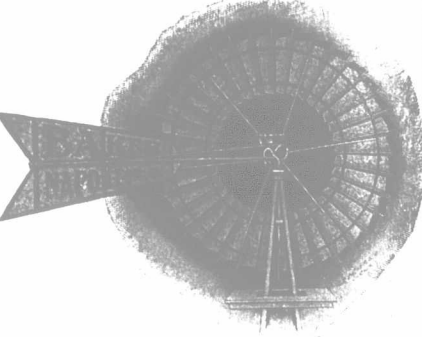
Makes most money because they do least work in quickest time with least power and smallest crew, owing to their simple construction and improved, patented devices. Portable and stationary. All sizes. Variable Friction Feed, Combined Hatchet Networks and Quick Rescuer and other superior features. Free Catalogue and Prices will interest you. List our complete line of well working machinery.

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113 Hope St., Hackensack, N. J.
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"BAKER"

Ball-bearing Wind Engines for Pumping, the most satisfactory and economical power and the easiest-running mill made.



We make a full line of steel towers, galvanized steel tanks, pumps, etc. All goods fully guaranteed. Write for catalogue.

The Heller - Aller Co.,
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Saves work and wages

THOUSANDS of farmers are reducing the cost of planting and increasing the production by using the ASPINWALL POTATO PLANTER. This machine does all the work automatically, requires no human aid other than the driver, and soon pays for itself out of the wages it saves. What the Aspinwall No. 3 Potato Planter has done for others it will do for you. Write for catalog descriptive of our POTATO CUTTERS, PLANTERS, SPRAYERS AND SORTERS. Address Dept. F.

Aspinwall Manufacturing Co.
Jackson, Mich., U.S.A. Canadian Factory: Guelph, Ont.

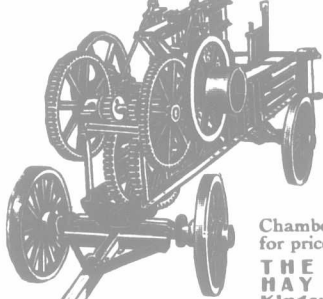
No. 3 Aspinwall Potato Planter

The Columbia Hay Press

BAILED 68 TONS IN 10 HOURS.

It has the points that sell: Automatic Self Feeder, Automatic Safety Fly Wheel, Handiest Block-dropper, Double Gear through-out, Extra Long Tying Chamber, etc. Write for prices.

THE COLUMBIA HAY PRESS CO.,
Kingsville, Ontario.



WILSON'S GOLD MEDAL SCALES

GET SPECIAL PRICES FOR YOU LISTEN!

WILSON pays the freight.

Get special price list to-day.

100 Styles of Hay and Stock Scales

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Seed Grain for Sale

Seed oats (white), Crown Jewel variety, early and good yielding. Mandshuri barley, a good sample and good grain, just grown 3 years since received from Guelph. This grain was grown on good loam soil, free from impure weed seeds, re-cleaned and graded. Grain in quantities, and can ship C. P. R. or G. T. R. to suit purchaser. Prices, samples, etc., on request. Write:

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


J. O. DUKE, RUTHVEN, ONTARIO.

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GOES LIKE SIXTY SELLS LIKE SIXTY \$65

For Pumping, Cross Separators, Churns, Wash Machines, etc. Free Trial. Ask for catalog—all sizes.

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A Garden of Delight

Is your garden a source of pride and pleasure, or simply of common "garden truck?" That will depend largely on your choice of seeds. People who sow

EWING'S Reliable Seeds

and give them proper care, get big crops—sure crops—crops of superior quality. Whether you garden for pleasure, or profit, or both, discriminate on the seed question. Get EWING'S, the seeds that have proved their quality by over forty years of bumper crops.

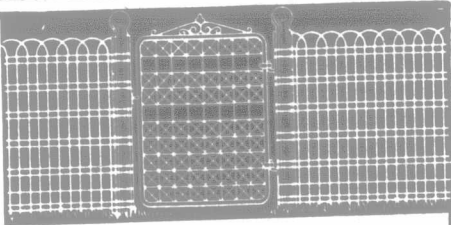
If your dealer hasn't Ewing's write for our Illustrated Catalogue and buy from us direct.



Wm. Ewing & Co.
Seedsman
McGill St., Montreal.

Handsome enough for the city lawn—Strong and cheap enough for the farm

Peerless Lawn Fence is made from heavy, No. 9 steel wire, all galvanized and coated with white enamel paint. It is built so strongly that it will last for years and it cannot rust. It costs less than one wooden fence and will outlive two. It will add to the appearance of any property. Let us send you the cost of fencing with



Peerless Lawn Fence

the Peerless Lawn Fence and electrically-welded, solid frame gates.

We make a full line of farm fences and gates. Agents wanted. Write for full particulars.

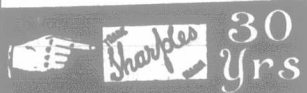
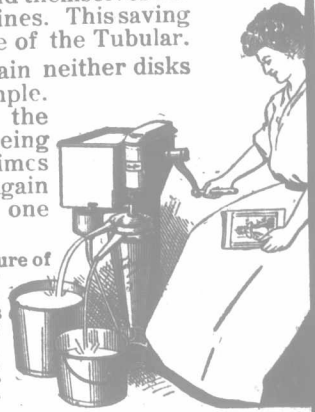
THE BANWELL HOXIE WIRE FENCE CO., Ltd., Dept. B, Winnipeg, Man. Hamilton, Ont.

Why Do Shrewdest Buyers Choose SHARPLES Tubular Cream Separators?

It is because Tubular users always get the most for their money. How? In two ways. Tubular Separators have twice the skimming force of others. Consequently, Tubulars skim faster and twice as clean. With this double skimming force Tubulars save—year after year—what others lose. This saving rapidly pays for the Tubular. Tubular users soon find themselves the full price of a Tubular ahead of users of other machines. This saving repeats itself time after time during the long life of the Tubular.

Here is another reason: Dairy Tubulars contain neither disks nor other complicated parts. They are perfectly simple. They last a lifetime, are guaranteed forever by the oldest separator concern on this continent. Being perfectly simple, Dairy Tubulars last several times longer than the best of others. So shrewd buyers again save the cost of several separators by buying one Tubular, which lasts for life.

In world-wide use. "The World's Best." The manufacture of Tubulars is one of Canada's leading industries. Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells. Our local representative will show you a Tubular. If you do not know him ask us his name. You can own and use a Tubular cheaper than any other. How can you afford to waste time or risk money on any "peddler's" or other inferior machine? Write today for catalogue No. 193



THE SHARPLES SEPARATOR CO.,
Toronto, Ont. Winnipeg, Man.

MAKE YOUR OWN TILE

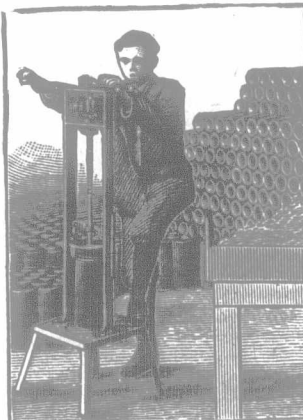
One man can make 300 to 600 perfect tile a day with our

Farmers' Cement Tile Machine

At a cost of \$4 to \$6 per 1,000. CAN YOU AFFORD TO BE WITHOUT IT? The only farm tile machine that does not require hand tamping; the only farmers' machine operated by either hand or power. Machine makes 3, 4, 5 and 6 inch tile. Our Waterproof FLEXIBLE CASING holds tile in perfect shape till set. NO PALLET.

TEN DAYS' FREE TRIAL. If after 10 days' trial it does not meet with entire satisfaction, return at our expense. Write to-day for illustrated catalogue.

Farmers' Cement Tile Machine Co.,
WALKERVILLE, ONTARIO.



Do You Want a Reliable Man?

THE SALVATION ARMY Immigration & Colonization DEPARTMENT

For several years recognized as the leading Immigration Society in Canada, will, during next season, 1910-11, continue its efforts to supply the demand for

FARM HELP

and Domestic Servants. Conducted parties are now being organized to sail early in the spring. Apply at once for application forms and information to

BRIGADIER H. MORRIS,
Head Office: James and Albert Sts.,
TORONTO, ONT.

or Major J. M. McGillivray,
Office for Western Ontario,
396 Clarence St., London, Ontario
Correspondence Solicited.

A Poor Education

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

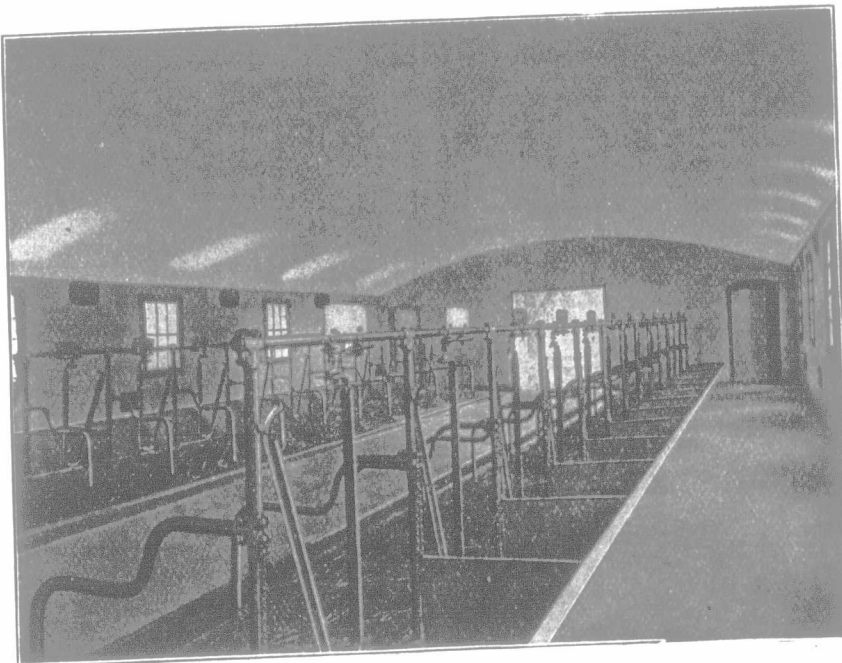


Sells his Crown Wire and Iron Fences and Gates at factory prices; also barbed, coated and plain wire, fence tools, etc. Ask for free catalogue.

YOU CAN REMODEL YOUR STABLE YOURSELF

if you use BT STALLS AND STANCHIONS

Write for our new catalogue. It shows the latest development in sanitary barn equipment—Stalls and Stanchions. It shows how greater comfort and cleanliness is secured for the cows, resulting in increased production and better profits. And the beauty of it is that these stalls may be put in by yourself—no carpenter or helpers to hire. BT Stalls come all ready for use, and in a few minutes they can be set up. We give full information as to the width, length and size of stalls, best shape for manger and gutter, and we tell how to lay the cement floor so that anyone can do it.



Remember, BT Barn Equipment will mean greater profit for you, as it will cut down your expenses and will increase the production of each cow. There are FIVE EXCLUSIVE FEATURES on BT STALLS that we want to tell you about. If you are building or remodeling your stable, fill out this coupon, and we will send you free our booklet on stable construction. We also build Hay Carriers, Forks, Slings and the BT Litter Carrier.

BEATTY BROS.
Fergus, Ontario.

BEATTY BROS.

Fergus, Canada:

Kindly send me (free) your booklet on Stable Construction and BT Stalls.

How many cows have you?

Are you going to remodel or build?

If so, when?

Mention if you will need a hay truck or litter carrier

Name

Post office

Province

Defy lightning as well as storms

You can defy lightning, so far as it affects your buildings, when you roof with Preston Shingles. For with them you get a GUARANTEE against harm to any building they cover from the thunderbolt. And they protect you against all kinds of weather as well.

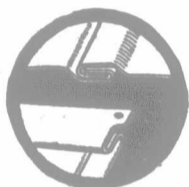
YET these better-galvanized (therefore longer-lived) metal shingles cost you not a cent more per hundred square feet than you must pay for the ordinary kind. And even that ordinary kind is worth far more

PRESTON SAFE-LOCK SHINGLES

than wood shingles—or slate—or the (so-called) patent roofings.

You should be well-advised about roofings

Allow us to send you a book that tells the mere truth about every sort of roofing material there is. It is free. You would gladly pay for it if you know what it would save you—in money, bother and time. But it's yours for the asking.



Please ask for that book. Do it now. It tells, among other things, why the all-square lock means bigger roof value. Write and

Ask Questions!

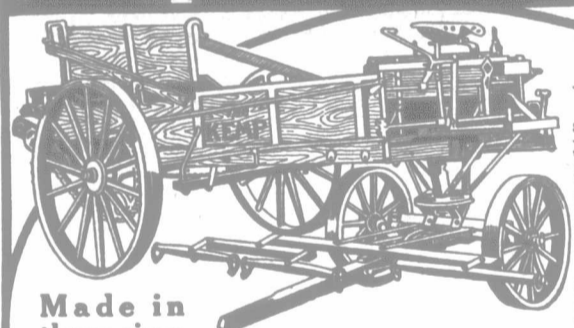
G. Dolph
Manager

Metal Shingle and Siding Co., Limited

Queen St. Factory, Preston, Ont., and Montreal.

29

Inside Facts About Kemp Manure Spreaders



Strong Where Others are Weak

YOU who continue to spread manure over your land by hand, learn how it is possible to cover three times as much ground with less labor and increase crops 10 to 15 per cent by using the Kemp Manure Spreader.

This spreader is the result of 39 years' experience in building spreaders of all kinds. It is the first one that will handle all sorts of material, thoroughly pulverize

Made in three sizes

and distribute it evenly, and has one-third lighter draft than any other spreader ever built. The secret of the wonderful success of the Kemp Manure Spreader lies in the Flat Teeth used on the Cylinder Bar. Because these teeth are wide and graded, we need only have one-third as many used on other machines. This does away with the manure backing up and clogging, reduces friction on the cylinder—and correspondingly lightens draft.

The machine is also equipped with the strongest and most practical change of feed ever put on a spreader, while the Apron has a friction return so the operator has it always under control. The Kemp Manure Spreader will economize labor more than any other farm implement and, by increasing the fertility of the land, will pay for itself in no time.

Settle your doubts, once and for all, concerning what kind of a spreader you want on your farm, by writing for our free book F75 which tells the inside facts about Manure Spreaders. Write today. Address,

Frost & Wood Co. Limited 75
Smith's Falls, Canada

1/3 Lighter Draft

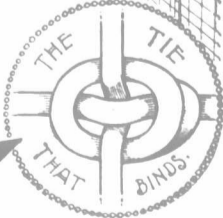
Handles All Kinds of Material

Standard Wire Fence

The greatest improvement in wire fencing was made when we perfected "The Tie That Binds." This hooks on the running wire and locks flat on both sides. It is not driven down on the wires at the point of crossing, but at an angle—thus, it cannot injure the fence. The tie is smooth—no ragged edges to cut animals or catch in hair or wool. Standard Steel Fence Posts are No. 12 gauge steel that enable you to build a permanent, lasting fence without staples. We also make Improved Galvanized Tube Gates. If you are in the market for fencing, write us at once for our booklet and sample locks. They will prove a lot of things that you ought to know about Wire Fence.

THE STANDARD WIRE FENCE CO. OF WOODSTOCK LIMITED
Woodstock, Ont. and Brandon, Man.

16



Vanco

Lime Sulphur Solution
Means Big Fruit And Big Prices

You have got to spray the fruit trees to get any kind of a crop. The most effective spray means the biggest crop and the biggest profits. VANCO LIME SULPHUR SOLUTION is a thoroughly reliable fungicide. It is a clear liquid—no sediment—free from small particles—sprays easily and does not clog the nozzle. You could not possibly get a greater amount of Sulphur in Solution than you get in the "Vanco" Barrel. This is the Spray to use for San Jose Scale, Aphis, Scab, Blight, Mildew and many other parasites and fungi that ruin trees and fruit. VANCO LIME SULPHUR SOLUTION is better than any home-made spray, because always of the same strength and uniform quality. Specific Gravity stencilled on every barrel. One barrel makes 12 barrels for spring or 40 for summer spraying.

VANCO Lead Arsenate Kills All Chewing Insects
Safest and surest spray for Apple Worms, Codling Moths, Potato Bugs, Asparagus Beetle and other leaf-eating, fruit-destroying insects. More effective and more lasting than Paris Green—safer to handle—easier to spray—sticks longer—strength guaranteed—NEVER BURNS. Made in Canada. This insures standard quality at lowest prices, because there is no duty to pay on it.

Write for prices and free copy of our new book on sprays.

FERTILISERS—We also sell Nitrate of Soda, Muriate of Potash, Sulphate of Potash and Acid Phosphate.

Chemical Laboratories Limited
126-136 Van Horne Street, TORONTO.

DAY AFTER DAY—YEAR IN YEAR OUT AN IHC PAYS BIGGEST PROFITS —

NOT only should your cream separator pay you the best possible profit at the start—but it should keep on paying biggest profits for a lifetime.

The durability of a separator is just as important as its skimming qualities. Many separators break down just when they are beginning to pay for themselves. Avoid loss and disappointment by getting an IHC Cream Harvester. They skim as clean and run as easily years hence as on the day they were bought.

IHC Cream Harvesters

have proved their value by years of perfect service. If you investigate all cream separators you will appreciate IHC features and advantages all the more. You will find that IHC Cream Harvesters are the only separators with gears which are dust and milk proof and at the same time easily accessible; IHC Cream Harvesters are protected against wear at all points by phosphor bronze bushings—not cast iron or brass. IHC Cream Harvesters are constructed with larger spindles, shafts, and bearings than any other separator, insuring greater efficiency and durability; the IHC bowl is free from slots or minute crevices—that is why it is so remarkably easy to clean.

A Style and Size for You

Made in two styles—Dairymaid and Bluebell—each in four sizes. The IHC local dealer will be glad to explain the many IHC Cream Harvester advantages, all of which have much to do with your dairy profits. Ask him for catalogues and all information, or write nearest branch house for information desired.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton
INTERNATIONAL HARVESTER COMPANY OF AMERICA Chicago U S A (Incorporated)

IHC Service Bureau

The purpose of this Bureau is to furnish farmers with information on better farming. If you have any worthy question concerning soils, crops, pests, fertilizer, etc., write to the IHC Service Bureau, and learn what our experts and others have found out concerning these subjects.



Subscribe for The Farmer's Advocate

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WESTERN FARMS
FOR SALE

or rent, with option to purchase. We have a few farms, with good house and stable, and land ready for seed, also some equipment. Write for terms.

The UNION TRUST CO., Ltd.
 Real-estate Department,
 Toronto, Canada.

You can't sow thises and reap figs. If you plant FERRY'S SEEDS you grow exactly what you expect and in a profusion and perfection never excelled.

FERRY'S SEEDS

Fifty years of study and experience make them reliable. For sale everywhere. For a 1911 Seed Annual free on request.

D. M. FERRY & CO.,
 Windsor, Ont.

Amatite ROOFING

Saskatoon Fair Buildings, covered with Amatite Roofing, Saskatchewan, Can.

60,000 Feet of Amatite Roofing

The accompanying view shows a series of buildings at the Saskatoon Exposition, all of them covered with Amatite Roofing.

Amatite was selected because it was inexpensive, easy to put on, required no care or attention or expense afterwards, and would give excellent durability.

If ordinary smooth roofing had been used, these roofs would require painting every year or two at considerable expense and trouble. Amatite, however, has a mineral surface which requires no painting.

Use Amatite for every roof where you want to save expense. It is the most economical solution of the whole roofing problem.

Amatite Roofing requires no skilled labor to apply; it costs no more, (in fact much less) than other roofings; and the fact that it requires no painting makes the total expense far below that of any other type of roof covering.

You can use Amatite for every kind of steep roofed building. We supply galvanized nails and liquid cement for the laps free of charge.

Send for free sample and booklet. Address our nearest office.

The PATERSON MANUFACTURING CO., LIMITED
 Montreal, Toronto, Winnipeg, Vancouver

Have You Seen The New "Galt" Shingle?

In justice to yourself, you should at least investigate "Galt" Steel Shingles before deciding on the roof for your new barn or the new roof for your old barn. Present wood shingles are failures and are being discarded—to use them is a step backward. Don't put a fourth-class roof on your first-class barn. "Galt" Galvanized Steel Shingles is the roofing, now and for the future. Roof your new barn with "Galt" Steel Shingles and you won't have to apologise for it now or at any time in the future.

Listen, you won't have time two months hence to investigate this roofing question. And yet the roof of your barn is an important part of your real estate and should be selected carefully. Won't you drop us a card now for our booklet "ROOFING ECONOMY" telling all about "GALT" Shingles?

If you haven't paper and ink handy, tear out this advertisement, write your name on the line at bottom and mail to us. We'll know what you mean. You'll never have a better chance than right now.

Name..... Address.....

THE GALT ART METAL CO., Limited, - GALT, ONT.
 Watch for the advertisements with The Kids from Galt.

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2000 MILES

Think of it! Over 2,000 miles of this fencing is already in use on the farms and along the highways of Canada and in Foreign Countries, and every foot of it is giving good service. All the good points in every kind of Fence are incorporated in the manufacture of

"RELIANCE"
 ALL NO. 9 WIRE FULL GAUGE

Write for your copy of our catalog of Fence, Gates, Lawn Fences. Agents wanted in unoccupied Territory.

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 EVERY ROLL OF RELIANCE FENCE IS BUILT TO SELL ANOTHER!

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Made especially to fill the requirements where no sewerage is available. Catalogue C upon application, with full particulars.

Red Cross Sanitary Appliance Co., Grimsby, Ont.

WHEN WRITING ADVERTISERS MENTION THE FARMER'S ADVOCATE.

I Wish YOU Were Like Mr. Fraser

I'd like you to do like he did—for your own good. Like a great many other people he had seen many of our advertisements. Had read some of them, just as you are reading this one. The time came when he was figuring on a new roof and he read one of our advertisements very carefully.

He thought, as maybe you do, that a wood shingle roof was the least expensive, and though not the best nor most durable, was at least "good enough" for him. But our ads said that Oshawa Steel Shingles cost about the same as wood shingles and were less expensive to put on. That sounded promising.

Further he read that slate cost six times as much, and so-called "ready-roofing" cost thirty-three times as much. That Oshawa Steel Shingles were fire-proof, leak-proof, rust-proof, rot-proof, rain-snow-and-wet-proof, need no painting, no patching.

In fact Oshawa Steel Shingles, according to our advertisements, seemed to be everything man could desire in a roof—the absolutely perfect roof. So good that he doubted the truth of our claims. "It sounds too much better than ordinary roofs" he thought. (He'd heard other roofing people talk extravagantly, and thought, "Oh, yes, it's easy to talk big,

but will the roof make good?"). Then he read my guarantee. That impressed him as being very straightforward, dependable. "If that means all it says: 'A perfect roof for 25 years, or a new one free' he thought, "why this advertisement is no idle boast." "By using Oshawa Steel Shingles I settle the roofing question definitely for at least 25 years. If this concern is financially responsible that guarantee seems to cover everything.

"Guess I'll send for their booklet, anyway, and look into the facts a little further." And he did. He got all the facts, before deciding. That's where I wish you were like him. I want you to get all the facts about Oshawa Steel Shingles. THEN you can decide. You only fool yourself if you doubt one word I say about our Steel Shingles. You take no risk. My guarantee protects you against disappointment—absolutely. You'd not think of using any other kind of roofing if you actually KNEW how good a roof my Oshawa Steel Shingles make.



Do Send for My Book of Facts About Roofs

Be curious, enquiring. Look into the facts. The book is free. Write to our nearest office for a copy.

G. H. Pedlar

How Do You Figure?

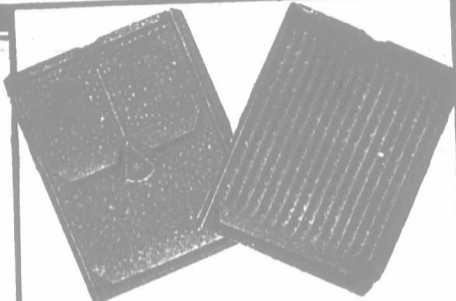
Figure the cost now, material and time, for every kind of roof you know anything about. Oshawa Guaranteed Steel Shingles, you'll find are as cheap to begin with as the poorest wood shingles. It's a fact. Figure the cost per year of each kind of roof. Compare the estimated life of other roofs with the guaranteed life of Oshawa Steel Shingles, and your figures will show you which is the best and cheapest roof for you to buy.

When I say "Guaranteed for 25 years" I mean it—No "ifs" About it

Some makers of metal shingles (notice they don't say "steel") talk boastfully about roofs of theirs which have stood the test for 25 years back. But if you buy their shingles do they positively guarantee to you a perfect roof, no leaks, no rusted holes, no need for paint, no bother whatever, for the next twenty-five years? That is what you are interested in—your own roof—not some other fellow's. Do they? Pedlar does. You may know people who have lived to be eighty, but that is no guarantee of your life. Oshawa Steel Shingles are the only kind that are clearly, positively, responsibly, guaranteed for any period.

Can You Afford Any Roof which is NOT Guaranteed?

Can you afford to put on a roof that will need some fixing next year, more fixing again the following year, and so on until it needs so much fixing that an entirely new roof is necessary? Can you afford to use "metal" shingles that are said to be good when you can get steel shingles that are guaranteed for 25 years—actually good for a hundred. Why not settle the roofing question at once for twenty-five years? Why doesn't the other fellow guarantee his roof if it actually is as good as Oshawa Steel Shingles?



Here Are Pictures of Two Patterns of Oshawa Steel Shingles (Guaranteed)

They come in squares 10 x 10 ft.—covering 100 square feet of roof. They are stamped from heavy sheet steel—28 gauge steel—then galvanized with zinc, so thoroughly that all kinds of weather can't make a rust-hole in them for longer than your lifetime. They are made in the biggest factory of its kind in the British Empire—and there's \$365,000 capital and 50 years of success back of the guarantee that goes with them.

PEDLARIZE All Your Buildings, Inside and Out

By "Pedlarizing" I mean doing for the whole building what Oshawa Steel Shingles do for the roof. I make other kinds of sheet metal building materials—for ceilings, side walls, outside—that make your whole building more fire-proof, more sanitary, more beautiful, more substantial. You should know about them. May we send you a booklet and pictures that tell the whole story? It's free. Write for it today.

Costs far less than Any other kind of roof

Oshawa Steel Shingles cost only \$4.50 for a hundred square feet. You'd have to spend as much right away for wood shingles. You'll be lucky if the wood-shingle-roof lasts as long as ten years—whereas my shingles are guaranteed to give you a perfectly good roof for at least twenty-five years. Oshawa Steel Shingles cost less to put on, and need no painting. And you can be sure an Oshawa Shingled roof will outlast any other roof you can put on. That's worth something, isn't it?

Rain-snow-wind-proof Fire and lightning proof No painting No patching

No bother at all with your Oshawa Shingled roof once it's on your building. Notice we don't merely say this. We guarantee it, with a guarantee that is legally binding—good for a new roof right up to the last day of the twenty-fifth year. That means it must be absolutely weather-proof. Also it is fire-proof, wind-tight, safe against lightning, and keeps the building warmer in winter and cooler in summer. And you need never worry with repairs. Isn't this the kind of roof you want?

What More Can You Ask of a Roof?

A roof that is practically one big seamless sheet of tough, galvanized steel, without a crevice or crack anywhere for water or wind to get into, that keeps out the heat of summer and the cold of winter—an absolutely perfect roof for the next twenty-five years. Why should you even consider any other kind? Certainly you should not fail to get all the particulars about a roof like this. Don't you think so? Then write for our book—today. It is free—from our nearest office.

The PEDLAR PEOPLE of Oshawa

Established 1861

- | | | | | | | | |
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| PORT ARTHUR
45 Cumberland St. | WINNIPEG
76 Lombard St. | REGINA
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200 Acres County of Halton, one-quarter mile County town Milton, 33 miles west of Toronto, main line C. P. R., 25 miles north of Hamilton, G. T. R. Large stone house, slate roof, barn 60 x 120, stone foundation and steel roof, with other outbuildings; excellent repair. Farm well fenced and first-class state of cultivation. Never been rented. Being sold to close estate. Apply:

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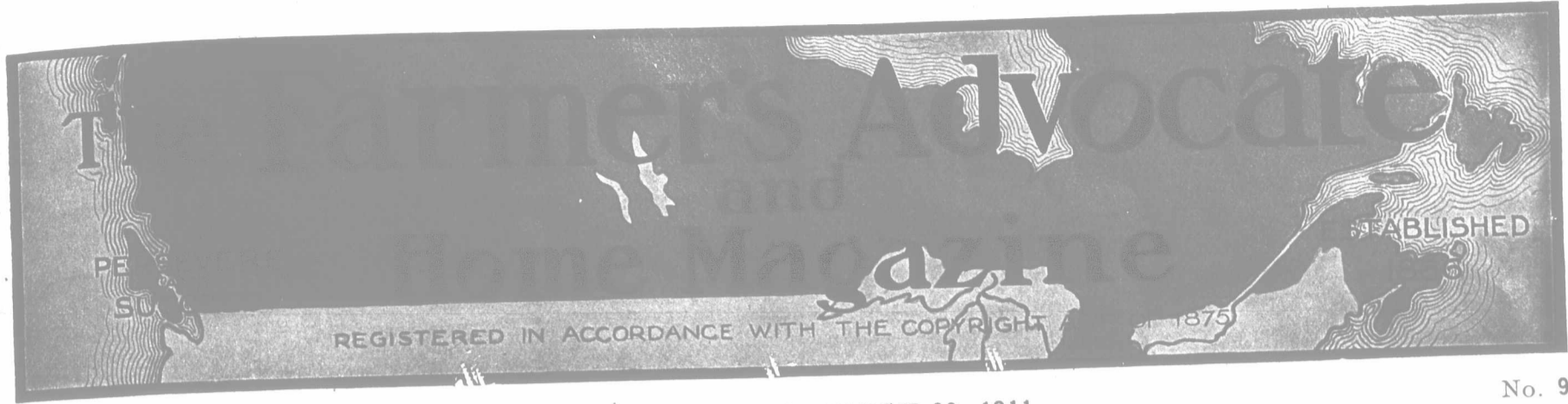
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EDITORIAL.

It is not new land we need so much as better ways of working the old.

Crop rotation is one of the most important problems in agriculture. Choose a short one.

People are hankering for more land, when they have too much already for the labor and thought applied to it.

As reciprocity comes to be freely discussed and understood, it appeals more and more strongly to Canadian farmers.

The editorial request for a poem on tree-planting has already aroused the muse. Several strings of verses have been received. The best poem has been selected for publication.

The New York Independent points out that Eastern States farmers have been so infatuated with the idea that high tariff could deliver them that they have lost sight of what the schools could do.

To compel the use of East-and-West transportation routes, when a North-and-South one would take us more cheaply and quickly to an equally good market, would be like driving an extra ten miles to town for the privilege of patronizing some rich friend's toll-gate.

If anyone has cause to object to the reciprocity pact, it is the American farmer, who yields us a more lucrative market than we open to him. But even he stands to lose little, and should welcome the agreement as a first step towards the breaking down of that absurd and chaotic tariff under which he has been for generations fleeced.

"You have been doing a splendid work for some time now, in dissecting various economic fallacies that are rather widely believed in, and I feel sure that this work, being of such a fundamental and non-partizan character, will have a very permanent influence for good." Thus writes a friend whose opinions we value. We prize his appreciation especially because he discerns our true purpose. We have, as he suggests, sought constantly to present fundamental principles, believing that only in the light of these can any particular tariff problem be intelligently solved.

Boiled down, perhaps the greatest advantage of reciprocity is that it will eliminate much waste by reducing forced long-distance transportation. It will, for example, lessen such anomalies as the shipment of coal from Nova Scotia to Montreal, and from Pennsylvania to Boston; of horses from Ontario to Saskatchewan (at an expense of about \$10 per head); and from the Western States to the Eastern States; of fruit from Niagara to Calgary, and from Oregon to Buffalo. "But," we hear in protest, "what will become of our great transcontinental railway systems?" Have no fear. There will still be plenty of unavoidable East-and-West traffic to keep present facilities busy, and to require additional roads as well. Reciprocity will so stimulate agriculture in Canada as to quicken the whole system of commerce and business, thus augmenting the total volume of traffic, of which a considerable proportion will necessarily continue East and West.

Stable Walls, Ventilation and Dampness.

Laymen observe many facts which it takes the definite knowledge of the scientist to explain. Observers have long since noted that most masonry stables were damp. Enter them on a summer day or a winter morning, and you are sensible of a slight chill in the atmosphere, even when the temperature is not low. A good time to observe this is when one is suffering from a cold. A person can milk more comfortably in a frame byre than in a considerably warmer stable with solid stone or cement walls. Why? An answer to these and sundry other questions is contained in Prof. Wm. H. Day's lucid article, "Why Stone Stables are Damp?" published in our Stock Department this week.

From recent studies of Dr. Armsby, as reported in King's book on "Ventilation," it was determined that a 1,000-pound steer charged the air with invisible vapor thrown off from skin and lungs to the extent of 10.4 pounds daily. In order, therefore, that a stable containing twenty steers or cows may not have moisture condensed on its walls, there must be an air movement through it sufficient to remove 208 pounds of water every day; for 40 head, 416 pounds; and for 100 head, over half a ton of moisture daily. From various calculations by Prof. King, we quote this striking one: "When twenty cows are housed in a stable with a floor space 20 x 40 feet, and with a 9-foot ceiling, this entire volume of air must be changed once every 50 minutes when the stable temperature is 70 degrees, once every 21 minutes if it is 50 degrees, and if the stable air is 30 degrees, the entire volume of air in the stable must be changed as often as every seven minutes, in order to prevent moisture condensation." These calculations are made on the assumption that the outside air is at 20 degrees, and already normally saturated to about three-fourths its capacity.

It must not be inferred that the main purpose of ventilation is to keep stables dry. The primary object is to maintain the air pure. This article, however, deals with the relation of ventilation and moisture. Considered from this standpoint alone, how very inadequate is the ventilation of the average basement stable to carry off the moisture from the animals' lungs and skin? It is physically difficult to ventilate a stable under a lofty mow space, and some owners do not attempt to ventilate at all. The stone or cement wall being practically impervious to air, and it being the custom to keep stables sealed up in winter, with the doors only occasionally open and the windows scarcely ever raised, there is in the average basement stable too little ventilation, either systematic or accidental. So the stable air becomes charged with an excessive amount of vapor, which condenses on the cold walls as dew or hoarfrost, according to the temperature. The hoarfrost melts when the temperature rises, causing the stable to be particularly damp at a time when otherwise it might be readily dried out by opening doors and windows. Bear in mind that the accumulation of hoarfrost is not the cause of the stable being damp, nor is it a very great evil in itself. It is simply an occasional indication of dampness, and, as pointed out above, its melting temporarily aggravates the dampness during times of thaw. Bear in mind, also, that such accumulation of hoarfrost will depend largely upon the nature of the wall. If it be what is called a well-insulated wall—i. e. a wall through which heat will not pass readily, and which, therefore, seldom becomes chilled to freezing point on its inner surface—hoarfrost

will rarely or never form on it, even though the stable air may be saturated. Dew may still be deposited on this wall, but dew does not accumulate to the extent that hoarfrost does.

Stone or solid cement walls, as Prof. Day points out, though practically impervious to air, are, nevertheless, good conductors of heat. In other words, they are poor insulating materials. The heat passes through them by conduction, just as it does through a window pane or a glass bottle. Cork a bottle of hot water, set it outside on a cold day, and see how soon the water will freeze solid. The water loses its heat through the glass to the outside atmosphere. A glass house, though perfectly air-tight, would be a very cold one. Prof. Day cites authorities to the effect that stone conducts heat about fifty times as fast as an equal thickness of wood; and he estimates that a stone wall, built up with mortar and sand, would conduct heat about thirty times as fast as an equal thickness of wood. A stone stable, though built with walls eighteen inches thick, is colder than a much thinner wall built of matched boards and building paper. Except on the score of solidity and durability, and one or two minor considerations, neither stone nor solid cement is a desirable building material. A hollow cement wall is a great improvement, because the dead air in the hollows is a good non-conductor of heat.

From all of the foregoing, it will be clear why there is less tendency for dew or hoarfrost to form on the inside of a hollow cement or a well-constructed wooden wall than on a solid cement or stone wall.

But a far more important reason in favor of the frame or hollow-cement structure is that, by reducing the waste of heat by conduction through the wall, we make it possible to ventilate more freely, without lowering temperature below the freezing point, which with many is the minimum, on account of the danger of freezing water-pipes. The better the insulation of our stable walls, the more freely we can ventilate without lowering temperature below a given point. The free ventilation permitted tends to dry out the stable atmosphere.

To the already enumerated objections to stone or solid-cement walls should be added this further one, that, being thick, they exclude much light. A two-foot window in an eighteen-inch stone wall will not admit nearly so much light as the same-sized window in a four-inch frame wall; and, besides, will greatly hinder the distribution of that light throughout the stable. This latter objection, of course, applies equally to the hollow cement wall; but, in other respects, the hollow wall is much superior to a solid wall of the same material and thickness.

Here is another fact to consider in comparing the humidity of stone and frame stables. In the average wooden wall there are a good many chinks and crevices which provide accidental ventilation, and these ventilating currents carry off some of the moisture from the animals' lungs. Still another point: The wooden wall transpires a certain percentage of moisture through its tissue on much the same principle as the seasoning of a log, which eventually dries out clear to the center, by the moisture being drawn along, sponge-like, from the inner to the outer particles. So we see the wooden wall tends to rid the stable of moisture not only by means of the air currents passing through the chinks and crevices, but by the transpiration of moisture through its fibres. Prof. Day's experiments on this point show that

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL
IN THE DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

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

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers of any publication in Canada.
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3. ADVERTISING RATES.—Single insertion, 25 cents per line, agate. Contract rates furnished on application.
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there is more in this transpiration theory than he himself had been inclined to expect. This explains in part why a stone house is so cool in summer, especially if kept shut up and not provided with large windows to admit sunlight. So far as the summer is concerned, one might prefer stone houses and stables, but, by converse reasoning, we perceive the objections to masonry walls as winter stabling, particularly for hogs, but in less degree for other stock, also. A stone building, unless heated by artificial means, is inclined to be damp. There is no doubt but that masonry has certain distinct advantages as a material for construction of stables, but there is just as little doubt that walls of wood, paper and shavings or sawdust, insure a drier, pleasanter and more sanitary stable atmosphere. The important question is whether by any means we can bring about an improvement of the conditions in the stone or concrete stabling. By using hollow construction, we may lessen the amount of heat wasted by conduction, thereby permitting the admission of larger quantities of fresh, cold air to displace the damper and more or less foul respired air. Those who have yet to build will do well to weigh carefully the advantages of frame construction, with shavings between the scantling. Those who must build of masonry, should consider carefully the advantages of using cement blocks or building their slop walls with a core, and should not fail to provide plenty of windows and doors. Those who already have stone or solid cement walls may well consider the proposition of lining them with boards. Every consideration points to the desirability of well insulated walls and free ventilation.

To many Canadians, the most disturbing argument against reciprocity is the fear that it may endanger Canadian loyalty. While respecting the fears of those who think this way, we would again point out that reciprocity worked the other way in the past. And why not? Does it endanger one's loyalty to his family connection to sell eggs and butter to a merchant who is not a relative when, by so doing, he can get a better price than by selling them to a cousin in a distant town?

Country and Town.

At the present juncture, when so much is being heard on the subject of rural life and rural prosperity, the appearance of a book entitled, "Rural versus Urban—Their Conflict, and Causes" (*), by an American traveller in Europe, John W. Bookwalter, is of timely interest. It is a study of the natural and artificial relations of these two great interests, with a view to reaching conclusions that will assist modern nations, such as the United States and Canada, in avoiding the perpetuation of errors that destroyed great historic states in the past. One conclusion is obvious, that the moral health and continued stability of the state is promoted by keeping agriculture at least on a par with town life and industries. In rural life rests the security of the future. He idealizes France, with its "elastic tariff," scientifically adjusted to preserve the balance between agriculture and town industries, and its communal centering of farming population in villages, whereby its voting or political power is preserved and made effective. In France, nearly two-thirds of the people find healthful occupation on the land, and, by preserving the supremacy of that industry, despite her periodic tempests of social and political passion, her onward progress is steadily maintained, and financially she is the envy of the nations. Mr. Bookwalter probably does not give sufficient credit to the thoroughness of the French system of agriculture and the natural thrift of the French country people, particularly the French housewives. He argues that extreme free trade and protection, respectively, in England and the United States, adversely affected agriculture, but seems to overlook the baleful effects of the land-tenure system of England, which has locked the people away from the land. It is shown that dire results followed the rapid settlement and expansion of grain production over the vast, fertile area of cheap land in the Trans-Mississippi basin. It must not be overlooked, of course, that the sudden increase in wheat production in the prairie belt was largely due to the advent of the self-binder and other machinery. "In its entirety, however," he says, "it would seem that it was the railways, with their affiliated interests, the manufacturer with his special advantages, the money-lender of the financial centers, and the speculator with his manipulative methods, which absorbed about all the wealth that the farmer's toil directly produced in the Trans-Mississippi territory, at least during its early history." If there is not in these statements of conditions and results a powerful admonition to the Canada of to-day, we would hardly know where to look for one more effective. While he seems to discern the possibility of a conserving, but not creative, quality in the protective principle, he is forced to acknowledge "the sinister presence therein of that easy perversion of economics that becomes the most formidable instrument ever wielded by cunning and avarice, not only to arrest the laws of nature and trade, but to divert them from their proper courses in order to promote the cause of special interests and to further the selfish aggrandizement of class. We refer, of course, to the high-protective and prohibitive tariff laws." "To what remedy alone," he asks, "are we driven to restore that just relation of the two capital elements of our national economy upon which the integrity and stability of the whole depends? The remedy is obvious, and approved by nature: Sweep away those legislative measures and fiscal agencies that essentially operate to produce an unnatural distribution of the nation's varied products, and let the diffusion of the fruits of the nation's increase be a natural and equitable one." And again, on his concluding page he says: "The agrarian rights and powers of a people should be ever more vigilantly safeguarded by holding urban aggression and power under salutary restraints, and thereby placing them both on the same common and enduring basis of equity."

(*) Publishers: The Knickerbocker Press, New York.

Opportunity of a Lifetime.

Editor "The Farmer's Advocate":

It is certainly amusing to notice in your columns occasionally the expressions of some who really work themselves up to the pitch of believing that the present reciprocity agreement with our American neighbors, if carried into effect, will result injuriously to the Canadian people, and that your "undisguised friendliness" to the agreement surprises them.

The remarks of Mr. Scratch in your recent issue, is a very good sample, although I am pleased to pay him the compliment of discussing the question upon its merits, so far as he goes, which cannot be said of too many of the deliverances which we notice.

If there is one fact, more than another, of which the farmers of Canada should be proud, it is that all the leading agricultural journals of the country have effectively shown that their management is "big" enough to discuss this question from the broad standpoint of the national welfare; and that, from this exalted point of view, and without exception, they are enthusiastically in favor of ratifying the agreement.

Take, for instance, my friend's argument on the horse question. After telling us that the Western Provinces constitute the greatest horse market in the world, he goes on to try to make us believe that it will be ruinous to Ontario and the East if this agreement is ratified and our Western farmers can get their horses from the South. If that is so (and I dispute it), what does it mean? It simply means that our Western farmers will be able, then, to get better value for their money in buying horses across the border; and if my friend were a Westerner, he would be enthusiastically in favor of the scheme.

We, as agriculturists, must realize that the Government of this country is commissioned to legislate for the whole of Canada, not any sectional part of it. According to his own argument, he has shown that this will be a good arrangement for the Western farmer. If his argument proves to be true in any sense, it can only apply to the very medium and inferior grades of horses—classes of animals which no Government should encourage their farmers to grow. What about the best classes—the good drafters and gentlemen's good driving, saddle and carriage horses? These are the animals which always bring the profitable returns. He seeks to belittle the great horse market of the big cities of the Eastern States. If this agreement materializes, Ontario and Eastern breeders will still have the Winnipeg, Montreal, and other Canadian markets, and, in addition to these, they will also have the great cities of the Eastern States, which really is (speaking from the past experience of Ontario dealers, and for the years that are to come) the greatest market of the world for distinctly high-class animals of these two sorts.

Every old horse-dealer and breeder can well remember how we always looked for our best prices from the "Yankee" dealers, as we used to call them; and when these purchasers are again allowed the freedom of our market, and can step on the train in the evening, and be up into Ontario the next day, I predict (although no prophet) that they will again be welcome visitors.

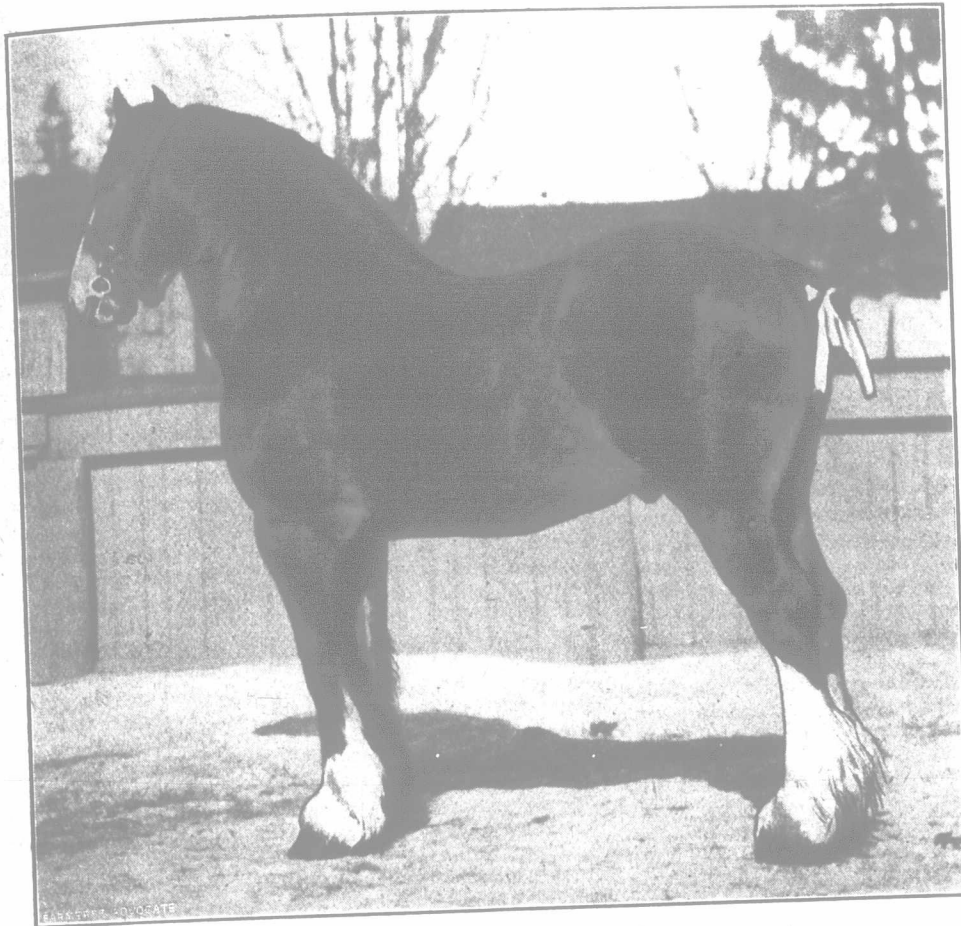
Ontario horses, being reared in the harder climate, and nourished on the muscle-forming oat grain, used to have a distinct preference over American corn-fed horses in their own market; and, without doubt, they will command this preference again. So that, in the matter of free horse markets between the two countries, speaking broadly, Canada has everything to gain, and very little to lose.

Then he talks about fruit. If we only consult the last published trade returns (year ending March 31st, 1910), we find that 48,272 barrels of Canadian apples jumped over the American tariff wall of 75 cents per barrel into the American market. That shows how the free-trade wind will blow. Ontario can grow the best apples in the world, and the rich Americans are bound to have the best.

In small fruits and vegetables, prices will be equalized to the general consumer. They will get this early American produce (before similar Canadian products are ready to market) the duty less than they have to pay for such produce now, and Ontario producers will have the benefit of the big American market later on in the season.

When we come to high-class beef cattle, this is the line of which I have made a study. It gives me my bread and butter. I have taken a leading American live-stock journal, and carefully watched the trend of prices in both countries for years. To one who has done so, it is surprising what nonsense is being written and expressed by those who oppose this agreement. Had I been allowed free access to the American market for my season's turn-over of beef cattle for the year ending September, 1910, I am safe in saying that my returns would have been at least an additional \$1,000. This arrangement will, if effected, prove a Godsend to the Ontario grower of high-class baby-beef.

Every Canadian citizen, and more particularly



Sir Crossley (imp.).

Clydesdale stallion; brown; three years old. Imported by T. H. Hassard, Markham, Ont., and sold to R. J. Norton, V. S., Owen Sound. Sire Baron of Buchlyvie; dam by Enigma.

every Ontario farmer, should deprecate the turning of the ratification of this agreement into a party issue. This has never been a party question in this country. Both political parties have most earnestly desired it in the past. From the time of the abrogation of the old Reciprocity Treaty, in 1866, that great statesman, Sir John Macdonald, spent his life sedulously endeavoring to bring about a similar trade arrangement. His very last appeal to the country was for a further mandate from the people along this line. And now, when we have it almost within our grasp, why should we allow the professional politicians of this country to divert us from the course?

In the past, a spirit of blinded partyism has been the greatest curse with which the Canadian farmer has surrounded himself. By it he has made himself the football of professional politicians to such a degree that, to-day, he has no effective voice upon the floor of Parliament. If he will only profit from the action of other industrial lines in this country, and give the timely warning that, henceforth, the true interests of Canadian agriculture are his politics, he will at once awaken the dawn of a better day, which will place the public life of this country on a higher plane, and enable himself to sufficiently vindicate the pre-eminence of his position as a member of this all-important industry.

This present issue furnishes the opportunity of a lifetime to the farmers of Canada, and if they will only follow the lead of the "big agricultural journals," they will be guided wisely through the storm, and into the free and open ports beyond.

Huron Co., Ont. THOS. McMILLAN.

Change Would Be for the Better.

Editor "The Farmer's Advocate":

Your correspondent from Essex County appears to me to take a very narrow view of the reciprocity question, from the standpoint of a Canadian, and not simply a resident of Essex County. Take the horse question. He does not mention that there is not a year passes but some of our best draft horses find their way to Detroit and Toledo markets, though the duties amount to from \$50 to \$60 per head, but makes a point of the fact that horses 21 years old can be sold as high as \$100 each. What do these figures mean? Simply that the producer of good horses is under a handicap. The settlers in the Northwest, who are usually the purchasers of the cheap horses, or those termed "serviceably sound," has to pay two, or, in the case of the man who bought the 21-year-old mare, three times what the animal is actually worth. And our Government are actually putting a hardship on those who are striving to west a home from the great bare prairie by not allowing him to buy his first team where he can get them the cheapest. The Government is spending large sums of money to settle the Northwest, the homesteader is usually a man of small means, few of them can afford a really good team. At the present time, a "serviceably sound" horse, 21 years old, will cost him \$100 and send him to the Northwest.

Fire and Axe.

"That for every foot of timber which has been cut in Canada by lumbermen at least seven feet have been destroyed by fire," is the startling statement made in a bulletin by H. R. MacMillan, one of the assistant Inspectors of Forest Reserves, a technically-trained forester, and frequent correspondent to "The Farmer's Advocate." Senator W. C. Edwards, president of the Canadian Forestry Association, and one of the best-known and most successful lumbermen of the Ottawa Valley, is on record as saying that in that valley ten times as

much timber has been destroyed by fire as has been cut by lumbermen. The bulletin concludes with a summary of Canadian forest fires during the year 1909 (in which, however, figures for Quebec are not included). This year was not a bad year for fires in the forest, the value of the timber and improvements destroyed being \$210,400 (timber being valued at \$1 per thousand). The expense of fire-fighting (Government and private) amounted to \$331,821.42. Except for this fire protection, the loss would undoubtedly have been much greater.

Reciprocity would benefit the breeder of really choice horses, and be a boon to the homesteader who has to use cheap horses to get started in the world. Now, a patriotic citizen and loyal Canadian should be willing to sacrifice a little to help his brother Canadian in starting a home that will help to build up the empire. Would it not be better to assist in the growth and expansion of our country than to simply watch it for several decades, as your correspondent says he has done?

Then, when considering the fruit question, he does not take the broad view. Why should not apples and peaches be as free to enter Canada as oranges and bananas? How can our Prairie Provinces expect to get their fruit from a Province that has to import apples from California?

One would infer from your correspondent that Pacific Coast growers were dumping their apples on Essex County markets, and crowding our own product off the market, when, as a matter of fact, there are no Essex County apples. We have to buy Pacific Coast apples, or go without; and, at the prices being paid, Australia growers could ship to us at a profit. Essex can grow apples just as good and just as cheaply as California, but it doesn't. The fruit industry is not in its infancy in Ontario, but in its dotage.

If corn had not been placed on the free list several years ago, what consternation the corn-growers would have had. The measure was opposed, and ruin predicted. Cheap corn from the Western States would make it unprofitable for corn to be grown in Canada. But such has not been the case. In this year of scarcity in Canada, the corn-growers here are availing themselves of the cheap corn of the United States, and are bringing in great quantities. They would suffer a hardship if they were not allowed to do so.

And in other things we farmers can be made to fear the wily politicians, who have really something besides the farmers' interests at heart, that reciprocity would injure us. But it will not be the case. Should the negotiations be successful, individually we will see little change; but what there is, will be for the better. Two neighbors can get along without each other all right, but it is much better to be on friendly terms.

J. O. DUKE.
Essex Co., Ont.

The C. P. R. as Farmer.

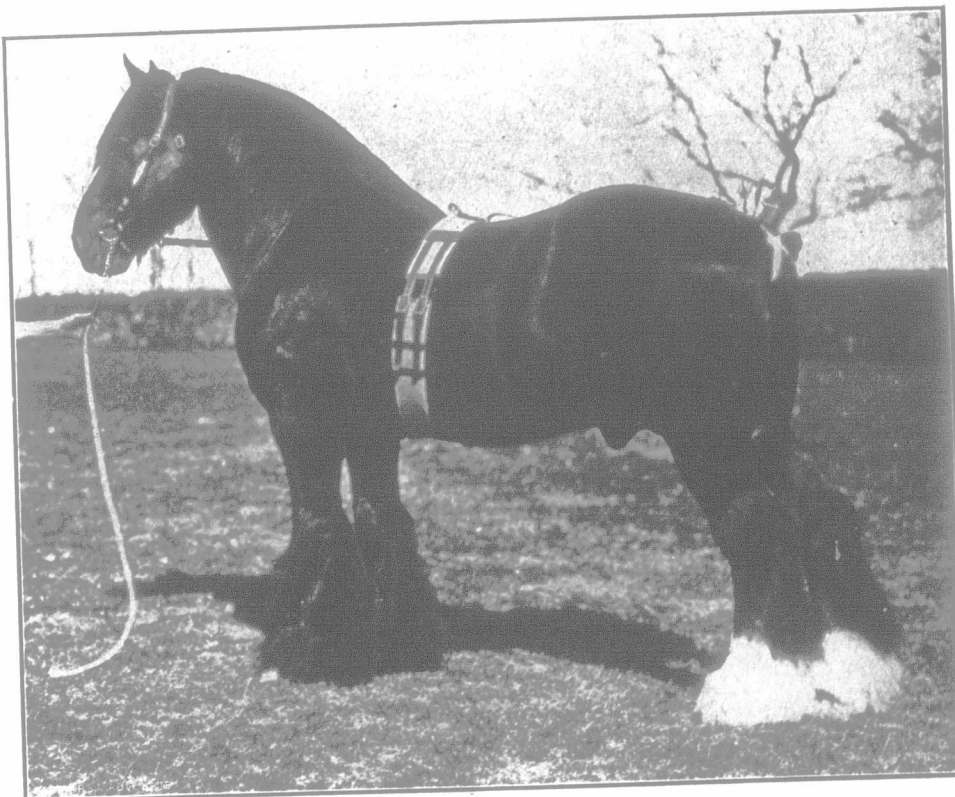
The Canadian Pacific is making use of about 400 acres of its farm of 480 acres lying about 12 miles east of Winnipeg for nursery purposes. The object of this large nursery is to grow trees, shrubs and hardy perennials suitable to Western conditions, for use along its line, the trees to be planted for shelter belts along the main line, and the shrubs and perennials for the decoration of station gardens of the West. These are to be shipped to section foremen and station agents, who will be instructed by an expert horticulturist how to plant the material, and how to lay it out to the best advantage. As a side line to the nursery, and for the purpose of crop rotation, vegetables and a small amount of grain are grown each year. As the C. P. R. is not accustomed to running any of its many lines of business at a loss, they wish to make this land produce to its limit. They are, therefore, subsoiling, liming, fertilizing, and keeping careful records, so as to determine whether these operations pay.

There is a greenhouse for propagating bedding material for the larger parks along their lines. About 100 pure-bred Plymouth Rocks are kept as a side line to consume by-products at the nursery, and, incidentally, to supply eggs and chickens for the dining cars, and thus reduce the running expense.

HORSES.

Hair on the Shire.

A good deal of discussion is going on in England just now among Shire breeders as to whether or not the Shire should be bred with less hair. Opinion seems about evenly divided. Some breeders favor breeding clean-legged horses, believing such will find better sale, whether it be to work on the farms or in the cities, or for sale as breeders on this side of the Atlantic. By some it is claimed that hair is protection against such diseases as grease, scratches, etc., and an indication of plenty of bone, while those against the hirsute adornment claim that it really favors the diseases it is supposed to prevent, is more useful to conceal faulty formation of the foot and ankle than it is valuable as an indication of the quantity and quality of the bone underneath it. As a rule, hair is condemned as a useless ornament, detrimental, rather than advantageous, to the draft horse—a finishing touch that is useful for show purposes, but not yet shown to be of any commercial value. Says the Farmer and Stockbreeder: We are not unmindful that in the past all the great Shire sires have been horses very full of hair, and that naturally their produce



Gaer Conqueror (25218).

Shire stallion; bay; foaled 1905. Supreme champion London Shire Show, 1911. Sire Montford Jupiter.

would inherit the same hirsute tendency; but that does not prevent recognition of the necessity for moderation in hair, as in other things. If we are to live for the present, then we unhesitatingly say breed the class of horse that has been making so much money of late. So long as there is weight and quality of bone, it is immaterial whether there is plenty of hair or little of it, for the gelding market; but what is of importance is that a valuable field is being entirely neglected simply because the ideals of the English and American breeders represent a total antithesis in the matter of hair.

We can understand that for show purposes the idea of exhibiting horses with only a little feather on the legs would be repugnant to those who have so long been accustomed to exercise all their art, with so much success, in keeping the hair on limbs and body. But, as every breeder admits, prize stock, although a highly important section, are really a very small and insignificant minority so far as the number of Shire horses bred are concerned. It appears to us to be a business provision for the future to look more to the horse and less to the quantity of hair he carries. The weight can be obtained in the Shire with more success than in any other type of draft horse, and, in the end, that is what we come back to. What farmer cares how much hair he has on the legs of his mares if they work well? What city contractor pays more for his geldings because they have plenty of hair? The actual commercial trade is not favorable to as much hair as is carried by show animals, and so long as we encourage the exercise of every art not only to grow hair, but to increase the already large quantity, so long shall we shut out our very best horses from the possibility of going abroad and establishing a lucrative trade in other countries.

English breeders seem to be becoming seized of the fact that the rapid extension of demand for Shires on this continent depends upon how well they conform to the type of the breed to the ideal that holds on this side of the water. The American horse-user has shown a strong preference for clean-legged horses, and in this country hair is in less demand than substance and real bone quality. It would probably pay English Shire breeders to trim their sails accordingly. They might take a hint from the Clydesdale breeders' experience in breeding for trade on this side, but should be careful never to sacrifice size to secure the type they believe to be desirable.

Pink Eyes—Hard Feet.

1. Stallion has pink eye. How long will this remain in the system and affect mares bred to him?
2. What will soften hard and brittle feet?

W. W. B.

Ans.—1. Stallions suffering from that form of influenza known as pink eye are supposed to be liable to infect mares bred to them for several weeks after an apparent recovery. Some claim that it is unsafe to breed such stallions at all during the season in which they have suffered. It is not possible to say definitely how soon after an attack it would be safe to breed, as there is so much difference in the individuality and constitution of both stallions and mares. Say, from six weeks to three months.

2. The best way is to apply a blister to the coronets every four weeks. The application of poultices also gives good results, or allowing the horse a few months' run on damp pasture. V.

LIVE STOCK.

Why are Stone Stables Damp?

"Stone" stables are more damp than wooden ones. Why? Is it because frost forms on the inside of the wall, or is this a result of the excessive dampness? If the latter, why the dampness?

Let us consider two basement stables of same size and internal construction, standing side by side, therefore subject to the same weather conditions, and both containing the same number of horses, cattle and other stock, the one having a wooden wall, the other a stone one. Let us suppose, further, that the stables are kept at the same temperature. Then, from a scientific standpoint, should the air of one be more damp than that of the other?

Two years ago, D. E. McTear, one of our students working upon this subject, performed the following experiment: He took a number of porcelain basins, 5 inches wide by 1½ inches deep. Into each he put water three-quarters of an inch deep. Two of them he left uncovered. Into two others he fitted closely a cover of pine board ½ inch thick, the fibre of the wood thus being horizontal. The crack between the edge of the cover and the side of the basin was sealed with paraffin wax, so that any moisture that escaped must pass through the wood, crosswise of the fibre. A third pair were fitted with covers cut from the end of a pine block, so that the fibre ran perpendicular;

hence, any water escaping from these must pass through the wood lengthwise the fibre. Other pairs were set up with cracks in the covers, and still others with auger holes. When they were all prepared, they were set side by side in a room free from drafts. At the end of twenty days, all water in the open basins had evaporated; 55 per cent. had escaped through the covers with fibre perpendicular, and 15 per cent. through those with fibre horizontal; i. e., 55 per cent. had escaped lengthwise the fibre, and 15 per cent. crosswise. One saw cut across the cover, or one-half inch auger hole added from one to two per cent. to those amounts. The result was a surprise to us. Calculating 15 per cent. of the water and the volume of the empty part of the basin, we find that the water that passed crosswise through the fibre of the pine cover was sufficient to saturate the air in the basin 140 times per day! Of course, conditions were extreme—the air in the basins was saturated with vapor, and that outside very far from saturation. And the cover was a thin one.

This experiment throws a flood of light on the stable problem. The wooden stable allows water vapor to pass out through its entire wall surface in the same way as the pine cover of those basins did, but much more slowly, because the walls are thicker. The action is accelerated by cracks, knot-holes, etc., the more so during windy weather. The liquids in the stables evaporate, striving to saturate the air, but through the pores of the wood, the cracks and the crevices, the vapor is dissipated so rapidly as to keep the air far from saturation.

A stone wall, on the contrary, is almost non-porous, and the only escape of moisture is through the cracks and holes. Consequently, it would seem natural, in the light of this experiment, to expect a wide difference between humidities in wooden and stone stables.

Even so, why should frost collect so thick on the inside of the stone wall, while scarcely any collects on the wooden one? Stone is a better conductor of heat than wood. I find, by consulting authorities on this point, that stone conducts heat about fifty times as fast as wood, the thickness being the same in both cases; loose, dry sand, ten times as fast as wood. Now, the conductivity of a wall composed largely of stone, with some mortar, consisting of sand run together with lime, must lie somewhere between these limits, and closer to the upper than to the lower. Consequently, a stone wall must conduct heat at

south-west. Why? The warm air travelling from the southward towards the north becomes cooler and cooler, till at last some of the water is precipitated. The temperature at which this occurs is called the "dew-point." If the dew-point is above freezing, the precipitation will be in the form of rain; if below freezing, snow or hail. The more moisture in the air, the sooner the dew-point is reached and precipitation begins. Now, the very same thing goes on in the stable. The cold stone wall cools the air below the dew-point, and moisture is deposited on the wall. If the dew-point is below freezing, the wall has frost on it, but, if above freezing, water. The inner surface of the wooden wall, being much warmer than that of stone, and there being less water-vapor present, it cannot cool the air down to the dew-point, and so no moisture is deposited on the wooden surface.

Thus we see that the wooden stable is intrinsically drier than a stone one, because the wood allows the escape of moisture through its pores and cracks. We see, also, that the frost or water on a stone wall results from the high heat conductivity of the stone and the high water content of the air.

Another phase of the power of wood to conduct vapor through its walls and cracks should be noted. If these walls will transmit water vapor, they will likewise transmit other gases that are produced in the stable.

Now, if wooden walls emit water vapor and other gases, while the stone ones do not, then it follows that, to make the stone stables as wholesome for stock as the wooden ones, artificial ventilation must be introduced. This will remove much of the moisture, at the same time keeping the stable cooler and overcoming in some degree the deposit of frost or water. Any device that would render the stone wall a poorer conductor of heat would remedy partially or wholly the collection of frost or water on the wall. And the wooden stables themselves, although they are naturally the better ventilated, may be much improved in this particular by some system of admitting pure and emitting foul air.

WM. H. DAY.

Cow Ties and Mangers.

Editor "The Farmer's Advocate":

The question of "Best Kind of Manger," raised by a correspondent from Haldimand County, is one of considerable importance. It must be admitted, however, that in this, as in many other matters, no final pronouncement can be made at the present moment, nor is it likely that farmers will ever agree as to which is really the best kind of manger for cattle. Probably the brief consideration of a few points that might be considered important in connection with the selection of the type of manger to be used, would be apropos at this time.

In deciding upon the type of manger to use, and in the construction of that manger, certain features must be kept prominently to the fore.

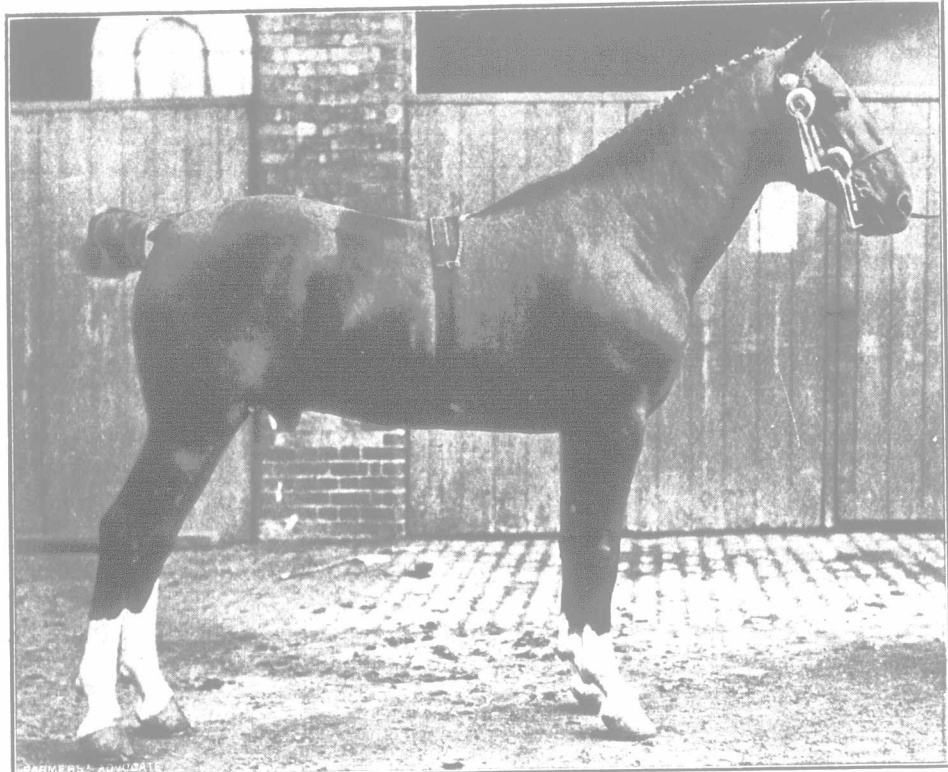
1. Convenience of feeding is, or should be, an absolute requirement in any manger, since lack of convenience means more time required, hence greater cost in caring for cattle.

2. Comfort for cattle. Mangers which do not contribute towards, or at least mangers which interfere with the comfort of animals, are to be avoided, since lack of comfort in any feature of the stable means less satisfactory returns, hence loss.

3. The hygienic qualities of the manger must be considered, since mangers which may possibly interfere with the best health of animals are just as likely, or more likely, even, to cause loss in the ultimate returns from the herd as either of the preceding features mentioned.

The types of manger most commonly seen are:

(a) The good old wooden-framed manger which enclosed the head of an animal in a species of frame or basket work, serving as a reservoir for



King's Proctor (11102).

Hackney stallion; chestnut; foaled 1908. Grand champion, London Hackney Show, 1911.

least thirty times as rapidly as a wooden wall of the same thickness. Usually, however, wooden walls are not solid, but consist of two thin walls of board, with air space between, this latter being frequently filled with packing of some kind. This structure is fully as good a non-conductor of heat as a solid wall, probably better. But the stone walls being much thicker than the wooden ones, the above ratio must be reduced, so that stone walls as we find them, making allowance for all factors, conduct heat from ten to fifteen times as fast as wooden ones. Consequently, we find the inner surface of a stone wall much colder than that of a wooden one. And it is this difference in temperature, coupled with the difference in moisture content of the air, that causes the one wall to coat with frost or water, and the other to remain dry. Warm air will hold more water vapor, and we are all familiar with this. Next, let our rains come from the south-east, or

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all the dust, chaff, cobwebs, dirt, filth, bacteria, etc., that could gather in a generation.

(b) The high-front wooden manger of more recent introduction, and, I am glad to say, of more widespread use to-day than the first-named ancient contrivance. This manger frequently rises to the level of the eye of the animal, and is usually closely built next the feeding passage.

(c) The cement manger, with the front or division between the feed passage and the manger, from 2 to 3 inches above the level of the said passage.

(d) The cement manger, with the feeding passage 6 to 8 inches higher than the bottom of the manger, and with no division or partition between the feed passage and the manger.

(e) The manger, or, rather, the entire absence of manger, where the feed passage or floor and the bottom of the manger are on the same level. In any of the above-mentioned types of manger it is possible to have a division between the cows in the manger, hence the question whether there should be a division or not, may safely be neglected in dealing with the advantages or disadvantages of the types mentioned. This division is largely a matter of the convenience or the peculiar requirements of the farmer interested. If he is anxious to keep track of the exact amount of feed consumed by individuals in his herd, then the divisions are probably necessary; otherwise, not.

Comparing briefly the advantages and disadvantages of the different types of manger, it would seem hardly necessary to spend any time upon the first-mentioned contrivance, which serves, as already mentioned, as a center of attraction for every description of dirt, and is absolutely inadmissible in a modern stable. The second type—that is, the high-fronted wooden manger—has several things in its favor. It holds the feed in front of the cattle, and prevents any danger from straining in search of food that may have escaped from the manger. It is, however, objectionable on two scores: (1) It is not as convenient a manger for feeding purposes as the third, fourth and fifth types; and, in the second place, it prevents free circulation of air around the animal's head while eating; and (2) on account of its peculiar construction is likely to prevent frequent cleanings, and so encourage the lazy feeder in allowing more or less decaying matter to gather, giving rise to evil odors, and allowing the mixture of more or less rotting material with the feed, as consumed day by day.

The low-fronted cement manger has the advantage over the wooden-fronted manger, that it is usually constructed to such a height only as will not materially interfere with convenience of feeding, and that any food tumbling over the other edge onto the feed passage is not likely to fall so as to be in sight of the animal, thus relieving her of any anxiety as to regaining it. Such a manger has also the advantage that, being low, and having a round cement bottom, it is much less likely to serve as an excuse for the lazy feeder, since any food left will be plainly in sight, and any but the most careless would feel called upon to remove the same from in front of the cattle at short intervals.

The fourth type of manger—that is, where the feeding floor is 6 to 8 inches higher than the bottom of the manger—is one that has many advantages, and some disadvantages. In the first place, if properly constructed, it retains the feed in front of the cattle quite effectually, very little escaping, excepting in cases where animals have, for some reason or other, formed the habit of tossing the head when eating. In the second place, it is the most convenient for feeding. In the third place, it is an exceedingly simple manger to clean out, and no possible excuse can be raised by the feeder for leaving any left-over feed lying in front of the cattle. It has the objection that, where no feed-room is in use, the feed passage in front could not very well be used for the preparation of the feed. Further, where the stable is not swept daily, it might lead to the gathering of dirt in greater or lesser quantities in this passage, which might possibly find its way into the manger, and so interfere with the quality of the feed received by the animals. It has, however, the great advantage of presenting absolutely no interference with the circulation of air in front of the cattle, and is undoubtedly the most hygienic of the various classes of mangers mentioned.

The fifth type of manger described, where the feeding floor and bottom of the manger are on the same level, is open to the objection that, as there is no boundary, the feed is almost sure to work away from what might be called the range of eating of the animal, and so excite efforts to reach some, which might have injurious effects upon the animals, sometimes possibly resulting in strained tendons, or even in broken legs.

Of all the types mentioned, I am inclined to favor the cement front or the raised feeding passage—that is, either third or fourth, as described above—with or without partitions between cattle according to the requirements of the feeder.

Stanchions have, I believe, come to stay. The chain stanchion permits of quite as great

freedom as could be given by any possible device for tying animals, and at the same time does away with the necessity for partitions between cattle, other than simple iron pipes, or some similar contrivance.

The chain tie is open to the objection that it is impossible to do away with the dust and dirt-gathering partitions, no matter where the chain is attached. Probably the most objectionable type of tie is the stanchion set in rigid frame, and the space between stanchions filled with a board or stakes to prevent animals reaching around. Such contrivances for tying animals are little short of barbaric, and the farmer who, in these days, installs such a system of tying his cattle should most certainly be prosecuted for cruelty to animals.

J. H. GRISDALE,
Dominion Agriculturist.

Ventilation.

Editor "The Farmer's Advocate":

Your correspondent from Haldimand Co. also asks for some information about ventilation of stables.

The ventilation of cattle barns is a simple matter, provided the proprietor or man in charge is willing to give it the necessary attention after having installed the proper system of ventilation. There are, however, two difficulties to be overcome before satisfaction is assured. In the first place, it is quite an undertaking to get even the most intelligent farmers to appreciate the importance of having an ample intake, and outlets sufficiently large to allow for the escape of foul air. The system once installed, if one may judge by what one sees in stables where ventilation systems are already in existence, it is almost as hard to persuade the man in charge to put the system into operation, or to allow the system of ventilation to operate, as it is to instal the system in the first place. Practically every cattleman, and many men who are not cattlemen, but who are looking after cattle, seem to think that their chief duty in looking after cattle is to protect them from the faintest vestige of fresh air in cold weather. Consequently, many stables, with ample provision for ventilation, may be met with where the air is heavy and damp, where the walls and ceiling reek with moisture, and where the cattle look depressed and dull—all due to the lack of fresh air.

After many experiments, and a thorough good test of practically every imaginable method of admitting fresh air, and allowing for the exit of foul, I have come to the conclusion that the most practicable, the most cheaply installed, the most easily operated, and the least likely to be found wanting under the greatest variety of circumstances, is the Rutherford system of ventilation.

This system allows for the admission of fresh air at or near the floor level. In arranging for the intakes, it is necessary to so construct as to direct the incoming currents of cold, fresh air upwards, rather than outwards or horizontally across the room. In arranging for the outlets, care must be taken to have same sufficiently large and as free as possible from bends or obstructions, in order to permit of the rapid escape of the warm, moist air. These outlets should, of course, begin at the ceiling, and if the ceiling

has different levels, one, at least, should start from the highest point of the ceiling. The outlets should also be controlled with keys, similar to those in a stovepipe, in order to have thorough control of the escaping warm air. Further, these outlets should extend a foot or so higher than the highest part of the roof of the building. They had better come out of the building at the peak of the roof, but may come out at any other point, provided that the shaft is extended to the height mentioned.

The capacity and arrangement of the intakes and outlets is a matter of considerable importance. In the first place, the total cross-section area of the intake should allow at least 15 square inches per head of cattle or horses included in the stable; that is, there should be about one square foot of intake for each ten head. The outlet should have double the capacity of the intake; that is, there should be at least 30 square inches of outlet for each head of cattle or horses in the stable.

The intake openings should be distributed in such a way as to permit of the air entering from as many sides as possible. No openings should, however, be less than 4 inches wide and 10 inches long. The intakes should not be controlled; at least, if best results are desired, it is not, generally speaking, advisable to put it within the power of the herdsman or cattleman to control the intake of fresh air. Of course, in extraordinarily cold weather it might sometimes be desirable to have some control over the intake, but this can be easily done by throwing a thin band of cotton or sacking over the opening, so decreasing the rate of inflow.

The outlets should never be less than 18 inches across. Shafts smaller than this are unsatisfactory. In the first place, they are almost certain to sweat; and, in the second place, do not permit nearly as much air to escape, relatively to their size, as do larger shafts.

The outlet shafts should, as already indicated, begin near the ceiling. They should also be placed as near the center of the building as possible. Further, the outlet shafts had better be constructed with two layers of board, with an air-space between. Sometimes, when constructed of single boards, matched, they prove satisfactory, but it is usually better to build of two ply of boards and air space.

J. H. GRISDALE,
Dominion Agriculturist.

Corn Silage for Steer-feeding.

Steadily the silo wins its way, not only into the dairy sections, but on the farms of beef-raisers as well. There is no question in anybody's mind about the value of roots for feeding cattle. No more should there be any doubt about the value of silage, notwithstanding the remarks we sometimes hear about "pickled cornstalks." Which is the better for feeding cattle, roots or silage, it is not necessary to discuss. Probably, on the whole, roots are rather safer, and may be preferred for feeding exhibition cattle, though even here a combination may give the best results. The great point in favor of the silo is that silage is a more economical food to produce than roots, at least in sections where corn does reasonably well. We believe this point was pretty reasonably dealt with by Prof. Day, when, in speaking at the Ontario Winter Fair, last December, he stated that, for



Shorthorn bull, twenty-two months old. Purchased by William Duthie, Collynie, at Birmingham Show and Sale, for 1,500 guineas.

mature cattle, such as cows or fattening steers, the feeding values of silage and roots correspond pretty closely to their representative contents of dry matter. Corn silage contains a great deal more dry matter per ton than roots, the totals being 26.4% for silage, 11.4 for Swede turnips, and 9.1 for mangels; although, in respect to protein, the difference is less, being 1.4 for silage, compared with 1 per cent. for roots. There is probably no crop, said Prof. Day, which supplies more feed per acre than the corn crop, though it is a somewhat one-sided food, and must be balanced with others containing a good proportion of protein, and must, also, on account of the acid it contains, be used with a certain amount of judgment.

Cattle-feeders are realizing, in larger and larger numbers, that, though they have fattened steers successfully with roots, they can accomplish the results more economically by using silage, albeit we have always stood and still stand fast to the opinion that it is advisable for most stockmen to use, also, a few roots along with their silage. A peck a day to an animal has a cooling and very wholesome effect, being relatively more valuable than double or treble the quantity.

Hollow Cement Wall.

Editor "The Farmer's Advocate":

The hogpen wall which I built three years ago is on a new plan, namely, the hollow cement wall, which I think is much superior to a solid wall, giving far better ventilation, and being much warmer. In studying out a plan for the erection of said wall, I was up against a rather hard proposition, as I had not the experience of others to help me along. Three prominent features were in my mind as being important in hogpen structure, namely, good ventilation, warmth, and pure water. It was to be built under an old barn, which had to be raised by the use of jack screws, the size being 26 x 56, with another bent added, making it 26 x 48 feet. The raising being done, attended by many difficulties, my next job was to dig a well, which I did, making sure to go deep enough so as to have a never-failing supply of water, the finishing of well being described later. The next work was putting in cement floors, troughs, and a stone wall to build cement upon. As timber was plentiful when the barn was built, the sills were one foot square, just the right size for my plan, which was to allow for a five-inch wall on the outside, and a four-inch wall inside, leaving three inches for hollow space. The inside and outside were firmly studded with an inch strip nailed on both sides of sills, to allow a wedge between plank and studding, that may be drawn out to slacken plank when lifting. The air-space was left by bolting two twelve-inch boards together, face to face, with 2½-inch bolts at bottom, and 2¼-inch bolts at top, countersinking head and nut half way through boards. Allowance was made for keys between boards, that may be drawn out so as to slacken boards before lifting. The ends of boards were sawn a little short on lower edge, so that, when being lifted, they would slacken. To bind the walls together, I secured old buggy tires, cut them in pieces 9½ inches long, and bent an inch at each end at right angles with the rest. I placed them across the open air-space about 2½ feet apart. The center boards for making air-space rest upon them until the cement is filled in. When the wall is completed, I think it will be just as firm as a solid cement wall 9 inches thick. It would be very much handier to build a hollow wall for a new building than under the old one.

The ventilators in wall were made by sawing 3-inch tile, 4 x 5 inches long, to suit the wall, putting the tile at the bottom on the outside and at the top on the inside, with a shut-off inside. A short block of wood, six inches long and three inches wide, bevelled so as to give it a firm hold in cement, is placed just above the ventilator on the inside. The shut-off board may be secured to block by a large screw. By means of the above shut-off board, one may control the ventilation according to the condition of the weather.

A wall constructed as described, with air-space in wall from bottom to top, does not frost on the inside nearly as much as a solid wall, therefore making the building much drier and warmer. This is a point of much importance, especially for sows and little pigs at farrowing time. The fresh air coming in at the east and west ends, also from the south side, forces the foul air up the ventilators on the north side. By the above system of ventilation, I have a hen-house and hogpen with the least objectionable odor of any I have ever visited. Having completed the walls, my next study was the finishing up of the well. In travelling through the country, and having had to use water from many wells under barns or near to barns, I have found the majority of them tainted with offensive smell and colored matter, so I thought I would make some improvement. I cribbed the well with boards, starting full size of well two feet below the rack, tapered it up to two feet in width at top, and put in my top 2 feet square with plank,

I then put a curb of cement outside the cribbing, mixed 1 to 6, eight inches thick, firmly pounded it in, filling in the outside of cement with stone, rounding it up about eight inches above the floor, and placed a pump therein. After three years' use, we have water as clear as crystal, without ever having seen a sign of color at any time in the three years.

I would advise anyone who intends to build a wall similar to mine to have their planks sawn 10 inches wide, have edges strengthened so as to prevent the cement from going through and leaving a ridge upon the wall. Planks should also

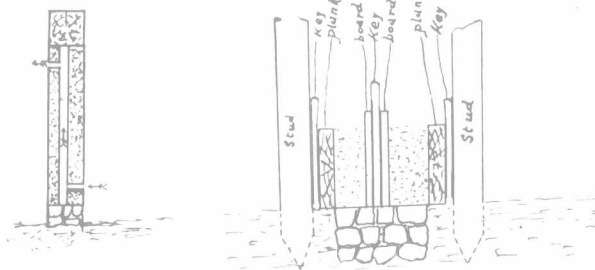


Figure 1.—Section of wall showing air space in center; also inlets for fresh air.

Figure 2.—Section showing planks and boards set for making the first "lift" of the wall.

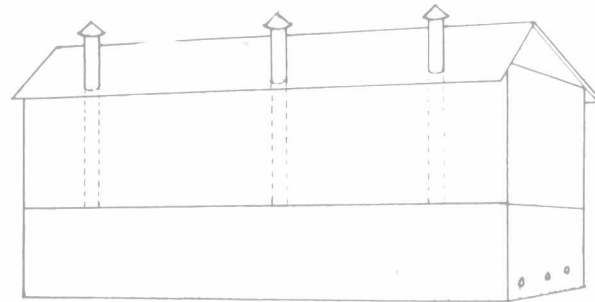


Figure 3.—View of barn, showing foul-air outlets in roof; also fresh-air inlets near ground.

be planed on both sides, as they are very liable to warp, and you can then turn them. Ventilation boards should also be planed the side which goes next to cement. Planed and bolted as described above, they may possibly be lifted without slacking keys; if so, it would save a lot of trouble. Form planks being planed would leave a wall with smooth surface, and save the trouble of plastering.

N. DAY.
Victoria Co., Ont.

Cement and Cement-block Silos.

We were interested to learn, a fortnight since, in the vicinity of Ayr, Ont., that quite a few silos are going up on the farms of cattle-feeders, and this is only representative of what is occurring in other progressive beef-making sections. As to kind of silo, there is some difference of opinion. For those who have not their buildings permanently arranged, the stave silo is to be recommended; some prefer it even as a permanent silo, and, when one uses good material, fitted together and well put up, it gives satisfaction. However, the majority of those who have their buildings permanently arranged prefer a cement wall; others prefer hollow cement blocks, which, though more expensive, look better, and to some extent reduce the trouble from freezing in cold weather. A few comparisons of the cost of cement-block and solid silos in the vicinity of Ayr will be read with interest.

John W. Maus has had a cement-block silo put up, 14 feet in diameter inside, by 35 feet high, for \$325. In addition, Mr. Maus hauled the gravel, dug the excavation, and supplied the water. The blocks are nine inches thick, about twenty inches long, and eight inches deep. Mr. Maus filled his silo last fall with 7½ acres of White-cap Yellow Dent corn, refilling once after it had settled three feet. It settled again about eight feet before feeding commenced in December.

A solid cement silo of the same height as Mr. Maus's, but only 12 feet in diameter, was built by William Manson at an expense of \$135, and \$35 extra for a roof. The contractor who built Mr. Manson's silo had an unfortunate experience, which it might be well for readers to note. It was undertaken, if we remember aright, late in the fall of 1909, and part of it collapsed twice in the course of construction, so that it was eventually left over until the next year. Mr. Manson thinks the mishap was probably due to the fact that the silo was built late in the fall, during cold, wet weather; and, as the contractor had only two frames, a section was left unsupported before it had properly set; the collapse occurred at the same point both times. This silo is eight inches thick from bottom to top, though a battered wall would be economical of material. The local contractor's ordinary rates for building a silo of this kind are \$135, roof and all complete. A very good feature of Mr. Manson's arrangement

is that the chute extends clear to the top of the silo, thus obviating the necessity of having a ladder outside by which to scale the silo when filling. The steep, conical roof on the silo is another good feature, as it is possible to pile into this a good deal of cut corn, which can be levelled down in a day or two as the fresh-cut corn settles. We should add that Mr. Manson supplied gravel and water, and boarded the men.

James Kyle is another believer in silos, having had one for a good many years. He is also a strong believer in alfalfa, which he finds the most valuable hay that can be got. He is of the opinion that, with plenty of good corn silage, alfalfa hay and roots, he can keep breeding cattle in good condition without any grain, and considers that such a ration is better for them than heavy feeding of meal. The thrifty condition of his herd lends convincing support to his opinion. Alfalfa and corn should go together. Corn silage forms the basis of an economical ration; alfalfa supplies the protein, which is somewhat deficient in the corn.

Goitre in Lambs.

Goitre in sheep is an enlargement of the thyroid glands on both sides of the windpipe, just below the jaws, and not unlike a kidney in shape and character. It is found most frequently in newborn lambs, and notable in late spring lambs whose dams have had too little exercise during the winter, and, having been liberally fed, are in high condition. The lambs affected with this disease are generally born weak, fat, and covered with a thin covering of hair, rather than of wool. Some die, giving a few gasps, immediately after they are born, others in a day or two, and occasionally one survives for months, but, as a rule, the enlargement grows until it affects the breathing and the thrift of the animal, and sometimes causes sudden death. Many reasons have been advanced for the prevalence of this goitre in newborn lambs, but experienced shepherds mostly attribute it to lack of exercise of the ewes and too liberal feeding of turnips or other roots. The writer, after experiencing many losses with such feeding, abandoned the giving of roots before lambing, and thereafter had no trouble with goitre. In cases where the lamb having goitre has strength to survive, the enlargement may be reduced by clipping the wool or hair from the part and painting it repeatedly with iodine; and, in the case of a strong, grown-up sheep suffering with this trouble, the cure is to cut into the growth quite deeply, and just as soon as it has ceased bleeding inject with a small syringe a small quantity of full strength tincture of iodine. The enlargement should also be painted with iodine at regular intervals, say once in two days.

THE FARM

How to Grow Corn.*

One of the essential points in growing corn is to have the land well tile drained. I would select clover sod, on clay loam, plow it in the fall, and in the spring apply nine loads of manure to the acre with the manure spreader. If not plowed in the fall, apply manure in winter. Plow early in the spring, in order to have the frosts pulverize the ground. If I hadn't the manure, I would use fertilizer when planting. When the manure is on, disk the land twice in a place both ways, then harrow it both ways with the smoothing harrow, and keep cultivating at intervals until planting time. Then, I would roll the land ahead of the planter.

The only proper way to select seed corn is from the stalks, standing where they grow, as soon as ripe, and before the first hard frost. Avoid the large ears on stalks standing singly, with an unusual amount of space around them. To induce the plant to produce heavily of sound, dry, shelled corn, is the important object. The kernels should be of a uniform size and shape, making it possible to secure uniformity in dropping with the planter. In testing, a few kernels should be pulled out, and if the germs are well covered, they will grow better than without being covered. It is a good plan to plant some kernels in a box, and keep them in the house at night, and put them out in the sun in the day time. Take care that you count the kernels, and then you can tell how many will grow. Plant as early in May as the ground and weather will permit.

Harrow both ways as soon as you see the corn coming up. If the ground is dry, as soon as you can see the corn nicely in the row, start the two-horse cultivator. When the corn is about five inches high, hoe it, and then cultivate it both ways until it is too tall for a two-horse cultivator. Then cultivate it with a one-horse cultivator, so as to keep the soil in good condition and to liberate plant food.

When the ears are all well glazed, get a good corn binder and cut it. Have a sheaf-carrier on it, so as to place the sheaves in rows, to save steps when shocking. Set up in good-sized shocks, and tie with binding twine around the

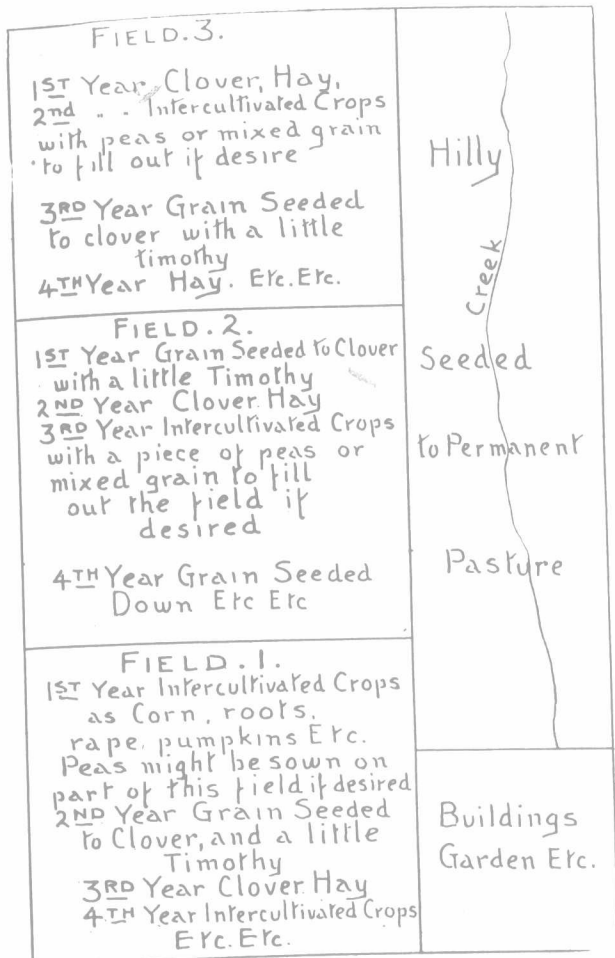


Fig. 1.—Three-year Rotation.

top, so as to prevent from falling down. Husk by hand if you can get the help, for it is a much nicer job when finished than when it is done by machine. The shredder shells corn and leaves a lot of husks on the ears, and, besides, the stalks keep better than the fodder, for it generally heats and moulds.

When once the stately forest trees
Their waving branches spread,
We now look o'er the smiling land,
And see corn fields instead.

*From an essay by James D. Dunlop, age 11, Union School Section No. 1, Chatham and Camden, Kent Co., Ont., winner of silver medal given by the Kent Farmers' Institute at Corn Exhibition, Chatham, Jan. 31st to Feb. 3rd, 1911. The competition was popular. Nearly every school in the West Kent Inspectorate contributed essays.

Crop Rotation: What, Why, and How.

WHAT ROTATION MEANS.

Public experiment and private experience combine to prove the marked advantage of crop rotation in securing maximum yields, while at the same time cleaning the land of weeds (or keeping it clean), combating insect ravages, and building up fertility. Crop rotation is no new thing, neither is it difficult to understand. It simply implies a systematic change of crops on each field, according to some definite and recurrent plan. Once started, it is as simple as one, two, three. To commence a rotation, one makes a mental survey of his farm, deciding what part would be best the coming year for corn and other hoed crops, what part for grain, and what part for meadow. Then, having divided his arable land into three or six, four or eight, five or ten, fields, according to the rotation he proposes to follow, he commences with a different crop on each field, but subsequently follows the same order on each, so that he has every year on one field or another a reasonable area of every kind of crop he wishes to grow. Barring disturbances due to seasonal adversities, it runs with the regularity of clockwork. Once started, it runs itself. To be sure, there will be occasional upsets, due to such causes as failure to secure a catch of clover. In these circumstances a man must use his wits, striving to improvise some arrangement or substitute some annual crop which will enable him to tide over the break without throwing out his whole plan of rotation. It is worth noting, in this connection, that the improved soil conditions resulting from a proper system of rotation go to reduce the chances of such failure, and if one follows the very wise example of Prof. Grisdale, of Ottawa, using large quantities of clover and grass seeds, his chances of missing a catch are reduced to a minimum; while, as another direct result of this policy of liberating seedling, he will obtain surprisingly large, even crops of fine hay. It is worth making a very special effort to avoid failure of the catch of seeds, because this is about the only cause that can really embarrass one in his attempt to adhere to a definite rotation.

REASONS FOR ROTATING CROPS.

We have defined the main objects of crop rotation as being to secure maximum yields, keep the land clean of weeds, to combat insects, and to build up fertility.

As to the first and last, we have seen run-down farms built up wonderfully in six or eight years by the practice of a three-year rotation. The frequent growing of clover is largely responsible for this, but, in addition, it is found that a three-year or four-year rotation provides each important crop with the conditions favorable for maximum development. For instance, the vegetative crops, those grown for their root and stalk, make especially good use of the nitrogen and humus resulting from the decay of a clover sod. This is due not only to the nature of their plant-food demands, but also to their late season of growth. A grain crop is harvested too early to derive full benefit from the decaying sward, and much of the nitrogen in the inverted sod is being liberated at a time when the requirement of the cereal would be better met by less nitrogen, and a more abundant supply of phosphorus to develop the seed or grain. Another reason that the cultivated crops make better use of a sod is that the summer cultivation given them helps to rot the sod; while, when grain is sown after sod, more or less grass is liable to grow up and hinder the growth of the crop. To get the best results,

inter-tilled crops, will deny the efficacy of this method. It will subdue almost any weed that grows in Eastern Canada, with the possible exception of bindweed and perhaps one or two others of our most noxious perennials. We are not sure but that it would subdue bindweed, and propose to give it a trial this summer, if convenient. A corn or root crop is but little more expensive to cultivate than a bare fallow, while the returns repay all the labor, pay for the rent of the land, and yield a snug profit, besides. Following by use of intercultivated crops is sound economy.

Likewise, a rotation such as described above, is the best known means of controlling ravages of such injurious insects as wireworm and white grub

EXPERIMENTAL EVIDENCE.

If experimental evidence is desired to prove the advantage of rotation, we have it in plenty. For example: Wheat grown at the Minnesota Experiment Station continuously on the same plot since 1894, shows an average yield of 18.6 bushels per acre since 1900. Grown in three-year rotation since 1900, the average yield has been 20.6 bushels per acre. No manure being given the plot, the increase must be credited alone to rotation, the seed and other conditions being substantially the same.

Corn grown at the Experiment Station continuously on one plot since 1894, has given an average yield since 1900 of 24.4 bushels per acre. In a three-year rotation of wheat, clover and corn, the corn yield has averaged 45.2 bushels per acre since 1900, showing a difference of over 21 bushels increase, due solely to rotation.

CHOOSING A ROTATION.

The desirability of a rotation being admitted, the question that follows is what one to adopt? In deciding this, one should consider his farm and system of farming. First of all, let him eliminate from his rotation area any land too rough to work advantageously. Three things may be done with this area. Very rough or rocky areas may be planted to trees, which are often the most profitable crop to grow on such soil. Land that is adapted to produce pasture may be devoted to this latter purpose, being broken if feasible, and seeded with a regular permanent-pasture mixture, as Prof. Zavitz recommends. Even if there is no rough land, it may pay very well to seed down a back field this way, allowing the live stock to manure it and harvest the crops. Land that is too steep to plow very often, but not too steep to mow, is usually ideal for seeding to alfalfa, to be cut for green feed or hay.

Having thus disposed of the inarable area, it remains to be considered what quantities or proportions of the various field crops can be grown and utilized to advantage on one's farm. This will depend a good deal on the number and kind of live stock kept. Without offering any comments here, save the suggestion to farmers in corn-growing regions to grow plenty of that very profitable cleaning crop, we proceed to remark that the rotation one chooses will be decided largely by the relative proportions of hay, grain and hoed crops that he desires to grow on his farm. Everyone, therefore, must work out his

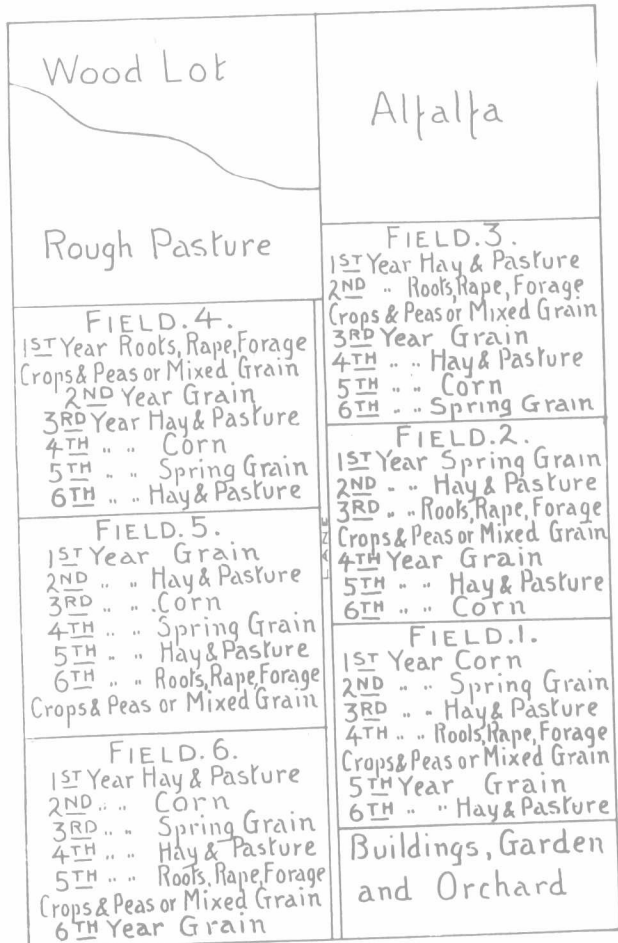


Fig. 2.—A Rotation within a Rotation, amounting practically to a Six-year Rotation on the three-course principle.

then, with hoed crops, especially with corn and potatoes, they should be planted on inverted sod. A partial exception might be made in the case of the roots, which do not prefer a tough grass sod, though on a friable clover sod they will do well, and for various reasons it is best to have them come in the same order of cropping as the corn.

Not only does an inverted sod provide most favorable conditions for most of our hoed crops, but the cultivation given these brings the land into that fine state of tilth desirable for grain crops, which should usually follow the hoed crops, without any further plowing of the land. So we have favorable conditions provided for two crops. Furthermore, the land is now in ideal condition to seed down to clover once more. As a rule, it is better that no field should be out of sod for more than two years at a time, and, conversely, it is usually better not to leave any in meadow more than one or two years, to become sod-bound, grassy and mossy. "Seed often and break often," should be the motto. Thus we get the benefit of frequent clovering, which enriches the soil in nitrogen and humus, renders it friable, and opens up the subsoil by its taproots. Rotation conserves fertility in the best modern sense. It is also believed by scientists to minimize the development of certain fungoid and toxic influences which lessen thrift and reduce yields when a certain kind of crop is grown year after year on the same soil.

No one will deny the advantage of keeping our farms free of weeds, and no one who has tried cultivating thoroughly a field of corn or other

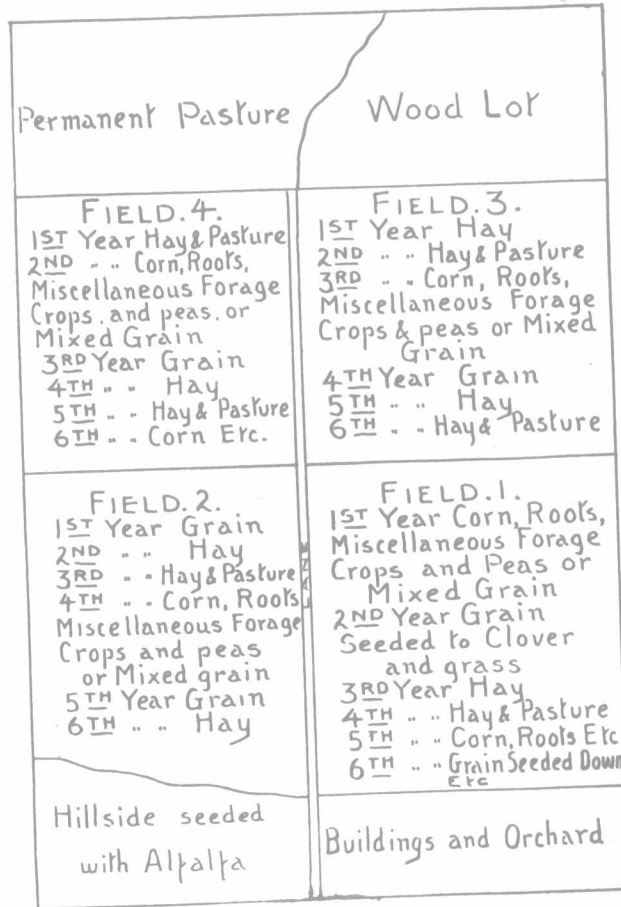


Fig. 3.—Four-year Rotation.

own rotation; but, in doing so, let him observe a few cardinal principles.

Seed down to clover every three or four years. Do not leave the rotated fields more than one or two years in meadow. Break often, seed often.

The two foregoing principles point to the desirability of a three-year or four-year rotation.

Work in a hoed crop once every three or four years, if possible, and on no account less often than once every six or eight years.

Always endeavor to put hoed crops on inverted sod, followed by grain seeded down.

Spare no effort to preserve the regularity of your rotation. Make a shift when necessary, but make one that will bring the field ultimately around to its regular course.

By using abundance of clover and grass seed, strive to prevent a failure in the catch of seeds, as this is the only failure that can seriously disarrange one's rotation.

SAMPLE METHODS OF ROTATION ILLUSTRATED.

By way of suggestion, we have prepared diagrams of three rotation plans. The first one shows a simple three-year rotation, as followed very successfully for some years on the farm of F. W. Hodson, in Ontario County, Ont. This farm was devoted to dairying as a side line. The rough creek hillsides were seeded to permanent pasture, and the rest worked somewhat as follows: One-third in hoed crop, principally corn; one-third in mixed grain, seeded to clover, and one-third in clover, from which one crop of hay was cut, the aftermath being usually pastured. For those whose conditions it meets, this rotation is the nearest ideal of any we know. It may be followed with three fields or any multiple thereof.

In Figure 2 we have represented practically the same rotation, carried out with six fields, but with a slight modification, introducing a rotation within a rotation, as it were. This provides for the sowing of peas or mixed grain on a portion of the land allotted to hoed crop. The sowing of peas here gives a chance to follow with fall wheat, instead of confining the grain entirely to spring-sown cereals, as Mr. Hodson did. Some sow fall wheat after corn, but corn is seldom harvested in time to get a first-class top on the wheat in ordinary autumns. It will be noted that care has been exercised to have one near and one far field balance each other, so as to avoid a long haul for all the hoed crop or all the hay, or all the grain, in any one season. This is a minor point of convenience.

Figure 3 shows a four-year rotation, which is essentially the same as the three-year, except that it allows for the land being left two years in meadow. It is preferred to the latter by some farmers with little rough pasture, who desire more meadow than the three-year rotation affords. It may be modified if desired, into an eight-year course, in the same way as the three-year course has been modified into a six-year one (see Figures 1 and 2).

Either the three-year or four-year rotation, modified, if necessary, in some such way as suggested, will be found to serve admirably the needs of most farmers in Ontario and Quebec, if not also in the Maritime Provinces. Everyone should certainly adopt some definite system of cropping, and, in doing so, aim to introduce as frequently as possible:

1. A clover crop to gather nitrogen and add humus.
 2. A cultivated crop to subdue weeds.
 3. A grain crop to seed down with.
- Commence this year.

Favors Home-grown Seed.

Editor "The Farmer's Advocate":

I do not think a change of seed is of as much value in keeping seed pure as using the fanning mill. One trouble in getting new varieties is that, unless they are tried by some reliable party, you do not know how much to depend upon their quality. I think the best plan is for the farmer to have a small plot and grow his own seed from small selections. One great drawback in getting seed from other sources is that you lose the valuable qualities that you have been breeding up in your own. It is like beginning again where you started. I think the farmer can certainly spare enough time to grow his own seed, and be well repaid for it. ALBERT GILBERT.

Not a few people still fail to perceive how reciprocity can benefit two nations. Their idea of a bargain is that it can benefit one party only, and that by robbing the other. They do not harmonize their theory of national trade with their practice in personal transactions. Did they do so, they would realize that the best kind of trade is that which benefits both parties. Reciprocal free trade in farm produce between such nations as Canada and United States cannot fail to result in net advantage to producers and consumers in the two countries.

Farmer, Plant a Tree.

Oh, Farmer, plant a tree,
For trees are getting few;
And thus, things should not be,
And so it's up to you
To do the work that comes to hand
And help to beautify our land.

Our fathers came of yore,
Away from kith and kin,
To Canada, a goodly shore,
With hopes a home to win;
And tho' great forests barred the way,
Undaunted, they had come to stay.

And so they set to work
With courage, undismayed,
They did not think to shirk,
But nobly gave their aid
To clear the land, to raise their bread,
That they and children might be fed.

And so it thus befell
That o'er our goodly land
A mighty change took place
That all can understand.
The land, through time, was chopped and cleared,
Where trees their heads once proudly reared.

But man in ruthless haste
Exposed our land to cold,
And many a tree laid waste
For greed of land and gold,
And many a one did fell and burn,
For which no one e'er got return.

So time has gone apace,
And trees are getting few,
And in this year of grace
We should know what to do.
And where trees once our landscapes graced,
I hope that some may be replaced.

So, Farmer, plant a tree,
Or, better, plant a score;
If it a good kind be,
I say, keep planting more.
"For what?" you ask. To say the least,
"Twill make good shade for man and beast."

"Twill not take long to do,
Though time is hard to spare,
Just every spring an hour or two,
A little extra care
To keep the stock their side the fence,
(Or sad will be the consequence).

"Twill make a place for you
To rest at set of sun,
Besides, if you but knew,
You have a good work done,
And you have well deserved a rest,
You've given your country of your best."

Who plants a tree plants love,
For love is kind, and so
You look to God above
For rain to make it grow;
So those who close to nature live
Will love to others freely give.

So, farmers, fill the bill,
Your children's hearts imbue,
And in their minds instill
A love of nature, too.
Those who in youth such paths have trod
Will learn to look to nature's God.

The spring is drawing nigh,
And summer comes apace,
The time will soon go by,
So each look up a place
Where you some shade would like to see,
And Farmer, Farmers, plant a tree.

Grey Co., Ont. MRS. W. BUCHANAN.



"There is a home beyond you sunset glory,
A fairer home than mine, though far it be,
Its beauties are disclosed in Bible story,
Its gates are open wide to you and me."

[A Note from the Writer.—I saw a few lines in a recent issue which induced me to write this. The love of trees was born in me, as I inherited it from my father, who at present lives in England (but he is Scotch). I am sending you a card that he had taken last Christmas. It is himself and his house. He lives all alone now, for we are all away, and my mother is dead. Although he lives in Gloucestershire, in the heart of England, you would think he lived in the bush, as he has planted hundreds of trees, and keeps on planting every spring. It is his hobby. It is mine, too, and I plant quite a few.]

Styles of Plowing.

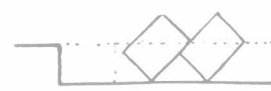
Editor "The Farmer's Advocate":

The standard size of furrow slice in medium land is 10 inches wide by 7 inches deep.

SHAPE OF FURROW.



Crested, or trapezoidal furrow slice.



Rectangular furrow slice.



Parallelogrammatic furrow slice.



Wide broken furrow slice.

The trapezoidal furrow slice is objectionable, as it leaves some soil unmoved at the bottom of the furrow; it is not firm, allows seeds a greater chance of dropping through, and, as it is narrower, takes a longer time to get over an acre. There is less open space below, however, and it harrows down and covers the seed better, though this latter is of no account where the seed is drilled.

The rectangular is better in most respects, but does not harrow down so easily, and the plows are not usually made so as to allow the coulter to be set perpendicularly.

The parallelogrammatic is the best form. It is crested, it is firm, all the soil is moved from the bottom, it is wide in proportion to depth, and plow irons are easily set to it.

The wide, broken form is that made by the short, wide-set plow. It is suitable on the lighter and more friable soils, but heavy clays cannot be satisfactorily pulverized by this means.

Length of Furrow.—Forty rods long is the best average suited to the strength of horses.

Distance travelled per acre at a width of 8 inches, 12½ miles; 9 inches, 11 miles; 10 inches, 10 miles; 11 inches, 9 miles; 12 inches, 8½ miles.

Average time to turn, ¼ of a minute.

Time Lost in Turning.—If a field is plowed at the rate of 8 inches, to the acre, the loss will be 1 hour 7 minutes 40 seconds; 9 inches, 58 minutes 40 seconds; 10 inches, 53 minutes 20 seconds; 11 inches, 47 minutes 20 seconds; 12 inches, 44 minutes. And to these must be added time taken up in resting. R. BONNART.

Huron Co., Ont.

Alfalfa.

Editor "The Farmer's Advocate":

Perhaps no other crop grown has a feeding value equal to that of alfalfa.

Alfalfa will grow on any soil that is moist, of a moderate depth, and well drained. As a crop for steep hillsides, it cannot be surpassed, and, when it becomes well rooted, it will grow luxuriantly for many years, as water cannot stand on the surface, and there is very little danger of ice lying in the spring.

In its cultivation, the most important thing is to get a soil having good natural drainage, fairly rich, and containing a fair percentage of lime. The land should be well cultivated before sowing the seed. The best way, perhaps, to secure this is to let it follow a hoed crop or summer-fallow, since in such cases the land is well manured, and should be free from weeds. After the root crop has been harvested, the land should be plowed and drilled up in small drills. In the spring, after danger of frost is past, and when the land is in a fit condition for tillage, the soil should be worked to a very fine tilth to a depth of two to four inches. The seed-bed should not be hard, but should be firm and settled, and prepared like a garden, so that it may contain readily available plant food to start vigorously the small and tender plant.

The alfalfa seed may be sown either separately or with a nurse crop of some kind. If the latter plan is adopted, the seed may be mixed with the grain in the drill and sown somewhat shallow, or it may be sown broadcast after the grain. Some recommend very strongly sowing the alfalfa seed ahead of tubes, especially when the seed has been treated with nitro-culture, thus insuring its

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being promptly and certainly covered. The nurse crop should always be sown somewhat thinly. The alfalfa seed, if sown after the grain, should be covered with about one-half inch of soil, which may be done by harrowing. If so desired, however, the alfalfa may be sown by itself. A good method of doing this is to sow the seed with a grass-seeder, then harrow the surface lightly and roll.

After the crop has reached a height of several inches, the mower should be run over the ground, cutting the weeds, etc., and leaving a stubble of three or four inches. This will destroy the weeds, if there are any, and also tends to make the young plant branch out and above ground, as well as to send its roots deeper into the soil.

In this country, as a rule, no crop is secure the first season, nor is it advisable to pasture during this period. The second year, two crops may be cut, and, if it is a good season, three cuttings may be secured. After this, when it has become well established, three cuttings may be taken annually. It is well not to cut or pasture too late in the fall, as the crop should have a good covering to protect it through the winter.

Wentworth Co., Ont. C. A. WHETHAM.

THE DAIRY.

Babcock Test for Milk-fat.

Editor "The Farmer's Advocate":

At your request, we take pleasure in answering the questions of two subscribers in Simcoe County, regarding the testing of milk. We can best do this by covering briefly the main points in testing milk for fat with the Babcock test, which is the most satisfactory short test yet devised, and the one used in and recommended by the Ontario Agricultural College, as well as by nearly all authorities in America. The Gerber test, which is used largely in Europe, is operated on principles similar to the Babcock test.

The apparatus complete, including scales, sample bottles, box for holding samples, dipper, etc., may be had from any dealer in dairy supplies who advertises in "The Farmer's Advocate" (if they do not advertise, they ought to). Two-ounce, screw-top bottles (cost 3 to 5 cents each) for stable sampling, are satisfactory. Box to hold these can be made by anyone handy with tools. For ordinary farm testing, a four-bottle machine, costing five dollars complete, is quite satisfactory. Manufacturers furnish full directions with the machine. Any intelligent person can make test for milk-fat by following the directions, but, when possible, we should advise a few lessons from a competent person, preferably at one of the dairy schools, where special teachers are employed for that purpose. The Agricultural Representative of the Ontario Department of Agriculture will be glad to show any farmer in his county how to test the milk with the Babcock test. Briefly, the method is as follows:

1. Thoroughly mix the sample of milk, or cream, by pouring, or stirring, in order to obtain a representative sample.
2. Measure 17.6 c.c. (cubic centimeters) of milk with a pipette, and transfer to the Babcock bottle. (In the case of cream, measure 18 c.c., or better, weigh 18 grams into the bottle.)
3. Add 17 c.c. of commercial sulphuric acid (oil of vitriol) to the milk sample in the bottle, by pouring the acid along the inside of the neck and bowl of the bottle, being careful not to pour it directly on the milk, as this tends to char or burn the fat.
4. Mix the milk and acid with a rotary motion. The mixing should continue until all the curd dissolves and the mixture becomes a uniform brown color. As a result of the chemical action, much heat is produced. This is necessary in order to keep the fat in a liquid condition. The sample should not be allowed to cool.
5. Next place the sample or samples in the pockets of the centrifuge, commonly called a "tester". Be sure that the machine is "balanced"—that is, has an even number of samples in the pockets, and that they are placed opposite each other. An odd number may be "balanced" with a sample bottle containing water.
6. Start the machine slowly, and revolve at full speed, as indicated by the manufacturer, for four to five minutes.
7. Stop the machine, and add hot water, at a temperature of 140 to 160 degrees F., to each bottle, filling to between the 8 and 10 per cent. mark. This may be done with a pipette or with a special filler. The operator must be careful not to fill the bottles so as to run the fat over the top, which above the ten-per-cent. mark, in which case the sample is spoiled, or made impossible to read, without compass or calipers.
8. Turn the samples again for one to two minutes at full speed, then stop the machine.
9. Remove the samples from the pockets and immerse in a hot-water bath, or dish containing water at 140 degrees F., having sufficient depth to reach to the top of the fat column in the bottle

10. Read from the highest to the lowest limits of the fat column in milk bottles. Each space between the figures on the graduated neck of the milk bottle represents one per cent., and each of the smaller spaces two-tenths of one per cent. It is possible to read samples to one-tenth of one per cent.

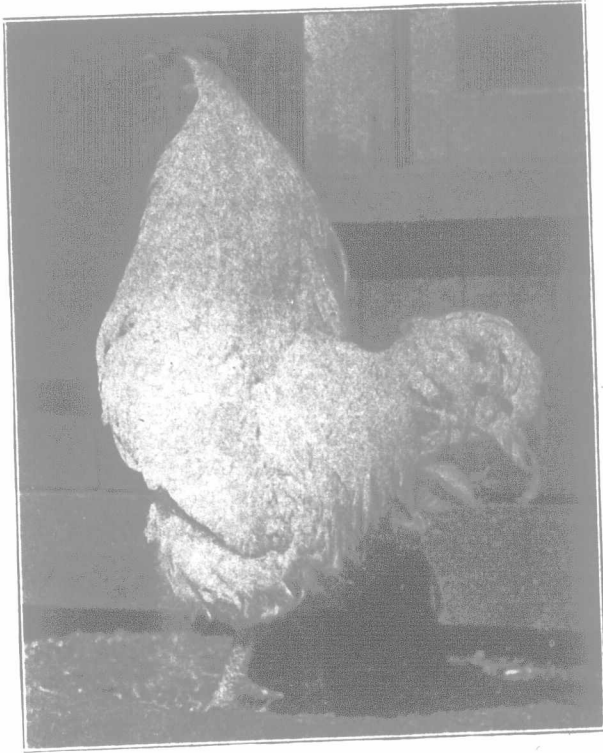
11. After reading, empty the bottles into an earthen crock or other vessel which will not be attacked by the acid. Wash once with hot water, then add a little soda and more hot water; rinse, empty, and wash again with clean hot water, when the bottles are ready to use.

12. Special bottles are used for testing cream, skim milk and whey. These require special directions for reading, but the ordinary farmer does not need to use any of these, except the cream bottle, for testing cream. These bottles are usually graduated to one-half of one per cent., though a person can read a little finer than this, if necessary.

Burnt readings, cloudy or curdy readings, too low or too high readings, and fat solid or congealed in the neck of the bottle, are common troubles. Burnt readings are caused by having milk or acid, or both, at too high a temperature (should not be over 60 to 65 degrees F.); acid too strong, too much acid used, or acid poured on top of the milk. Cloudy or curdy readings are caused by the opposite of causes for burnt readings—milk or acid, or both, too cold; acid too weak, acid and milk not properly or completely mixed. Too low readings may be caused by not measuring the proper quantity of milk, spilling some of the sample, not using sufficient centrifugal force, owing to too low speed in the machine, and inaccurate reading. Too high readings may result from inaccurate measuring of the milk, having the water too hot, reading from a steam-turbine tester without cooling, inaccurate reading. Fat congealed in the neck of bottle is caused by fat being too cold, and it is impossible to read such a sample; set in hot water, at 140 degrees F., to melt the fat before reading.

Fuller directions are contained in text-books on the subject, and also in various bulletins.

H. H. DEAN.



"Good Morning."

Co-operative Milk-testing.

Editor "The Farmer's Advocate":

Would you think it advisable for a Farmers' Club of, say, 20 members to buy a milk tester for the use of the members, in order that each member may find out which of his cows are profitable and which are not, or do you think that would allow each member the use of the tester for such a short period that it would not be of very much use? Would you think it a better plan for two or three neighbors to combine and get a tester? About what price is a tester, and where can they be got? Do instructions go with each one as to how to use them?

SUBSCRIBER.

I would advise a Farmers' Club to organize a cow-testing association, and thus get in line with what others are doing for the improvement of their cows. J. A. Ruddick, Dairy Commissioner, Ottawa, will be glad to furnish details for organizing such an association, and will assume the cost of testing the samples for fat, where farmers weigh the milk from each cow and take samples according to directions. This lessens the cost to individual cow-owners, and insures accurate testing of the samples, which might not be the case where every farmer tests his own cows' milk, and

more particularly where inexperienced persons do the testing. However, if the Club prefers not to join, or form a cow-testing association, the next best plan would be for the members to purchase a ten-bottle machine, and have it at some central point where milk samples could be sent for testing. The office of the Agricultural Representative for the county, where there is one, would be a very good place to locate the tester (if there is not a tester there already), and he, the representative, would no doubt be pleased to test samples for the Club at a small cost, or free of charge.

The next best plan would be for each member to purchase a four-bottle machine, at a cost of five dollars. I do not think the plan of moving the tester about from one farm to another would be altogether satisfactory, although, if each one would be willing to test on a different day during the month, and each be responsible for breakages occurring at his farm or during transit, the plan of one tester for twenty members might work out all right, by making composite samples and testing once a month.

H. H. D.

The report of the annual meeting of the Eden Bank Creamery Company, Limited, of Sardis, B. C., makes a very satisfactory showing of the product of the creamery for 1910, the payments for butter-fat being an increase of \$3,000 over that of 1909, which was due to a proportion of the output having been sold as milk and sweet cream, the patrons receiving a larger return per cow than when the company were dependent upon the manufacture of butter. The butter-fat sold in 1910 was 207,652 pounds, which sold for \$66,804.17, averaging 32 cents per pound.

POULTRY.

Poultry-raising for Women.

Editor "The Farmer's Advocate":

March is passing on, with its wind and bluster, and along comes the strong rays of the sun, bringing milder weather, making us all eager to be up and doing. The time is here again when young life prevails all over the farm. Perhaps not the least of this fresh life is the product of the incubator.

To any woman fond of outdoor life, there is to our mind nothing more interesting than the rearing of poultry, from the time the incubator is set, to the marketing of the matured bird, though, to have real success, one must have a real liking for the work. There is nothing slavish about it, though to some it may appear too manish. Nevertheless, it often overcomes the difficulty of securing a little ready money that so many of our sisters feel deprived of; and would just like to say to anyone beginning that success lies largely in following carefully any instructions given with your particular machine, and the many helpful letters in "The Farmer's Advocate" from time to time, rather than any remarkable skill. You will not know it all with the first hatch, nor yet with the first season's work, but keep at it; your ideas will develop with the work. A few simple hints may not be amiss.

1. Try to get the eggs from a flock of two-year-old birds (any kind you may fancy, but should be pure-bred). Pullets' eggs do not hatch so well, nor are the chicks as vigorous.
2. Have your incubator in a corner (out of drafts) where you can look at the thermometer often while going about your housework; 101½ to 102 degrees is just as good for the first ten days, and, as the hatch develops, the natural heat in the egg will raise the temperature to 103 degrees, without much adjusting of the lamp. "See, however, that your regulator is properly set before commencing."
3. Start the turning of the eggs as you expect to be able to continue throughout the hatch. If at 7 a. m., do so again at 7 p. m., or any other hour that suits best; never, on any consideration, turn at, say, 9 or 10 a. m., and then at 5 or 6 p. m. There should be the twelve hours between turnings. Regularity means much in anything, and particularly in this.
4. Set a few hens the same day as the machine, and divide all the chicks among these; thirty or thirty-five are not too many for one hen to look after. If the weather is cold, take some away at night for a while till they are quite strong. This is considerably less work than the brooder, and, as they run about, the hen protects them. Then, don't be afraid, if a spare moment comes, to get an old knife or other implement, and hie away to where the hens are trying to scratch for them, and start in to dig a bit. Hen and chicks will soon learn your object, and run to meet you to get the first worm you may dig up.
5. If at any time the eggs get too warm, say 106 degrees, or thereabouts, remove the tray with eggs gently from the machine, and wring a woolen shawl out of warm (not hot) water, and draw over the eggs; leave till cool enough to turn, then return to the machine and watch the thermometer for a time. Overheating weakens the chick in the



Applying the Paste.

egg, but in this way you may save your hatch. Cooling eggs develops and strengthens the chick, so never hurry the eggs into the incubator; give them time to cool. We have had them hatch out one every hour for a time in warm weather, with splendid results.
A FARMER'S WIFE.

Feather Plucking.

Editor "The Farmer's Advocate":

My hens began, about the middle of February, to pick out the small, downy feathers below the tail; then they picked the flesh; some holes were as large as a fifty-cent piece, some larger, some smaller; others had the blood dropping out of them. Two died from the effects of it; others healed up, but they did not leave them completely alone. Is there any permanent cure, or is it something they were fed or something they lacked. No one has ever heard of it in our neighborhood. I feed them grain in a deep litter composed of clover leaves, heads and chaff; make them scratch for their breakfast by mixing it up well; also, bran in a hopper, to pick when they wanted it. At dinner time, vegetables and apples, cooked or raw, or sometimes a bran and other meal mash; other times, clover leaves mixed in with it; also a little grain well stirred with litter, to keep them busy; and, until the middle of February, corn on the cobs, a few at a time. At night, grain thrown among litter. They have grit, oyster-shells, lime, and coal ashes to dust in. Also give them fresh water three or four times a day, and clean out their trough. Hang up meat frequently for them to pick at. I also give them salts, Cayenne and sulphur in their mash two or three times. The hens are one and two years old this spring. They had fresh air, and were warm and dry. I cleaned the droppings from under their roosts every morning. They were allowed to run out in the barnyard on mild days, but they were scarce. Turned them out when they started picking one another, and let them run at will. About twelve out of thirty are picked. Can they be stopped completely, or would they commence again when closed in another winter? Please publish as soon as possible, and oblige.

A SUBSCRIBER.

Ans.—The fowls seem to have been very well cared for, indeed. Had it not been that it is stated that meat had been hung up for the hens to pick at, we would have inferred that it was lack of meat that induced the feather-pulling. It probably started from idleness, consequent on confinement. Had the first hen guilty of the practice been promptly killed, it is likely that nothing more would have been seen of it. The practice spreads among fowls.

Egg Basket.

We are in need of a new egg-crate, and it occurred to me this morning, why could there not be wire baskets made? The old Humpty-Dumptys are so inconvenient to set in a buggy, and one has to carry them so carefully unless they are tied. My idea is to have a No. 9 wire for frame, and small wire to form a network, to hold six dozens in a layer, and have two layers deep; the lid to be divided in center and hooked, falling flat back to each side of basket when not needed, and a catch or opening at each end to carry by. Do you not think it would be both very handy and durable? Do you think they would be worth getting patented, or could one apply for patent and try to sell the right? Where do you think I could get one made? Where could I get the pasteboard packing?
J. M.

Ans.—Experience is the best teacher. Make a basket such as you describe yourself before even

asking a firm to construct one. It would be wise to use it for some time before any money was spent on a patent. It is doubtful if your basket would be a success. I have thought the same about a package for carrying eggs, and have endeavored to make something that would be an improvement on the Humpty-Dumpty. I think I have it, but it is in the other direction. One of the troubles with the Humpty is that it is too open and flimsy—too much of a basket—and, while a wire frame might be stronger, it would be even more open. An egg package should be closed, and strong enough to keep the contents free from injury and dirt. We use boxes of various sizes to accommodate the requirements of private customers. A box that holds six dozen is very handy; is made out of 1/2-inch pine or basswood. The size, inside measurement, is 12 inches long, 8 inches wide, and 8 inches high. A layer of excelsior is put on the bottom, and again at the top. The lid is put on the same as the lid of a 30-dozen crate. A neat brand can be printed or pasted on the top, and it makes a very tasty and substantial package, much ahead of a wire basket in every way.
F. C. ELFORD.

GARDEN & ORCHARD.

Trees Girdled.

I have a young orchard which this winter the rabbits have girdled. Can the trees be saved, and if so, how?
A READER.

Ans.—In answer to above, we give reprint, in part, of an excellent article that appeared in our columns in 1908:

During winters of severe cold and deep snow, mice and rabbits, on account of a lack of other food, are quite likely to gnaw the bark of the fruit trees. One winter, six of our thrifty-grow-

naturally passes up the sap-wood of the tree, and is not thus checked in its flow by the girdling; but the downward flow of cambium or sap, which has been elaborated in the leaves takes place just beneath the inner bark, forming what is known as the cambium layer between the inner bark and the sap-wood. When the girdling cuts through to the wood, the downward flow of cambium is thus checked, and the tree starves through the cutting off from the roots of the supply of nourishment which has been elaborated in the leaves.

Cut scions of last year's growth of wood long enough so that they can be entered about one inch under the bark at the upper and lower extremities of the wounded part. Shave the end of the scions down so they will wedge in well under the bark. According to the size of the tree, fit in from two to four such bridges, on opposite sides of the trunk. The entire work must then be covered with the cow-dung paste, the same as slightly-girdled trees.

If this work has been properly done, the sap can circulate through the "bridges," and the tree's life will be saved. It is claimed that this "bridging" is not very often successful with plum and cherry trees, so it is best to pull up trees of this sort if they are completely girdled. The method will save many apple and pear trees that otherwise would dry up.

Though mice do not gnaw as deep as rabbits, usually only the top layers of the bark being wounded, treatment is necessary, anyway. I know, from past experience, that if such wounds are left exposed, they will dry out, and the growth of the trees will be checked.

The cloths should not be removed the first season. I leave them on for two years, but take them off the second season, so the wood may not commence to rot. All trees that I have treated in this way have shown, by their luxuriant growth, that they were doing as well as other young trees of the same age, but which had not been girdled.

Potash Paid on Cauliflower.

Editor "The Farmer's Advocate":

There being at present considerable discussion regarding the use of commercial fertilizers, the following report of an experiment with fertilizer on cauliflower, conducted by the undersigned at Cedarvale Gardens, Varenay, Ont., during the past summer, might be of interest. Planting was done on June 14th, the variety used being Steele-Briggs' Whitehead. The plots were divided as follows: No. 1, unfertilized; No. 2, complete fertilizer, applied at the following rate per acre: Nitrate of soda, 200 pounds; acid phosphate, 400 pounds; muriate of potash, 160 pounds. No. 3, incomplete fertilizer, composed of nitrate of soda and acid phosphate, and applied at the same rate as on plot No. 2.

Plot No. 1 yielded at the rate of 5 tons per acre; No. 2, 8 tons; and No. 3, 6 1/2 tons.

The value of the increase in yield per acre on plot No. 3 (based on last season's factory prices) was \$45, giving a profit of \$35 after deducting the cost of the fertilizer. The net gain on plot No. 2 was \$76, showing an increase of \$41 directly due to the application of potash.

The soil where the experiment was conducted was sandy loam, and uniform throughout. The potash and phosphate fertilizers were applied broadcast, and harrowed in just previous to planting, and the nitrate of soda in one application immediately after the plants were set.

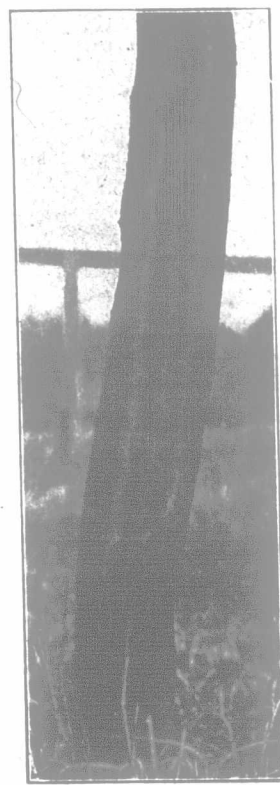
Haldimand Co., Ont. R. E. MILLER.

Raising Cucumbers by the Barrel.

A sure way to get the family supply of cucumbers, let the season be wet or dry: Take an empty salt barrel, bore some small holes around near the bottom. Set it about three inches in the ground, fill the barrel with good manure. Plant the seeds around, say, a foot or more from the



Cucumbers Growing Around Barrel Filled with Manure.



A Tree Nearly Healed.



Bridge Grafting.

THE FARM BULLETIN.

Essex Sales.

Essex at present is in the throes of a land boom. Prices for real estate have advanced with amazing rapidity. Various reasons may be assigned for present conditions; for instance, good crops and prices in 1910, with similar prospects for present year; the purchasing by American companies of large tracts of unimproved and partially-improved lands in the corn-growing belt, at high and advancing rates per acre. The possibility of an extended market should the prospective reciprocity agreement become an actual fact, is even now a visible factor. Groups of farmers may be observed almost every day earnestly discussing future prospects, and comparing notes. Your correspondent has seen nothing to compare with it in land-booming since the great boom in Western lands in the years 1881 and 1882. Our hope is that this may be more stable.

Owing to a mild winter and springlike weather of March, wheat has apparently suffered little or no damage, and, as the danger point is almost past, farmers are elated over the prospect of another good yield.

The manufacturing of maple syrup is at present occupying the attention of those who are fortunate enough to possess a sufficient number of trees warranting an investment in utensils necessary for conducting such an enterprise.

Piles of sand and gravel, cement blocks, brick and tile indicate advanced interest in farm improvements.

Farmers are actively engaged in preparing for spring work. Should present weather conditions continue, every available team will soon be at work on the land. The soil is in first-class order, and, to all appearances, an extended acreage of spring wheat and oats will be sown.

The lectures recently delivered at different points by specialists in various lines of agriculture, made possible through the kindly co-operation of the M. C. R. officials, were fully appreciated and largely attended by the farming communities, which augurs well for future progress.

Several of our wide-awake business men are dividing their farms into five- and ten-acre lots, with a view to increasing the number of market gardeners.

Stock of all grades and classes continues to be scarce. The supply of horses, cattle, sheep and poultry fails to meet local demand. A. E. Essex Co., Ont.

Northern Spy. At the winter pruning, the tops of varieties of this type should be thinned out to admit light, but no heading of leading branches should be practiced. In the following August, summer pruning as described above should be made use of for the purpose of causing development of fruit buds. It should not be necessary, under this method of handling, to wait fifteen or even twelve years for fruit. Summer pruning begun at five or six years, should result in fruit bearing at eight or nine, and probably earlier.

On the question of root pruning, I cannot do better than quote one of the best authorities (Pictorial Practical Fruit-growing, by W. P. Wright): "When all is said and done on the subject of pruning, it remains the fact that the real secret of fruitfulness in a tree lies at the root. If the roots are right, the fruit will come—large fruit, finely colored, and plenty of it. Pruning the branches of fruit trees becomes a necessity when we have to grow them on the restrictive system to suit small areas of ground; but, were it not for that, the knife might be kept away from them after the first early shaping, without any harm resulting; in fact, with positive benefit.

"The first thing to do is to get the soil into the right mechanical condition for holding moisture through long periods of drouth, and for permitting the free ingress of air. When this condition is secured, early relifting will do nearly all the rest. If a young tree is lifted and put back again the second year after planting, the stronger

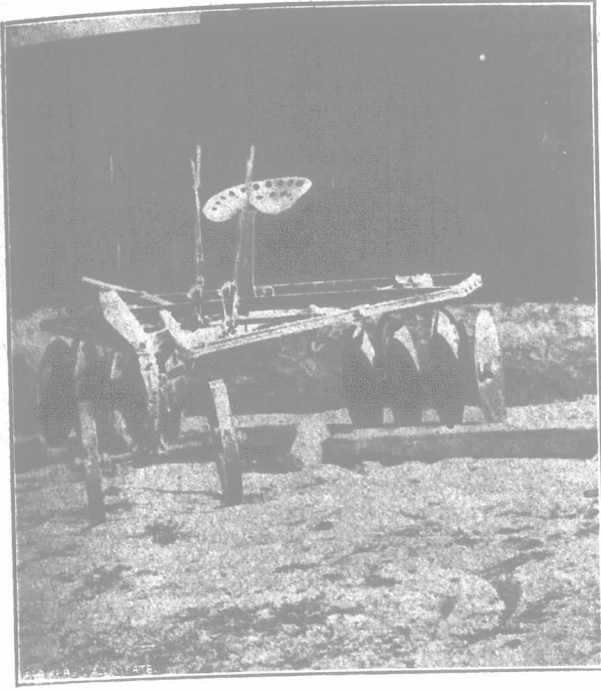


Fig. 1.—Extension disk as used in the West—without a tongue. Easy to turn with.

barrel. Have it as handy as possible to the well or other supply of water. In dry weather, put from two to four pails of water in the barrel every evening, or any other time. It will surprise you to see them grow. This is the second year we have tried it. JOHN JACKSON. Lincoln Co., Ont.

Pruning.

By J. W. Crow, Professor of Pomology, Ontario Agricultural College, Guelph.

Pruning for the express purpose of developing fruit buds has not yet become a common practice in this country. Walter P. Wright, one of the best of British authorities on horticultural matters, states that "The formation of fruit buds can be absolutely insured by proper summer pruning, but it is expert finger-and-thumb work, and commercial growers in Great Britain rarely practice it." The writer does not expect our growers to find time for the expert methods of the English and French pomologists. We hope, however, to see adaptations made of Old Country practices to suit our conditions. Labor is more costly here, but it is not at all unlikely that it will pay us to put more time on our orchards, to the end that we may make larger profits therefrom. We need men who will specialize in apple-growing to the same extent that some few in the Niagara belt have specialized in peaches. Specialization means the adoption of more intensive methods, and the men who are leading the way to-day are those who do things best. It is true that in Great Britain the most expert practices are confined to those who grow fruit for exhibition, but it is also true that commercial growers in that country adopt, to a certain extent, such practices as summer pruning and root pruning. The wide-awake growers of the Pacific slope began experimenting with these advanced methods some years ago, and growers in many sections of British Columbia and the Western States are bringing trees into bearing at an early age, partly, at least, through following Old World practice.

It need scarcely be said that these practices are of use only with trees that are growing very rapidly, or which for some reason fail to set fruit buds. If trees blossom well, and fail to develop fruit, the trouble must be sought in other directions. Our object now is to understand how trees may be made to bloom. Mr. Wright states that the "expert finger-and-thumb work" referred to above (this applies to apples, pears, plums and cherries) consists of "pinching," which is "best done twice: first, when the side shoots have formed six good leaves; and, secondly, six weeks later. At the first stopping, the end of the shoot is pinched off, and at the second the ends of the secondary growths are removed." In no case are the leading shoots headed off, unless it is desired to increase their number by causing them to branch. The ideal is to develop enough main branches to fill up the head, without crowding, and then by proper handling of the side shoots, to develop fruiting spurs along the entire length of the main branches. Pinching as soon as the lateral buds have developed six good leaves will result, of course, in secondary growth, which must be carefully attended to later. To avoid the necessity of doing the work twice, commercial growers pinch these side shoots about the middle of August, at a time when they have nearly finished growth to six good leaves. At the subsequent winter pruning, these side shoots are again shortened to spurs, two or three buds in length. This method is specially recommended for strong-growing, dense-headed varieties like our



Fig. 2.—Cultivator, extensively used in dry belts of the West. This cut shows the implement as extended by A. I. Mason, Hood River, Oregon, for working under low-headed trees. For getting close under the head, the driver moves over to the end farthest from the row, and his weight causes the tool to run sidewise, with the opposite end close to the trunk. An excellent tool for all except stony ground.

roots are broken, and exuberant leaf action is checked. Beyond paring over the ends of all broken roots with a sharp knife, nothing need be done. The tree is simply taken out and put back again. A young tree should not be lifted when the growth is short and fruit spurs are forming fast, but should be lifted when the summer growths are numerous, are 18 inches long, or more, and devoid of fruit buds. Begin three feet from the tree, work carefully towards the stem, and, as soon as fibres are met with, delve down below the tree and work it out. The operation may be performed as soon as the leaves ripen in autumn, if the weather be showery and the soil moist; but, if dry, it should be deferred." With those that are too large to lift, "it is well to make a trench around the tree so as to get at the roots, doing half one year, and half the next, whenever a tree seems disinclined to bloom. A special effort should be made to cut any large roots which strike downward into the subsoil, as they are a frequent source of unfruitful top growth."

There is no reason why root pruning of this kind should not give the same results in this country that it does in England. It is simply a question as to whether our growers can afford to take the necessary time for performing the operation. It will no doubt pay us to experiment in a small way, at least, as we undoubtedly have many cases in which it is desirable to hasten fruit-bearing. Regarding the proper time for root pruning, it may be that in our climate early spring would be the more favorable season, although it is probable that the operation could be successfully carried on at either time.

It still comes as a surprise to most audiences to learn that, according to investigations by an eminent Cornell authority, a bearing apple orchard between the ages of thirteen and thirty-three years, will remove, in the form of fruit and leaves blown off (not counting growth of wood) almost as much plant food as a twenty-five bushel crop of wheat.

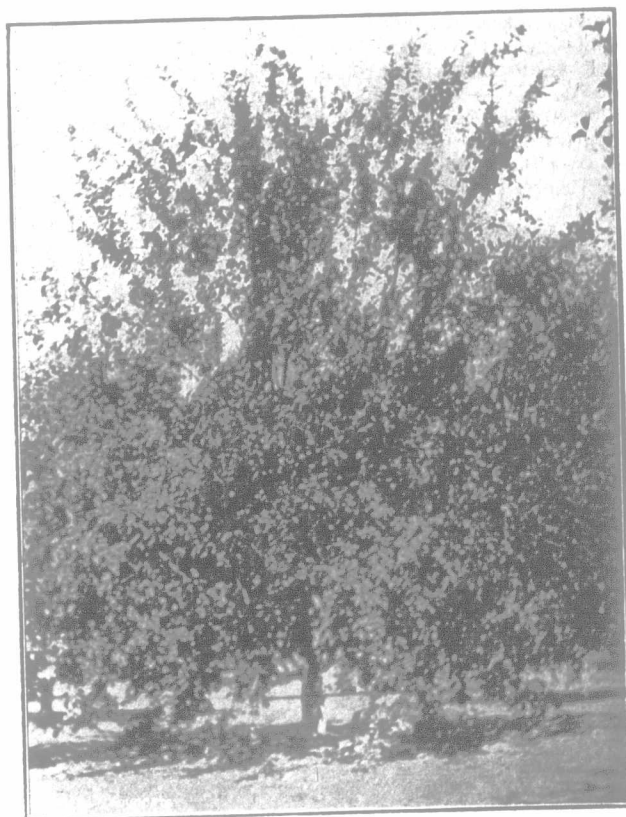


Fig. 3.—One of Mr. Mason's low-headed trees.

Ontario Stallion Act.

The long-talked-of Bill for the enrollment and inspection of stallions has been introduced into the Ontario Legislature by the Minister of Agriculture, Hon. Mr. Duff. It is called "The Ontario Stallion Act," and authorizes the appointment by the Lieutenant-Governor-in-Council, on recommendation of the Minister of Agriculture, of a Stallion Enrollment Board, consisting of four persons, with the Director of the Live-stock Branch, who shall be secretary and executive officer. The Minister is also authorized to appoint a committee of three inspectors to act under the Board. The Board and Committee are to receive a per diem remuneration and necessary travelling expenses. The gist of the bill is in the fifth clause, which enacts that no person shall stand, travel, or offer for use any stallion, unless and until the name, description and pedigree of such stallion has been enrolled, and a certificate of enrollment procured. Owners of stallions are required to submit to the Board all evidence of breeding and ownership, and, upon receipt of same and payment of the fee, the Board shall issue a certificate accordingly. The fees to be paid the Board are \$2 for enrollment, \$5 for inspection, which is, however, optional with the owners; \$1 for yearly renewal of enrollment, and \$1 for transfer of certificate. The fees received by the Board are to be turned into the Provincial treasury. Subject to the approval of the Lieutenant-Governor-in-Council, the Board may make such regulations as are necessary for carrying out the provisions of the Act. Violations of the provisions of the Act will incur a penalty of not more than \$100, nor less than \$25. Where inspection is desired, the report is to form a part of the enrollment record or register, to be kept as may be prescribed, and certificates issued accordingly. When a stallion has been enrolled after the first day of August in any year, the enrollment and certificate shall remain in force until Dec. 31st, in the succeeding year; and when made before August 1st, the enrollment and certificate shall continue in force until December 31st following. There is provision for but one inspection after the horse has reached the age of eight years. In the case of any other stallion the report of the Committee shall form part of the record of enrollment for two years only, after which the stallion shall be submitted for re-inspection, if the owner desires an extension of such certificate. In case the Committee's report on a horse is not unanimous, the owner has the privilege of an appeal. Posters or advertisements of enrolled stallions shall contain, prominently displayed, a copy of the certificate of enrollment.

According to the draft of the Bill, it would appear that registration in the recognized purebred records of Canada is not essential to secure admission to the enrollment, unless the regulations which the Board is authorized to require should make provision therefor.

Clause 5 of the Act would not have taken effect until August 1st, 1911, but the Minister of Agriculture on Friday last withdrew the bill, saying that there was a general feeling that, before becoming law, ample opportunity should be given for farmers and horsemen generally to become acquainted with its provisions.

For Importers of Nursery Stock.

New regulations were issued from Ottawa, Feb. 27th, under the Destructive Insects and Pests Act. Nursery stock, including all trees, shrubs, plants, vines, grafts, scions, cuttings or buds which are not exempted shall be imported only through the ports of Vancouver, October 1st to May 1st; Niagara Falls, October 1st to May 15th; Winnipeg and St. John, N. B., from March 15th to May 15th, and from Sept. 26th to December 7th. At these ports importations shall be fumigated.

The following vegetation and florists' stock are exempted from inspection and fumigation, and can be brought in through any port: Greenhouse-grown plants, herbaceous perennials and bedding plants, bulbs and tubers, and cottonwood poplar, when imported from Dakota or Minnesota.

All persons importing nursery stock, except such as is exempted, shall give notice to the Dominion Entomologist, Experimental Farm, Ottawa, within five days of despatching the order, and shall again give notice to the same official on the arrival of the shipment in Canada. Transportation companies shall, also, on receiving such consignment, give notice.

Nursery stock from Europe may be allowed to proceed to its destination, but not be unpacked, except in the presence of an inspector. Nursery stock from Japan, or the State of Vermont, New Hampshire, Maine, Massachusetts, Connecticut and Rhode Island, shall be subject to inspection after fumigation.

The San Jose scale, the Brown tail moth, woolly aphis, West Indian peach scale, gypsy moth, potato canker, and parasitic diseases of potato, potato, branch or stem canker, gooseberry mildew, and white pine blister, are the de-

structive insects, pests and diseases guarded against.

No potatoes can be imported from Newfoundland or the Islands of St. Pierre or Miquelon.

Experiments With Farm Crops.

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1911 they are prepared to distribute into every township of Ontario material of high quality for experiments with grains, fodder crops, roots, grasses and clovers, as follows:

No.	Experiments.	Plots.
1	Testing three varieties of oats.....	3
2a	Three varieties of six-rowed barley.....	3
2b	Two varieties of two-rowed barley.....	2
3	Two varieties of hulless barley.....	2
4a	Two varieties of spring wheat.....	2
4b	Two varieties of spring rye.....	2
5	Two varieties of buckwheat.....	2
6	Two varieties of field peas.....	2
7	Emmer and spelt.....	2
8	Two var. of Soy, Soja or Japanese beans.....	2
9	Three varieties of husking corn.....	3
10	Three varieties of mangels.....	3
11	Two var. sugar beets for feeding purposes.....	2
12	Three varieties of Swedish turnips.....	3
13	Two varieties of fall turnips.....	2
14	Two varieties of carrots.....	2
15	Three var. of fodder and silage corn.....	3
16	Three varieties of millet.....	3
17	Two varieties of sorghum.....	2
18	Grass peas and two varieties of vetches.....	3
19	Rape, kale and field cabbage.....	3
20	Three varieties of clover.....	3
21	Two varieties of alfalfa (lucerne).....	2
22	Four varieties of grasses.....	4
23	Three varieties of field beans.....	3
24	Three varieties of sweet corn.....	3
24a	Two varieties of early potatoes.....	2
24b	Two varieties of medium-ripening potatoes.....	2
24c	Two varieties of late potatoes.....	2
29	Three grain mixtures for grain production.....	3
30	Three grain mixtures for fodder production.....	3

Each plot is to be two rods long, by one rod wide, except No. 28, which is to be one rod square.

Any person in Ontario may choose any one of the experiments for 1911, and apply for the same. The material will be furnished in the order in which the applications are received, while the supply lasts. It might be well for each applicant to make a second choice, for fear the first could not be granted. All material will be furnished entirely free of charge to each applicant, and the produce will, of course, become the property of the person who conducts the experiment.

C. A. ZAVITZ, Director.

Ontario Agricultural College.

Amendments to Seed Control Act.

Hon. Sydney Fisher, Minister of Agriculture, has given notice of a resolution, proposing to amend the Seed Control Act. The resolution outlining the purpose of the bill to be introduced is as follows:

"Resolved, that it is expedient to amend the Seed Control Act, by providing (a) that the Governor-in-Council may make regulations determining the species of farm weed that shall be included within the meaning of the term 'noxious weeds'; (b) that no person shall sell, offer, expose, or have in his possession for seeding, any seeds or cereals, flax, grasses, clover or forage, except timothy, alsike or red clover, and alfalfa, unless they are free from any seeds of noxious weeds, and unless the receptacle containing them is marked with the name and address of the seller, the name of the kind of seed, and the names of the noxious weeds, the seeds of which are present in the seed sold, offered, exposed, or had in possession; or (c) that every person who sells, offers, exposes or has in possession for sale for seeding any seeds of timothy, alsike, red clover or alfalfa, or any mixture containing them, in any form or receptacle, shall cause such receptacle to be marked with the designation of the grade of seed; (d) that no person shall sell, offer or have in possession for sale any seeds of timothy, alsike, red clover or alfalfa, in or from any receptacle, unless marked with the designation of the grade of seed, and coming within the requirements prescribed for each such designation; or (e) that no person shall have in possession for sale, or sell, any of the aforesaid seeds, if the seeds of noxious weeds or other useless or harmful plants are present in greater proportion in the seeds sold, offered, exposed or had in possession for sale than the maximum number of such seeds that may be permitted of the grade designated therefor."

In anticipation of such further legislation, a circular was sent out by the Dominion Seed Branch to grass and clover seed growers and to seed merchants. Seed growers to the number of 1,384, and 210 seed merchants, made reply to these queries. Ninety per cent. of the seed-growers and 92 per cent. of the seed-merchants replied yes to

the first question, favoring the enforced uniform grading of timothy, red clover, alfalfa and alsike seed, according to fixed standards of quality for Nos. 1, 2, 3, and Rejected. The great majority of them also asked for an extra No. 1 grade, which is being provided. The standards proposed in the bill are practically the same as those suggested in the circular submitted.

According to the standard to be provided in the Amended Act, there will be very little Extra No. 1 seed, and we are informed that last year's supply would not meet more than half the demand for No. 1 seed. The proposed bill, if enacted, should cause a marked spread in prices paid to the farmer in favor of seed that can be made to grade Extra No. 1 or No. 1.

It is believed that, with continued educational work, it should be possible to so grade up the quality of the clover seed produced in the Province of Ontario that by the end of five years it would be feasible to further restrict the sale of seed that may now be sold as No. 3. The principle of grading to be followed, apart from the weed seeds, will be practically the same as that adopted in the grading of commercial grain. So far as soundness, plumpness and color of seed is concerned, most of the seed that would grade No. 2 and No. 3 would be accepted as No. 1 if the weed seeds were not present. Occasional samples—not more than one in fifty—that would grade No. 1 in the matter of purity, would be reduced to No. 3 on account of soundness, plumpness and color.

Good Prospects for Stock-raisers.

(Our English correspondence.)

Birkenhead, one of the Mersey ports, was formerly the great slaughtering-place for Canadian and United States cattle in the palmy days of live-stock shipping. A few years ago, as many as 10,000 to 12,000 head were slaughtered weekly. Now, only about 2,000 are handled. Greatly distressed has followed for those employed in the business, and much unemployment, and efforts have been made to get the Board of Agriculture to take off the embargo on live Argentine cattle, so as to fill this big gap, but all such efforts have proved fruitless.

This falling-off in live-cattle receipts does not mean that less foreign and colonial meat comes to England. Against this big drop, there have been huge shipments of late of chilled and frozen meats to the Mersey and London. In spite of large supplies, demand has been so good, owing to active trade conditions, that prices have kept up well. Hind quarters of chilled beef are quoted wholesale at 4d. per pound, and fore quarters at 3d. Importations of chilled and frozen meat reached an unprecedented total in 1910. The aggregate deliveries weighed 610,970 tons, an increase of 78,714 tons on 1909. If it were not for these vast shipments of oversea meat, many British workmen would have to consume far less meat than they do.

A feature of last year was the rapid ripening of public opinion in continental countries in favor of lower duties on frozen meat. Austria, Italy and Switzerland have all made moves in that direction. The cause is the growing scarcity of domestic supplies, and the consequent dearth. The effect of these lower duties will be to divert some of the supplies to the Continent, with a consequent hardening effect on prices in the United Kingdom. Prospects of fairly remunerative prices for oversea stock-breeders for some time to come seem to be reasonably good.

F. DEWHIRST.

The Union Stock-yards Clydesdale Sale.

The sale of imported and Canadian-bred registered Clydesdales, held at the Union Stock-yards, West Toronto, on Tuesday, March 14th, was an unqualified success, as a representative gathering of Clydesdale importers and breeders from all over the Province and the West, as to prices realized, and the quality of the offerings. The highest prices realized were \$500 for the bay three-year-old, Imp. Lady Gillies, and \$480 for the bay three-year-old, Imp. Lady Stockdale, both consigned by James Torrance, of Markham. A number of others sold for \$400 and over, the average being about \$350; and, when it is considered that among the lot were yearlings and others up to ten years of age, the above figures indicate a great and pressing demand for breeding Clydesdale fillies and mares—the more so that a number of those sold were just landed from Scotland, and not in the best possible fit for selling.

Reports from the Grimsby, Ont., district show that the Dominion Cannery, since the announcement of the proposed new trade arrangements with the United States, have increased their contract prices. In the case of tomatoes, the rate is 27½ cents per bushel, compared with 25 cents last year; raspberries, \$1.80 per crate, compared with \$1.68; strawberries, \$1, compared with 98c.

MARCH 23, 1911

The U. S. Country-church Programme.

Twenty-five United States ministers, who have been successful in their own fields, have consented to serve during the coming year as advocates of the Reconstruction of the Country Church on a definite programme. Fourteen of these men completed a course in the Summer School at Amherst, Mass., under President Kenyon L. Butterfield and his associates of Massachusetts Agricultural College. The discussion carried on the past year by the Presbyterian Department of Church and Labor has furnished these men with a definite programme, for all ministers entering into this discussion have agreed upon certain essentials in the reconstruction of the country church, and the building up of the country community in the older agricultural States. Of these twenty-five men, seven are in New York State, two in New Jersey, three in Pennsylvania, three in Ohio, one in Michigan, three in Indiana, two in Illinois and Wisconsin, and one in Maryland and Kentucky. These men will serve during the coming year in writing for the agricultural press, for county papers, and for educational journals, upon the experiences and the philosophy of the country community. They are prepared in matters concerning the public schools, grange, churches, and other rural problems. They will speak before church and agricultural organizations, at educational meetings and other public gatherings. Nine of them are already rendering service in this field, receiving their expenses only. Among the elements entering into this programme, which is not lengthy, are:

- First.—The church must be a community center.
- Second.—The churches in the country community should be unified, and should co-operate with all rural institutions.
- Third.—The average country minister is crippled by a salary so low in comparison to the pros-

perity of the farmers about him that he is unable to do the best work.

Fourth.—The schools in the country must be radically improved, looking toward ultimate consolidation in the interest of the whole community.

Fifth.—Churches and other institutions in the country should promote the study of agriculture under the great agricultural leaders.

Sixth.—The church should promote public recreation for the young people and the working people of the country community.

Seventh.—This programme is a definite religious effort to interpret the Gospel of Christ, especially on behalf of the poor and the young and other people on the margin of the country community.

This work is undertaken in co-operation with such men as Pres. Kenyon L. Butterfield, of Mass. Agricultural College, at Amherst; Dr. Henry Wallace, of Des Moines, Ia., and Secretary Willet M. Hays, of the Department of Agriculture, Washington, D. C.—[Warren H. Wilson, Ph. D.

A worked-out understanding of the soil and the seed might add 25, 50 or 100 per cent. to our field crops.

Last year the Canadian Northern Railway built 560 miles of railway, but this year the construction programme calls for 600 miles, with enlarged yards and many other improvements.

Owing to an outbreak of foot-and-mouth disease at Cobham, Surrey, Eng., Canada has placed an embargo against all live-stock from Great Britain, except horses. Permits issued for the importation of cattle, sheep and other ruminants and swine, excepting such animals as are actually en route, have been cancelled.

"Canadian diamonds" is the latest discovery announced by the Director of the Geological Survey, Ottawa, found in the chromite on Olivine Mountain, near Tulameen River, British Columbia. Those extracted were small, none of them larger than pinheads, so that the discovery is of scientific, rather than commercial importance, thus far.

The supplementary estimates at Toronto provide \$5,000 for increased accommodation for the Ontario Winter Fair, Guelph. The subject will be taken up by the Winter Fair Board shortly, and be disposed of at the annual meeting during the first week in April, before which the Guelph city authorities will have decided upon their intentions.

Thomas J. Drummond, of Montreal, President of the Lake Superior Corporation, on returning from New Ontario, says that the New Ontario clay belt is virtually a timbered prairie, and will afford homes for two million people. Being traversed by the C. N. R. and G. T. P. R., and tapped by the C. P. R. from its main line, its development will be rapid, and one of the surprises of the century.

Ex-Mayor Chas. Waterous, head of the Waterous Engine Works Co., of Brantford, Ont., although a believer in a considerable measure of protection to manufacturing industries, has announced his support of the reciprocity arrangement as affording a substantial degree of relief to farmers. He believes the bitter opposition of manufacturers to the measure a mistake, for the reason that its adoption will tend to allay dissatisfaction, while its rejection would only intensify demands for more sweeping tariff changes.

QUESTIONS AND ANSWERS. Miscellaneous.

THRUSH.

Valuable horse is affected with thrush. J. C. S.

Ans.—Thrush is the result of an inflamed condition of the membrane that secretes the horn of the frog. The frog cracks, decays, and has an offensive smell. To cure, pare away all partially-detached or decayed horn, and keep perfectly clean. Clean out the cracks, and fill them full of calomel every second or third day. Keep feet perfectly dry; or if the horse has to be worked, fill up cleft of the frog with tow smeared with pine tar. A competent veterinarian uses and strongly recommends formaldehyde (which a druggist will supply), one part of the liquid solution to five or six of water. Clean out the foot, then syringe or douse daily with the solution.

CRANBERRY-GROWING—APPLES FROM SEED.

1. Could you give me any information about planting and growing cranberries? I have about four acres of muck soil where water naturally lies about a foot from the surface, but have no way of flooding it to prevent frost from injuring fruit. Would this be necessary? Would the climate in this district be too cold to grow them successfully? Do you know of any parties who sell plants?

2. Would also like to know, in growing apples from seed, which variety would be most likely to produce fruit the same as that from which the seed was taken? E. B.

Ans.—1. The requisites for successful cranberry culture are: (1) A deep, mucky soil—a swamp upon which white cedar, spruce, black ash, red maple or swamp huckleberry will grow, and upon which water lies from fall until spring, draining off in summer, is likely to do admirably. (2) A ready means of irrigation, such as a running stream—provided, of course, the natural foundations are lacking. Occasionally, good results have been obtained from higher land which cannot be flooded, but such a situation cannot be depended upon for uniform results, as the plants are likely to suffer from fall and spring frosts, from the heaving of the ground, and from exceptionally long periods of drouth in summer. As a rule, water should lie on the bog to a depth of a foot or more from November to April.

Cranberries would in all probability stand the climate of Kenora. Late spring and early fall frosts are often very disastrous to the fruit. In order to procure plants you would probably have to

send to Wisconsin, where there is a Cranberry-growers' Association, as they are not, so far as we know, obtainable from dealers in Canada. You might address S. C. Parker, Secretary Nova Scotia Fruit-growers' Association, Berwick, N.S. 2. W. T. Macoun, Horticulturist, Experimental Farm, Ottawa, has found that a majority of seedlings of the Wealthy apple bear a strong resemblance to the parent fruit, and that, as a rule, the trees are more hardy. If our memory serves us aright, the early French-Canadian settlers propagated the Fameuse, or Snow Apple, from seed, and it was found to grow almost exactly true to type.

ALFALFA ON FALL WHEAT.

I have taken "The Farmer's Advocate" only for a short time, but I am very well pleased with it, and have shown it to some neighbors. I have a field of about six acres rolling land, which is a heavy clay, and bakes easily. It grows good crops, but is difficult to work. It is in fall wheat now, and I would like to sow alfalfa on that, as a neighbor got a good catch that way. Should it be sown in March, while it is freezing at nights? Would rolling after sowing be enough, or would it require harrowing as well? Of course, I understand that sowing with spring grain, or alone, is better than this, but the field is difficult to catch in good working condition in spring, and if there is a reasonable chance of success, I will sow it on the wheat. H. A. M.

Ans.—Some correspondents claim to have seeded alfalfa successfully in the spring on fall wheat. Whether it is better to sow the seed in the spring on soil honeycombed with frost, or later when the soil is dry enough to work up, we are not prepared to say definitely. We should prefer to take chances on the second plan, harrowing the seed in.

SHEEP PASTURE—ECZEMA IN HORSES.

1. What would you advise to sow on a hill that has been in pasture for twenty years? Was plowed last fall, and would like to pasture sheep this year.

2. What should be done for horses that have eczema, and to disinfect the stable? W. McP.

Ans.—1. Rape furnishes very nutritious pasture for sheep, but they could not be turned on until about six or eight weeks after it has been sown. After land has been worked down quite fine, sow in June, or even earlier, using four or five pounds of Dwarf Essex rape seed per acre. Cover about $\frac{1}{4}$ of an inch deep, and roll. This field should be good for corn.

2. Make a solution of corrosive sublimate, 40 grains to a quart of water. Heat it to about 150 degrees Fahr., and rub well,—being sure to rub it into the

skin,—twice daily. With horses other than mares in foal, this treatment is usually preceded by a purgation with 6 drams aloes and 2 drams ginger, which is followed by giving each one ounce of Fowler's Solution of Arsenic, night and morning, every alternate week, as long as needed.

To disinfect stable, thoroughly wet with a whitewash brush all surfaces with a 5-per-cent. solution of crude carbolic acid and water. After that has dried off, whitewash with fresh lime, to every pailful of which a pint of crude carbolic acid has been added.

Comfort in Old Age.

The impression which some people have that the Canadian Government Annuities scheme is available only to persons over the age of 55, is quite erroneous, an impression arising, probably, from the fact that 55 is the earliest age, except for invalidity or disablement, at which an annuity can begin. Naturally, the younger the person is when the purchase is begun, the smaller will be the payments which he or she will have to make to secure the same Annuity, and smaller will be the apparent cost. But any person over the age of five, may purchase an Annuity. An account of the sad ending of an old gentleman who had, until recently, lived all his life in a Canadian Province, but upon whom fortune, for some reason, had not smiled, was communicated a few days ago in a dispatch from a United States city. He had gone to Michigan to stay with a son for the remainder of his days, but shortly after his arrival the son died, leaving no means, and the father, who preferred death rather than the poor-house, to which he was to have been sent the following day, terminated his life. If the old gentleman had been provident in his younger days, and had laid aside but 10 cents a week, the amount accumulated at 3-per-cent. compound interest, which he would have had at his disposal at 80, would have purchased for him an Annuity of \$180 a year, an income sufficient to have enabled him to have provided for himself for the remainder of his days. Had he had the opportunity at 20, as all residents of Canada have to-day, of paying in to the Government Annuities fund a sum of 10 cents a week, his income at 80 would have been over \$525, instead of \$180, and had he died at any time before attaining the age of 80, his heirs would have received every cent that he had paid in, with 3-per-cent. compound interest, up to the date of his death. As the old gentleman reflected upon the past, it no doubt seemed but

yesterday when he was a boy. Still, young men and women are disposed to spurn the thought that old age is inevitable, that the day will come when they themselves will be old, and that the poor-house must be their ultimate destiny, if they have not made provision against such a contingency. But it will be impossible for them to dodge the issue, and the system of saving which the Annuities Act affords them is positively the only means available by which they can make this provision with absolute certainty, and with the smallest outlay. Explana-tory literature may be obtained at the Post Office, or will be supplied on application to the Superintendent of Annuities, Ottawa, to whom letters may be sent free of postage.

TRADE TOPIC.

The attention of farmers and poultry-raisers generally is directed to the advertisement of the Prairie State Incubator, by Gunn, Langlois & Co., Montreal, whose extensive experience in handling poultry and its products gives them special knowledge of the making of a satisfactory and successful incubator. There is a growing demand in the market for poultry and eggs as our cities and towns grow, and there is good money in poultry-raising properly conducted. The catalogue of this company gives much useful, practical information, the result of experience, about breeding, hatching and rearing poultry for profit. The catalogue will be mailed free to anyone writing for it. See the advertisement, and apply for the catalogue.

GOSSIP.

SALE DATES CLAIMED.

- March 28th.—Donald Ferguson, Glanworth, Ont.; Shorthorns, Shropshires, Clydesdales.
- March 29th.—William Hamilton, Bright, Ont.; Shorthorns.
- April 7th.—Belleville Holstein Breeders' Club; Holsteins, in Belleville, Ont.
- May 18th.—Dr. D. McEachran, Ormstown, Que.; Clydesdales.

A one-legged Welsh orator named Jones was pretty successful in bantering an Irishman, when the latter asked him: "How did you come to lose your leg?" "Well," said Jones, "on examining my pedigree and looking up my descent, I found there was some Irish blood in me, and, becoming convinced that it was settled in the left leg, I had it cut off at once." "By the powers," said Pat, "it would have been a very good thing if it had only settled in your head."

INCORPORATED - - - - 1855

The Strength
of the
Bank of Toronto

lies in its proportionately large Reserved Funds, its long experience and steady growth, the ability and high standing of those who conduct its affairs, the soundness of its loans and investments, and its large resources.

THE MANAGERS of the Bank are pleased to offer the up-to-date facilities of this well-known institution to all who have banking business to transact.

Capital, \$4,000,000
Reserved Funds, 4,944,777

MARKETS.

Toronto.
LIVE STOCK.

At West Toronto, on Monday, March 20th, receipts of live stock numbered 71 cars, comprising 1,459 cattle, 12 hogs, 271 sheep and lambs, 28 calves, 42 horses. Cattle trade was dull. Exporters, \$5.70 to \$5.95, one load \$6.10; prime picked butchers', \$5.80 to \$6 (only four cattle at latter price); loads of good, \$5.40 to \$5.75; medium, \$5.10 to \$5.30; common, \$4.80 to \$5.10; cows, \$3 to \$4.75; bulls, \$4 to \$5; milkers, \$40 to \$60; calves, \$1 to \$8.50. Sheep, \$4.50 to \$5; lambs, \$6.50 to \$7 per cwt. Hogs, selects, fed and watered at market, \$7, and \$6.65 to drovers for hogs f. o. b. cars at country points.

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

	City.	Union.	Total.
Cars	165	128	293
Cattle	2,056	1,832	3,888
Hogs	4,202	923	5,125
Sheep	1,193	1,392	2,585
Calves	282	63	345
Horses	—	251	251

The total receipts of live stock at the two yards for the corresponding week of 1910 were as follows:

	City.	Union.	Total.
Cars	227	220	447
Cattle	3,357	3,987	7,344
Hogs	5,016	1,095	6,111
Sheep	880	238	1,118
Calves	276	113	389
Horses	9	280	289

Compared with the corresponding week of 1910, the combined receipts of live stock at the two yards show a decrease of 154 carloads, 3,456 cattle, 986 hogs, 44 calves, and 38 horses; but an increase of 1,467 sheep and lambs.

While the receipts of live stock last week were not large, the cattle supply was more than equal to the demand. Trade was not brisk at any time during the week, and after Monday's market at the Union yards, the best cattle barely held steady, while common and medium classes declined from 15c. to 25c. per cwt.

Exporters.—Prices for export cattle last week ranged from \$5.65 to \$6.10, four carloads selling at the latter price, which was five cents per cwt. higher than for the best load for the previous week; but the quality of the four loads was easily 10c. to 15c. per cwt. better. For the London market, 300 steers were bought, 1,280 to 1,377 lbs. each, at prices ranging from \$5.80 to \$6.10, or an average of \$5.95. For the Liverpool market, 300 steers were bought, 1,170 to 1,236 lbs. each, at a range of \$5.65 to \$5.85, or an average of \$5.76 per cwt. Export bulls sold at \$4.75 to \$5. It will be seen that the average for the London cattle was a trifle higher, and the Liverpool cattle a little lower than the previous week.

Butchers'.—Prime picked lots of butch-

ers' sold at the end of the week at \$5.80 to \$5.90; loads of good, \$5.50 to \$5.75; medium, \$5.15 to \$5.40; common, \$4.75 to \$5.10; cows, \$3.25 to \$5; bulls, \$4 to \$4.75; canners, \$2.25 to \$3.

Milkers and Springers.—Common and medium quality milkers and springers were \$10 to \$15 per head lower in price, while the best quality cows were \$5 to \$10 each lower. Prices were quoted at \$35 to \$65 each.

Veal Calves.—Receipts have been larger, and prices a little easier, at \$3 to \$3 per cwt.

Sheep and Lambs.—Prices were firmer, as follows: Ewes, \$4.50 to \$5 per cwt.; rams, \$3.50 to \$4.25; lambs, \$6.25 to \$7 per cwt.

Hogs.—Receipts were moderate, and prices steady during the week. Selects, fed and watered at the market, \$7.05, and \$6.75 for hogs f. o. b. cars at country points. All hogs over 220 lbs. in weight were supposed to be bought at 50c. per cwt. lower prices than the above quotations.

Horses.—Horse market practically unchanged. Northwest trade not nearly as good as last year at this season, and remains quiet. J. H. Smith, of the Union Horse Exchange, reports a good local demand at the following prices: Drafters, \$200 to \$225; general-purpose horses, \$150 to \$175; express and wagon horses, \$175 to \$225; drivers, \$100 to \$200; serviceably sound \$35 to \$100 each.

BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, 80c. to 81c., outside points. Manitoba—No. 1 northern, 97c.; No. 2 northern, 95c.; No. 3 northern, 93c., outside points. Rye—No. 2, 65c. to 66c., outside. Peas—No. 2, 80c. to 81c., outside. Buckwheat—48c. to 49c., outside. Barley—For malting, 65c. to 67c.; for feed, 50c. to 55c., outside. Oats—Canadian Western, No. 2, 36c.; No. 3, 35c., lake ports. Ontario, No. 2, 31c. to 32c.; No. 3, 30c. to 31c., outside. Corn—American new, No. 3 yellow, 52c. to 53c., Toronto. Flour—Ontario winter-wheat, 90-per-cent. patents, \$3.25, at seaboard. Manitoba—Prices at Toronto are: First patents, \$5.40; second patents, \$4.90; strong bakers', \$4.07.

HAY AND MILLFEED.

Hay.—Baled, car lots, on track, Toronto, No. 1, \$12.50; No. 2, \$8.50 to \$10.50.

Straw.—Baled, car lots, on track, Toronto, \$7.

Bran.—Manitoba bran, \$21 per ton; shorts, \$23; Ontario bran, \$22, in bags; shorts, \$24, car lots, track, Toronto.

COUNTRY PRODUCE.

Butter.—Market steady to firm, at unchanged quotations. Creamery pound rolls, 26c. to 28c.; creamery solids, 23c. to 24c.; separator dairy, 22c. to 24c.; store lots, 17c. to 19c.

Eggs.—Strictly new-laid were plentiful and cheaper, at 19c. to 20c.

Cheese.—Market firmer, at 13c. for large, and 13c. for twins.

Honey.—Prices nominal, at 19c. to 11c. for extracted, and \$2.50 per dozen sections for combs.

Beans.—Hand-picked are quoted by commission dealers at \$1.85 per bushel, which would mean a value to the farmer of \$1.50 to \$1.60 by the car.

Potatoes.—Car lots of Ontario potatoes on track, Toronto, 85c. to 87c., and New Brunswick Delawares, 90c. to \$1.

Poultry.—Scarcely enough coming forward of fresh-dressed to constitute a wholesale market. Turkeys, 22c. to 25c.; geese, 15c.; ducks, 20c. to 22c.; chickens, yearlings, 18c. to 20c.; hens, 15c. to 16c.

HIDES AND WOOL.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 9c.; No. 2 inspected steers and cows, 8c.; No. 3 inspected steers, cows and bulls, 7c.; country hides, cured, 8c. to 8c.; green, 7c. to 8c.; calf skins, 11c. to 13c.; sheep skins, 9c. to \$1.25; horse hides, No. 1, \$3.00; horse hair, per lb., 30c. to 32c.; tallow, No. 1, per lb., 6c. to 6c.

TORONTO SEED MARKET.

The William Rennie Seed Company report the following prices, at which re-cleaned seeds are being sold to the trade: Alsike No. 1, per bushel, \$11; alsike No. 2, \$9.60; alsike No. 3, \$8.75; red clover No. 1, per bushel, \$10.50; red clover No.

2, \$9.30; red clover No. 3, \$8.40; timothy No. 1, per bushel, \$7.20; timothy No. 2, \$6.75; alfalfa No. 1, per bushel, \$13.75; alfalfa No. 2, per bushel, \$12.25.

FRUITS AND VEGETABLES.

Apples, Spies, \$5 to \$5.50, and \$6 per barrel, the latter price being only for extra choice samples for table purposes; Greenings, \$4 to \$4.50; Baldwins, \$3.75 to \$4.50; cabbage, \$1 per 100 lbs., or \$18 per ton; Canadian carrots, 50c. per bag; parsnips, 60c. per bag; Spanish onions, large case, \$2.90; Canadian onions, 90c. to \$1 per bushel; Florida celery, per case, \$2.75.

Montreal.

Live Stock.—On the local market last week, the supplies of cattle showed a slight increase, and this, together with the fact that this is now the Lenten period, during which the consumption shows a great falling off in Montreal, resulted in a slight decline in prices. Choice steers sold as high as 6c. to 6c., fine being 5c. to 6c., good 5c. to 5c., medium 4c. to 5c., common down to 3c. Some heavy bulls sold at 5c. to 5c., and some common stock sold at 3c., at which also some common cows were purchased. Yearling lambs were scarce, and the market firm, sales being made at 6c. to nearly 6c. per lb. Sheep were steady, at 5c. per lb., and spring lambs, which were also scarce, sold in the vicinity of \$8 each. Some choice calves sold up to \$15 each, and the lower grades at around \$4. As a result of the fire, which broke out in one of the stock-yards here on Monday, 13th, some 70 head of cattle were lost. The employees succeeded in rescuing over 400 head out of the 500 which were then present. The market for hogs was easier, selected lots being quoted at 7c. per lb. and a fraction higher, weighed off cars.

Horses.—Supplies light, and demand only moderate; prices steady. Heavy draft, 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; inferior, broken-down animals, \$50 to \$100 each, and choicest carriage and saddle animals, \$350 to \$500 each.

Dressed Hogs.—The market for dressed hogs was on the easy side, with prices at 9c. to 10c. for abattoir, fresh-killed, and 8c. to 9c. for country-dressed.

Potatoes.—The market again weakened, and a decline of 5c. was reported. Shippers were asking 80c. per 90 lbs., for Green Mountains, carloads, track, Montreal, with buyers turning these over at an advance of 5c., in the same position. Grocers probably paid about \$1 per bag of 90 lbs.

Eggs.—Market rather easier, fresh-laid eggs costing 23c. here, these selling to grocers at 25c. Very few American eggs coming in, as Canadian are valued at 2c. more, and it is difficult to get Americans at less than 21c.

Butter.—Choice full-made creamery, 26c. wholesale, down to 24c. Dairy-made, in tubs and boxes, 19c. to 20c. per lb.; rolls, 20c. to 22c.

Grain.—No. 2 Canadian Western oats quoted from 38c. to 38c. per bushel, car lots, store; No. 1 extra feed, at 37c. to 38c.; No. 3 Canadian Western, at 37c. No. 3 a cent under, and No. 4 yet a cent under. Manitoba barley No. 4 is 49c. to 50c. per bushel, and No. 3 American yellow corn, 55c. to 56c. per bushel.

Flour.—Ontario flour declined about 10c. per barrel all round. Manitoba flour quoted at \$5.60 per barrel, in bags, for Manitoba first patents; \$5.10 for seconds, and \$4.90 for strong bakers. Ontario patents, \$4.75 to \$4.90, and under. Straight rollers, \$4.25 to \$4.50.

Mill-feed.—Market firm. Manitoba bran, \$21 to \$23 per ton; shorts, \$23 to \$25. Ontario bran, \$22 to \$23; middlings, \$21 to \$25; pure grain mouille, \$30, and mixed, \$25 to \$28. Cotton-seed meal quoted at \$37 to \$38 per ton.

Hay.—No. 1 baled hay, \$11 to \$11.50, carloads, track, Montreal; No. 2 extra, \$10.50 per ton, and No. 2, \$7.50 to \$8; clover mixed, \$6.50 to \$7; pure clover, \$6 to \$6.50 per ton.

Seeds.—Dealers are beginning to experience some demand from the country. Prices per 100 lbs., in bag lots, Montreal: Timothy seed, \$15 to \$16.50; medium red clover, \$18 to \$20; Mammoth red clover, \$18.50 to \$20.50; alsike, \$18 to \$22.

The Canadian Bank of Commerce

affords to farmers and others every facility for the transaction of their banking business.

Accounts may be opened by mail and moneys deposited or withdrawn in this way with equal facility.

SALES NOTES will be cashed or taken for collection.

Branches throughout Canada, including Toronto, Hamilton, Montreal, Charlottetown, New Glasgow and Truro.

Hides.—Demand fair. Prices unchanged, at 8c., 9c. and 10c. per lb. for beef hides; 10c. and 12c. for calf skins, and 90c. each for lamb skins. Horse hides sell at \$1.75 and \$2.50 each. Tallow steady, at 6c. to 7c. per lb. for rendered, and 1c. to 4c. for rough.

Chicago.

Cattle.—Beeves, \$5.20 to \$6.85; Texas steers, \$4.40 to \$5.65; Western steers, \$4.75 to \$5.90; stockers and feeders, \$4 to \$5.80; cows and heifers, \$2.60 to \$5.90; calves, \$6.25 to \$8.50.

Hogs.—Light, \$6.95 to \$7.20; mixed, \$6.75 to \$7.10; heavy, \$6.60 to \$7; rough, \$6.60 to \$6.75; good to choice hogs, \$6.75 to \$7; pigs, \$6.60 to \$7.20.

Sheep and Lambs.—Native, \$3 to \$5.10; Western, \$3.25 to \$5.25; yearlings, \$4.75 to \$6.65; lambs, native, \$5 to \$6.50; Western, \$5.25 to \$6.60.

Buffalo.

Veals.—\$5 to \$9.50.
Hogs.—Heavy, \$7.20 to \$7.35; mixed, \$7.40 to \$7.45; Yorkers, \$7.50 to \$7.60; pigs, \$7.50 to \$7.60; roughs, \$6.30 to \$6.45; stags, \$5 to \$5.25; dairies, \$7.20 to \$7.60.

Sheep and Lambs.—Heavy lambs, \$5 to \$6.10; handy lambs, \$5 to \$6.90; yearlings, \$5.50 to \$6; wethers, \$5 to \$5.25; ewes, \$4.50 to \$4.75; mixed sheep, \$3 to \$4.90.

British Cattle Markets.

John Rogers & Co., Liverpool, cable States and Canadian steers 12c. to 13c. per lb.

CURIOUS ACCIDENTS.

Claims under accident-insurance policies, "employer's liability," and others, are very often curious enough, as most people in the world of business know. The Nottingham Express gives a number which have been collected from several of the leading offices, thus:

Cow, whisking her tail, causes injury to milkmaid's eye.

Servant receives shock through seeing large Teddy bear when room was only dimly lighted.

Barmaid severely hit by flying cork.

Man servant sprained leg through stamping on rat.

Domestic, fetching coal out of cellar, collapsed from fear caused by silent appearance of washerwoman, and broke her arm.

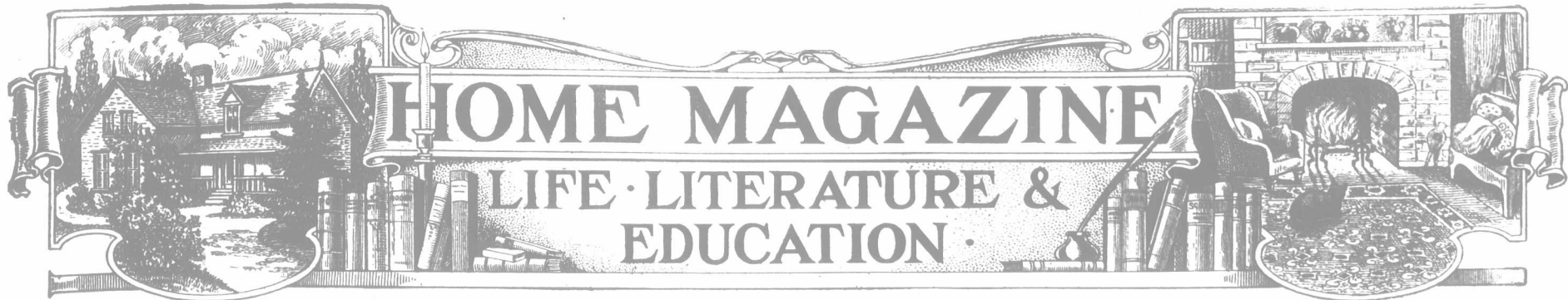
Coachman, proceeding from stable, struck on face by master's slipper, intended for singing cat.

Cook, breaking coal, piece went down her throat.

Curate scalded through stumbling while carrying tea-urn at parochial gathering.

Traveller's nose injured in collision with lamp-post.

And perhaps the oddest of all was the claim made by a butler whose hand had been "injured by pin in embracing parlourmaid." We are not told whether this claim was admitted.



Selections from Eminent Writers.

The Pastoral Bees.

(From "Locusts and Wild Honey," by John Burroughs.—a most delightful book.)

The honeybee goes forth from the hive in spring like the dove from Noah's Ark, and it is not till after many days that she brings back the olive leaf, which in this case is a pellet of golden pollen upon each hip, usually obtained from the alder or swamp willow. In a country where maple sugar is made, the bees get their first taste of sweet from the sap as it flows from the spiles, or as it dries and is condensed upon the sides of the buckets. They will sometimes, in their eagerness, come about the boiling-place and be overwhelmed by the steam and the smoke. But bees appear to be more eager for bread in the spring than for honey; their supply of this article, perhaps, does not keep as well as their stores of the latter; hence, fresh bread, in the shape of new pollen, is diligently sought for. My bees get their first supplies from the catkins of the willows. How quickly they find them out! If but one catkin opens anywhere within range, a bee is on hand that very hour to rifle it, and it is a most pleasing experience to stand near the hive some mild April day and see them come pouring in with their little baskets packed with the first fruitage of the spring. They will have new bread now; they have been to mill in good earnest; see their dusty coats, and the golden grist they bring home with them.

When a bee brings pollen into the hive, he advances to the cell in which it is to be deposited, and kicks it off as one might his overalls or rubber boots, making one foot help the other; then he walks off without ever looking behind him; another bee, one of the indoor hands, comes along and rams it down with his head and packs it into the cell as the dairymaid packs butter into a firkin.

The first spring wild flowers, whose shy faces among the dry leaves and rocks are so welcome, yield no honey. The anemone, the hepatica, the blood-root, the arbutus, the numerous violets, the spring beauty, the corydalis, etc., woo all lovers of nature, but do not woo the honey-loving bee. It requires more sun and warmth to develop the saccharine element, and the beauty of these pale striplings of the woods and groves is their sole and sufficient excuse for being. The arbutus, lying low, and keeping green all winter, attains to perfume, but not to honey.

The first honey is perhaps obtained from the flowers of the red maple and the golden willow. The latter sends forth a wild, delicious perfume. The sugar maple blooms a little later, and from its silken tassels a rich nectar is gathered. My bees will not label these different varieties for me, as I really wish they would. Honey from the maple, a tree so clean and wholesome, and full of such virtues every way, would be something to put one's tongue to. Or that from the blossoms of the apple, the peach, the cherry, the quince, the currant—one would like a card of each of these varieties to note their peculiar qualities. The apple-blossom is very important to the bees. A single sweet apple has been known to gain two hundred pounds in weight during its growth. Bees love the ripened fruit, and in August and Sep-

tember will suck themselves tipsy upon varieties like the sops-of-wine.

The interval between the blooming of the fruit trees and that of the clover and raspberry is bridged over in many localities by the honey locust. What a delightful summer murmur these bees send forth at this season! I know nothing about the quality of the honey, but it ought to keep well. But when the red raspberry blooms, the fountains of plenty are unsealed indeed; what a commotion about the hives then, especially in localities where it is extensively cultivated, as in places along the Hudson. The delicate white clover, which begins to bloom about the same time, is neglected; even honey itself is passed by for this modest, colorless, all but odorless flower. A field of these berries in June sends forth a continuous murmur, like that of an enormous hive. The honey is not so white as that obtained from clover, but it is easier gathered; it is in shallow cups, while that of the clover is in deep tubes. The bees are up and at it before sunrise, and it takes a brisk shower to drive them in. But the clover blooms later, and blooms everywhere, and is the staple source of supply of the finest quality of honey. The red clover yields up its stores only to the longer proboscis of the bumblebee, else the bee pasturage of our agricultural districts would be unequalled. I do not know from what the famous honey of Chamouni, in the Alps, is made, but it can hardly surpass our best products. The snow-white honey of Anatolia, in Asiatic Turkey, which is regularly sent to Constantinople for the use of the grand seignior and the ladies of his seraglio, is obtained from the cotton plant, which makes me think that the white clover does not flourish there. The white clover is indigenous with us; its seeds seem latent in the ground, and the application of certain stimulants to the soil, like wood ashes, causes them to germinate and spring up.

The rose, with all its beauty and perfume, yields no honey to the bee, unless the wild species be sought by the bumblebee.

Among the humbler plants, let me not forget the dandelion that so early dots the sunny slopes, and upon which the bee languidly grazes, wallowing to his knees in the golden, but not oversucculent pasturage. From the blooming rye and wheat the bee gathers pollen, also from the obscure blossoms of Indian corn. Among weeds, catnip is the great favorite. It lasts nearly the whole season, and yields richly. It could, no doubt, be profitably cultivated in some localities, and catnip honey would be a novelty in the market. It would probably partake of the aromatic properties of the plant from which it was derived.

Among your stores of honey gathered before midsummer, you may chance upon a card, or, mayhap, only a square inch or two of comb, in which the liquid is as transparent as water, of a delicious quality, with a slight flavor of mint. This is the product of the linden or basswood. Of all the trees in our forest, the one most beloved by the bees. Melissa, the goddess of honey, has placed her seal upon this tree. The wild swarms in the woods frequently reap a choice harvest from it. I have seen a mountain-side thickly studded with it, its straight, tall, smooth, light-gray shaft carrying its deep-green crown far aloft, like the tulip or

maple. . . . As a shade and ornamental tree, the linden is fully equal to the maple, and if it was as extensively planted and cared for, our supplies of virgin honey would be greatly increased. The famous honey of Lithuania, in Russia, is the product of the linden.

It is a homely old stanza current among bee folk that,

"A swarm of bees in May
Is worth a load of hay;
A swarm of bees in June
Is worth a silver spoon;
But a swarm in July
Is not worth a fly."

A swarm in May is indeed a treasure; it is, like an April baby, sure to thrive, and will very likely itself send out a swarm a month or two later; but a swarm in July is not to be despised; it will store no clover or linden honey for the "grand seignior and the ladies of his seraglio," but plenty of the rank and wholesome poor man's nectar, the sun-tanned product of the plebian buckwheat. Buckwheat honey is the black sheep in this white flock, but there is spirit and character in it. It lays hold of the taste in no equivocal manner, especially when at a winter breakfast it meets its fellow, the russet buckwheat cake. Bread with honey to cover it from the same stalk is double good fortune. It is not black, either, but nut-brown, and belongs to the same class of goods as Herrick's

"Nut-brown mirth and russet wit."

How the bees love it! And they bring the delicious odor of the blooming plant to the hive with them, so that, in the moist, warm twilight is redolent with the perfume of buckwheat.

Yet, evidently, it is not the perfume of any flower that attracts the bees; they pay no attention to the sweet-scented lilac, or to heliotrope, but work upon sumach, silkweed, and the hateful snapdragon. In September they are hard-pressed, and do well if they pick up enough sweet to pay the running expenses of their establishment. The purple asters and the golden-rod are about all that remain to them.

Bees will go three or four miles in quest of honey, but it is a great advantage to move the hive near the good pasturage, as has been the custom from the earliest times in the Old World. . . . It is the making of the wax that costs with the bee. As with the poet, the form, the receptacle, gives him more trouble than the sweet that fills it, though, to be sure, there is always more or less empty comb in both cases. The honey he can have for the gathering, but the wax he must make himself—must evolve from his own inner consciousness. When wax is to be made, the wax-makers fill themselves with honey and retire into their chamber for private meditation; it is like some solemn religious rite; they take hold of hands, or hook themselves together in long lines that hang in festoons from the top of the hive, and wait for the miracle to transpire. After about twenty-four hours, their patience is rewarded, the honey is turned into wax, minute scales of which are secreted from between the rings of the abdomen of each bee; this is taken off, and from it the comb is built up. It is calculated that about twenty-five pounds of honey are used in elaborating one pound of comb, to say nothing of the

time that is lost. Hence the importance, in an economical point of view, of a device by which the honey is extracted and the comb returned intact to the bees. But honey without the comb is the perfume without the rose—it is sweet, merely, and soon degenerates into candy. Half the delectableness is in breaking down these frail and exquisite walls yourself, and tasting the nectar before it has lost its freshness by contact with the air. Then, the comb is a sort of shield or foil that prevents the tongue from being overwhelmed by first shock of the sweet.

Hope's Quiet Hour.

This We Also Pray For.

For we rejoice, when we are weak, and ye are strong: this we also pray for, even your perfecting.—2 Cor. xiii: 9 (R. V.).

"'Lovest thou Me?' True love is strong, Ready to work and suffer long. Patient and meek, she fills her tasks, And no reward but love she asks."

I have lately been reading Hamilton Wright Mabie's "William Shakespeare," and notice that he says of Helena (the heroine of "All's Well that Ends Well"), that Coleridge thought her Shakespeare's loveliest creation. He also speaks of Isabella (the heroine of "Measure for Measure") in this way: "Isabella's stainless and incorruptible chastity invests purity with a kind of radiance, and she finds her place in the little company of adorable women in whom Shakespeare's creative imagination realized and personified the eternal feminine qualities." And yet Helena seemed careless of her husband's holiness and honor, if only she could—by fair means or foul—win his affection; and Isabella, though scrupulously particular about her own white robes, was eager to buy her brother's pardon at the expense of the whiteness of other souls. Thank God, there are many thousands of women in the world who are not only trying to walk with God themselves, but who rejoice when others are strong, and who pray constantly for the perfecting of those they love.

Only God can measure the influence one soul may have on another. Only God knows how many men have echoed the excuse of Adam: "The woman whom Thou gavest to be with me, she gave me of the tree, and I did eat." It was the woman God had given him to help him in his upward climb who tempted him successfully. He might have resisted temptation, certainly, and so might other men; but woman has much power for good or evil, and power means responsibility. How high does her ambition soar? Is she satisfied if she can win her husband's affection, or does she earnestly pray for his perfecting? Is she content to keep jealous watch over her own white garments, or does she care about the sin of her brothers and sisters? Tennyson's "Enid" could not endure the fact that her husband loved her more than he loved his duty. His boundless love for her made him forgetful of the work and responsibility of his high position. No wonder she said that she would rather gird his armour on him, and ride with him to battle, than know that he was wasting his strength and time. No wonder she felt that it would be better for him if she were "laid in the dark earth," rather than weaken him by her loved companionship.

Then there is that other lovely woman pictured by Tennyson in "The Holy Grail." While living a hidden life of

prayer, she longed for the world to be healed of wickedness, and her prayers reached very far. Sir Galahad has inspired a great multitude of men with high aspirations after a life of radiant whiteness; and that quiet woman, whose name is unknown to fame, inspired Sir Galahad. She saw a vision of perfect fellowship between God and man, and between man and man, a vision of LOVE coming down from heaven to burn with its pure flame in the hearts of men. When she found a knight whose love was one with hers, she bound a sword-belt on him and sent him forth on his high mission, saying:

"I, maiden, round thee, maiden, bind my belt.
Go forth, for thou shalt see what I have seen,
And break thro' all, till one will crown thee king
Far in the spiritual city: and as she spake
She sent the deathless passion in her eyes
Thro' him, and made him hers, and laid her mind
On him, and he believed in her belief."

How often we hear that men are indifferent to religion; that they stay at home and read the papers, leaving the women to go to church alone. And yet the highest spiritual teaching comes from men, not only through sermons, but through books and hymns, and—greatest force of all—the power of holy living. The Pattern Life was the life of a Man. Perhaps Christian women are working enthusiastically, like Martha, when they could accomplish far more by sitting at the feet of Christ and praying for the perfecting of those they love.

What measure of perfection have you set your heart on? Is it enough for you to pray that one you love should climb some distance up the mount of holiness, and then sit down contented with his attainment? Or are you praying bravely that he may obey God's call, even though it be to a cross of pain? Do you really want him to devote all his powers to the great work of drawing the world into a clearer knowledge of God? If you want him to be perfect, as your Father in heaven is perfect, then your opportunity is always at hand. Prayer—the prayer of one whose hand is clasped close in the hand of the Great Intercessor—is the mightiest force imaginable. If we ask the thing that God Himself desires, then—as St. John tells us—"we know that we have the petitions that we desired of Him." What matter is it if we do not see the result of our prayer immediately? The farmer does not lose hope for his apple orchard because there is no fruit the year the young trees are planted. A mother does not think her prayers that her child may lead many souls nearer to God are wasted, because she has to wait for the visible fulfillment of her prayer.

We are all made in the image of God, and, therefore, we can never be satisfied to stop in our climbing, can never rest until we have carried out our Lord's command to be perfect as our Father in heaven is perfect—even though we have to climb on through all eternity, to reach that infinite height.

In the Tabernacle, there was a heavy veil before the Holy of Holies, as a sign that sin was a barrier between man and God. When the Great Sacrifice was completed, that barrier was torn down by God Himself—how He must have rejoiced when that new and living way was new-made for us (Heb. x. 20, marg.). Now, the way into Heaven itself is open, and we can draw near in full assurance of faith, if we are one with Christ, the true High Priest. The Way is open—Christ is the Living Way—why is it that we are too much engrossed with business or pleasure to take advantage of it? If the value of our prayers—their reality and power—determines more than anything else the measure of our own progress, and the help we are giving to others, then it is no wonder that our progress is slow. We submit to live in a rush, and prayer because we don't prize it as we should is too often put aside for a more convenient season. And then we are weak, and the people we want to help and ought to help, are weak too. The Way is open, and God wants to supply all our need, but we are too busy to think of Him. We may not be slothful in business, but we are very apt to fail in being fervent in prayer. Let us, O Lord, rejoice in

hope; patient in tribulation, continuing instant in prayer." Bishop Brent, in "Adventure for God," declares that sloth, in these strenuous days, "usually takes on the form of a lack of balance in which worship is outstripped by action. It is the great unseen stretches of life that are most endangered by the spirit of the age. The part of life lived in the public eye is kept up to pitch, but we are too weary, or worried, or preoccupied, to take time to become personally acquainted with the eternal verities. We do not plan for deep excursions into the sphere that lies less than a hand's breadth from our 'prie-dieu.' Or in moral matters we are not curious enough to try just how high we can climb in the scale of goodness."

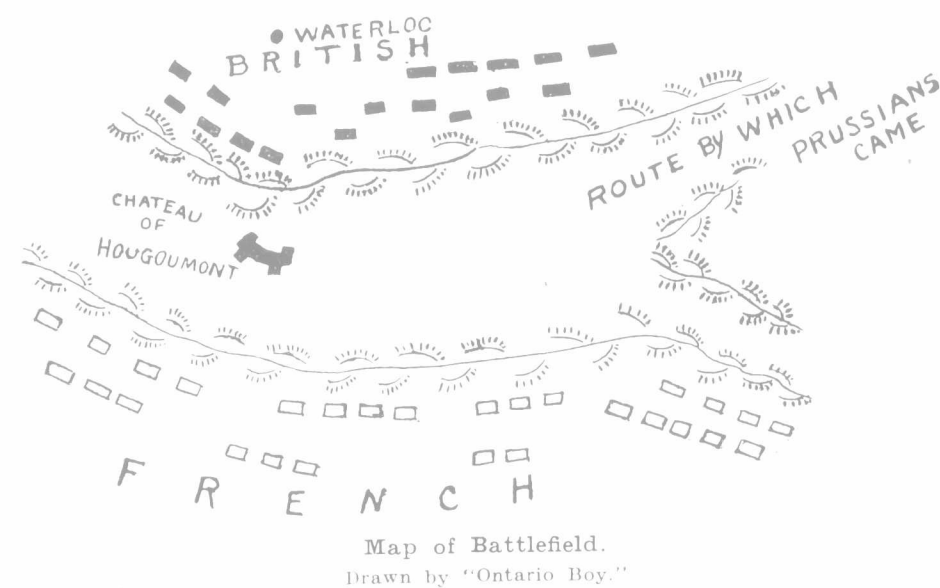
No life need be weak or confined within narrow limits. Every day can be full of joyous interests. Prayer is like the magic carpet in the old wonder story. On its wings we can go anywhere, touch anyone, and do mighty works, unseen and unknown. Those who are sick or crippled, may reach out and strengthen the hands of God's warriors in the uttermost parts of the earth. Those who feel their own weakness, may be thrilled through and through with the power of God. Prayer is the most practical work on earth—let us do it with all our might.

DORA FARNCOMB.

The Beaver Circle.

[All children in third and fourth books, also those who have left school, or are in High School, between the ages of 11 and 15, inclusive, will write for Senior Beavers'. Kindly state book at school, or age, if you have left school, in each letter sent to the Beaver Circle.]

Dear Beavers.—You have had to exercise patience in waiting for the results of your competition on the Battle of Waterloo, but so very many essays were received, that the task of judging was slow and difficult. Indeed, the work sent by



Map of Battlefield.
Drawn by "Ontario Boy."

those whose names appear in the first half of the Honor Roll, was so close in merit to that of those who proved the prize-winners, that it was necessary to mark very sharply. Had it been possible, indeed, we should have been glad to send prizes broadcast. We are proud of you, Beavers, for your splendid work. You who won places on the Honor Roll may, indeed, be congratulated, almost as much as you who came in first of all.

Prizewinners (the prizes are equal):

Thaddeus Sieniewicz, Fairview, Halifax, N. S.
Raymond Evans, Norham, Ont.
Ontario Boy, Peterboro, Ont.
Sam Cordingley, Lisgar, Ont.
Albert E. Rosser, Denfield, Ont.
James N. Corry, Britton, Ont.

Of these, the last two excelled in giving preliminary explanations; Sam Cordingley's gave evidence of original thinking on the subject, the other three were written with much literary excellence, those of Thaddeus Sieniewicz and Raymond Evans being especially graphic descriptions of the battle itself, while Ontario Boy helped his by a very fine map of the field.

Honor Roll.—Harold Church, Ralph Wallace, Willie McKeen, Ernest Williams, Gladys Pridmore, Josephine Johnson, Marion Weston, W. Elbes, M. Strangway, Roy Kennedy, Mildred Smith, Hazel

Greene, Marion MacLeod, Florabel Johnston, Jean McRae, Margaret Coun, Leonard Condy, "Abbie," Pearl Pounder, Harold Ermel, Mary Morse, Bert Third, Tom Patrick, Leslie Houston, John Baigent, James Atkinson, Jack Reid, Salem Thomson, Nina Kelly, W. McPherson, Sydney O'Brien, Hillis Keyes, Innes MacFarlane, Mary Wills, Edward Keys, Gladys Adams, Alroy MacLeod, a typewritten essay—no name signed, Orval Becksted, Leonard Henderson, Bruce Learn, Rachel Ellison, Geraldine Carkner, Vernon Augustine, Edith Hyde, Velma Bingham, Etta Annett, Mabel Wagner, Louise Fowler, Charles Patterson, N. McKinney, Essel Willard, Willie Wilson, Hazel Moore, Jean Rentoul, Florence Hooper, Lillian Griffiths, Kathleen Ware, Kathleen Murray, Alice Venning, Frank Chapman, Willie Dunn, Mae McDonald, Mabel McCusan, Grace Burleigh, Luella Parrott, Bruce Barkley, Tom Harrison, Annie Farr, David McCarter, Fred Boyd.

We cannot publish all of the prize essays to-day. The rest will appear later.

"Waterloo, June 18, 1815."

(Prize Essay.)

After the defeat of the French at Leipzig, October 13, 1813, the allied armies of Russia, Austria, Prussia, Sweden and England, entered Paris, and Napoleon was banished to the Island of Elba. After eleven months, however, came the startling news that he had escaped, and had landed in France. His old soldiers flocked to his standard, and in a very short time he found himself at the head of two hundred and fifty thousand men. The British and Prussian armies, which were scattered about at various points, hastened to unite and crush Napoleon, but he, with his usual ingenuity, planned to defeat them before they could unite their forces. He divided his army into two parts, and, at the head of eighty thousand men, marched to Ligny and inflicted a severe defeat on the Prussians. On the same day, Marshal Ney, with

from the Prussian General, Blücher, the battle began between 11 and 12 o'clock, with a fierce attack on Hougoumont, which was successfully defended by the British Guards. Napoleon then hurled his heavy columns against the British left, but was completely defeated. His third move was against the British center, which he tried to break by heavy artillery fire, and furious cavalry charges. But the British formed in squares, and foiled every attempt. This continued until about 5 o'clock in the afternoon, and at last,—

"The Prussian trumpet blew,
Through the long tormented air,"

and Napoleon found himself menaced in rear and flank, by forty thousand Prussians. With one last effort, he resolved to break the British lines by one desperate charge of the Old Guard, and the six thousand veterans, led by Marshal Ney, were ordered to charge. Wellington saw the move, and ordered his artillery to load with grape shot and wait. As the French rushed up the slope, the command was given to fire, and a terrific volley swept the French ranks. Then came the single command, "charge!" The whole British army charged fiercely with the bayonet, and literally swept the French from the field.

The defeat was complete. The shattered French army broke and fled, and were pursued most of the night by the Prussians, who slaughtered them unmercifully. Napoleon, fearing death at the hands of the Prussians, surrendered himself to the captain of the British warship Bellerophon. He was banished to the lonely Isle of St. Helena, where he died, May 5, 1821.

ONTARIO BOY (age 16).

Peterboro Co., Ont.

The Battle of Waterloo.

(Prize Essay.)

If it had not rained on the night between the 17th and 18th of June, 1815, the future of Europe would have been changed. Had the earth been dry and the artillery able to move, the action would have been won and over by 2 p.m., three hours before the Prussian interlude. Wellington had only 159 guns, while Napoleon had 240.

Those who wish to form a distinct idea of this battle, need only imagine a capital A on the ground. The left leg of the A is Neville's Road, the right one the Genappe Road, while the string of the A is the broken way running from Ohaim to Briane T'Allend. The top of the A is Mont St. Jean, where Wellington is; the left lower point is Hougoumont, where Reille is with J. Bonaparte; the right lower point is La Belle Alliance, where Napoleon is. A little below the point where the string of the A meets and cuts the right leg is La Haye Sainte; and in the center of this string is the exact spot where the battle was concluded. At 4 p.m., the situation of the English army was serious. The Prince of Orange commanded the center, Hill the right, and Picton the left. The Prince of Orange shouted to the Dutch Belgians: "Nassau, Brunswick, never yield an inch!" When the English seized the French flag of the 150th line regiment, the French shot Picton. Hougoumont still held out, while La Haye Sainte was lost. About 4 o'clock the English line fell back all at once; nothing remained on the plain but the artillery and sharpshooters.

The English front withdrew. Wellington was falling back. "It is the beginning of the retreat," Napoleon cried. Napoleon sent a messenger to Paris to announce that the battle was gained. Napoleon gave orders to Milhaud's cuirassiers to carry the plain of Mont St. Jean. There were three thousand five hundred in number, and were mounted on horses. They formed twenty-six squadrons, and behind them they had as a support L. Desnouette's division. At 9 a.m., the whole army had admired them when they came up, with bugles sounding, while all the bands played, "Veillons au Sainte de l'Empire." Now Ney placed himself at the head of the cuirassiers, and the mighty squadron started, while behind the crest of the plain, thirteen English squares, each of two battalions, and formed two deep, were waiting with their muskets for them.

When the French reached the culminating point of the crest, they noticed he-

tween them and the English army, a trench. It was the hollow road of Ohaine. It was a frightful moment—the trench was unexpected. The second rank went first into this abyss. Men and horses rolled pell-mell, crushing each other. This commenced the loss of the battle.

Sixty guns and thirteen squares thundered at cuirassiers at point-blank range. The disaster of the hollow way had not discouraged the cuirassiers. Waither's column alone suffered in the disaster; but Delord's column arrived entire. The cuirassiers rushed at the English at full gallop, with pistols in their hands. The English, though fiercely attacked, did not move, but the front rank, kneeling, received the French with bayonets, while the second fired at them; behind the second the artillery men loaded their guns, while the cuirassiers, with their horses, leaped over the bayonets into the center of the army. The extreme right square, the most exposed of all, was nearly annihilated in the first attack.

The cuirassiers, few in number, and reduced by the disaster of the hollow way, had against them nearly the whole English army. Some Hanoverian battalions, however, gave way; Wellington saw it, and thought of his cavalry. Had Napoleon at this moment thought of his infantry, the battle would have been won by the French. All at once the cavalry of the English attacked the French.

Ney dashed up with Desouette's lancers; the plain was taken and retaken. Ney had four horses killed under him, and one half of the cuirassiers remained on the plain. This struggle lasted two hours. The English were greatly shaken. The French annihilated seven squares out of thirteen, captured sixty guns, and took six English regimental flags.

Now Wellington had the village and the plain; Ney only the crest and the slope. Kempt, on the left wing, asked for reinforcements. "There are none," Wellington replied. Almost at the same time, Ney asked Napoleon for infantry, and he answered, "Infantry?" At 5 o'clock Wellington looked at his watch, and could be heard muttering, "Blucher, or night." At this moment, Blucher was advancing. Now each battalion of the Guard was commanded by a general.

Ney, wild, offered himself to every blow in this combat. He had his fifth horse killed under him here. Bleeding, and with a broken sword in his hand, he shouted, "Come, and see how a Marshal of France dies on the battlefield!" But in vain—he did not die. The rout of the rear of the Guard was mournful. Ney borrows a horse, leaps on it, and, without a hat, stock or sword, dashes across the Brussels road, stopping at once English and French. He tries to hold back the army. The soldiers fly from him, shouting, "Long live Marshal Ney!" Guyot, who leads the Emperor's squadron to the charge, is killed. Then Napoleon leads them. Next morning the Prussian cavalry, who had come up fresh, dashed forward. Thus, forty thousand Frenchmen were put to flight. At nightfall, Bernard and Bertrand were seized by the skirts of their coats by Napoleon.

THADDEUS SIENIEWICZ.

Halifax, N. S.

Waterloo. (Prize Essay.)

The gray light of a Sunday morning was breaking over a shallow valley lying between the parallel ridges of low hills, some twelve miles to the south of Brussels. All night long the rain had fallen furiously, and still the fog hung low, and driving showers swept over the plain as from the church spires of surrounding villages the bells began to peal. For centuries, those bells had called the simple villagers to prayers; to-day, as the wave of sound vibrated through the misty air, it was the signal for the awakening of two mighty armies to the king-making battle of Waterloo.

For weeks, the British and Prussian armies, scattered over a wide district, had been keeping guard over the French frontier. Napoleon, skillfully shrouding his movements in impenetrable secrecy, was about to leap across the Sambre. Napoleon hoped to defeat Blucher before Wellington could join forces with his ally, and then in turn crush Wellington. It was a splendid strategy, nobly begun, but left sadly incomplete. Napoleon fought Blucher at Ligny, on June 16th, and, defeated again, caused him to retreat to

Wavre, but here Wellington intercepted his plans by ordering his own British army to retreat to Waterloo, thus giving Blucher another chance to join him before the final contest began.

Hither Napoleon followed him, and on the 18th of June, 1815, the rival hosts were drawn up on two ridges, scarcely a mile distant. The opposing armies differed rather in quality than numbers. Wellington had, roughly speaking, sixty-seven thousand men, and one hundred and fifty-six guns, while Napoleon had a total of seventy-two thousand men, and two hundred and forty-six guns. But the French were war-hardened veterans, men of one blood, speech and military type, a loyal mass aflame with warlike enthusiasm. Of Wellington's troops, not half were British and Germans. Some were raw drafts from the militia, and had never seen a shot fired in battle.

A precisely ten minutes to twelve, the first heavy gun rang sullenly from the French ridge, and then Reille's corps flung itself upon Hougomont, an old farmhouse of which the British had made a fort. It was a strong post, and the brave Col. Macdonnell, in charge of the Foot Guards, nobly fulfilled his trust by saving it from the French. At 2 o'clock Napoleon launched his great infantry attack, led by D'Erlon, against the British lines, which, at this point, consisted of Picton's division. The British lines were drawn up slightly back from the crest, and, as the French reached the top, Picton's steady lines rose suddenly before them. Then, from the steadily red lines, there ran in one red flame, from end to end, a dreadful volley. Again the muskets cracked, and yet again, and while the French were trying to rally their forces, Picton ordered his men to charge, and the French were scattered.

One of the most dazzling incidents of the fight was the attack of the Household and Union brigades. They leaped the hedge which bordered the road between the two armies, and met the French cuirassiers in full charge. The sound of their impact rang sharp and sudden above the din of the conflict, but the French were carried away in an instant, and went, a broken and shattered mass of men and horses, down the slope. Later, the Scots Greys bore down upon the French battalions, and, as they rode through the Scotch infantry, the Scotch blood in both companies naturally took fire, and, "Scotland for ever!" went up in a stormy shout from the killed lines.

Napoleon's infantry had failed to capture either Hougomont or La Haye Sainte, which was stoutly held by Baring and his Hanoverians, so now he thought that he would try something else. At

4 o'clock came the great cavalry attack of the French. To meet the assault, Wellington drew up his first line in a long chequer of squares. In advance of them were the British guns, with their sadly-reduced complement of gunners. As the French cavalry came up the slope, the gunners ran for shelter beneath the bayonets of the nearest square. With all his grand cavalry, consisting of nearly forty squadrons, Ney could not force the firm red British squares, and the flood of maddened men and horses swung sullenly back across the ridge. Foiled in his first attack, Ney drew the whole of Kellerman's division, and, with a mass almost double in area, again charged upon the British squares. From 4 to 6 o'clock, this amazing scene was repeated, each time the French retreating with their forces greatly reduced by the fire from the squares and the British guns.

Captain Mercer, who was in command of part of the British artillery, gives a most realistic picture of the grand fight of the gunners. About 3 o'clock, in the height of the cavalry struggle, Fraser, chief commander of the horse artillery, gave orders to Mercer to retreat for safety under the British bayonets, when the French cavalry charged home. Each time that the French horsemen came up, countless numbers would be mown down by the British guns. So dreadful was the carnage, that, on the next day, Mercer could identify the position of his battery by the huge pile of men and horses lying in front of it.

Napoleon had expended in vain upon the steadfast British lines, his infantry, his cavalry, and his artillery. There remained only the Old Guard. The long, summer evening was drawing to a close when he marshalled these famous soldiers for the final attack. The eight battal-

ions were arranged in echelon, and really formed one mass, though in two parallel columns of companies, having batteries of horse artillery on either flank advancing with them. Napoleon watched this huge, black echelon mount the slope, and, as the Guard and the British mingled together, his face became pale as death, and he was heard to murmur, "Ils sont meles ensemble." (They are mingled together.) The moment the Old Guard reached the summit and the smoke had cleared away, from the whole line of the British ran—and ran again, and yet again—the vivid flash of a tremendous volley, followed by a gleaming row of leveled bayonets as the British began the charge. Who could withstand such a charge? Not even Napoleon's veterans. As the line of gleaming points shone nearer, and yet nearer, the nerve of the French seemed to fail, the huge Guard faltered, shrank, and tumbled in ruin down the hill.

Meanwhile, on the opposite ridge, stood the great Napoleon. He cast one hurried glance over the field, and, in the place of his once grand host, he saw nothing but broken squadrons, abandoned batteries, and wrecked battalions. "Tout est perdu," he said, "Sauve qui peut!" and, wheeling his horse, he turned his face from his last battlefield. His star had set. Napoleon had lived too long for the world's happiness, or for his own fame. After this battle, his army simply ceased to exist, and there remained to Napoleon only six ignoble years at St. Helena. But to Wellington, who had showed all the highest qualities of generalship in the grim but decisive battle of Waterloo, there remained thirty-seven years of honored life, till, "To the noise of the mourning of a mighty nation," he was laid beside Nelson in the crypt of St. Paul's.

RAYMOND EVANS. Northumberland Co., Ont.

Our Ingle Nook Page of Opinions.

We thank most heartily those who have so very ably contributed to "Our Page" upon this important subject, "Beautifying Canada." They may feel best repaid, however, in thinking of the great possible good this little series of letters may do throughout our beloved country. A little seed sown through so widely-circulated a journal as ours, may bear much fruit.

Next month, the subject—a very excellent one, suggested by an Ancaster member—is "Do not professional exhibitors

keep our women and girls from exhibiting at our township fairs?"

Beautifying Canada.

(A Hint to the Agricultural Society and Fair Officials.)

Canada is beautiful naturally, but, with the advent of man, much of this natural beauty has been spoiled and obliterated. But we want, if possible, to preserve the beauty of our country, and where the forest



"And harmoniously woven into each memory are those old log buildings, which exactly fitted their primitive surroundings." (See "Opinion" written by Mrs. Dawson.)

Now, Why Should I Buy a

KNECHTEL KITCHEN KABINET ?

ARE you asking yourself that question, Madam? Or do you, Sir Husband, wonder just what good one of these time-money-and-labor-saving devices would be in your home? Give it five minutes' study, and you will wonder why you have been keeping house without a K. K. K. You will see in one minute, how many, many, many steps it must save every day, because it groups in one compact space practically every item of the culinary battery.

—a place for everything you use in getting meals ready. You can sit down to your work if you like. You will have far more time for recreation, and far more vitality to enjoy it. Go to-day to your furniture dealer, and ask to examine the Knechtel. He will cheerfully explain its exclusive excellence to you. And he will not beg you to buy. Booklet D mailed on request.

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IF you keep help, it does much to keep the girl contented, for it gives her more time for her other work, and spares her from getting so tired out. It economizes foodstuffs, because it abolishes much waste—keeps the supplies in better shape—keeps them clean—protects them from mice and insects. After you've had a K. K. K. a month you wouldn't sell it.

Knechtel Kitchen Cabinets are made in five handsome styles, all beautifully finished, all with shining, rustproof extension tops of bright aluminum. Each has a dust-tight flour-bin with sifter bottom, an ingenious sugar bin, plenty of shelf and cupboard room



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to use the best sugar—because poor sugar means poor cooking.

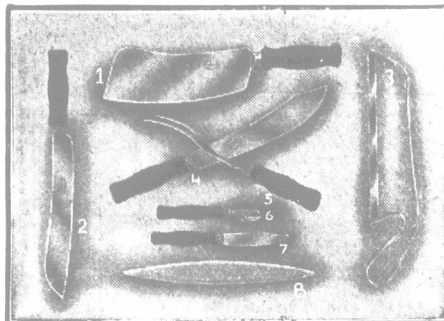
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Selling this fully guaranteed, eight-piece Kitchen Set. Write to-day for our agents' offer.

May Mfg. Co., Elora, Ont.

trees have been cleared away, and we deem it wise or expedient to plant others in their places, let us follow nature as closely as possible, and plant them in clumps and in bays. Planting in rows is considered too stiff and formal, although, to my mind, a nice row along the front of a place, or up each side of a lane, looks well.

How nice it would be if more people were imbued with the love of planting trees; they make a place so homelike and cozy, and a great contrast to a bare house standing out in the open.

If any of you own such a house, it does not matter how new and handsome it is, if there are no trees or shrubs about it more than half of the charm is gone. If you have ever read any of Sir Walter Scott's works, perhaps you may have come across what the Laird of Drummedykes said to his son, "Whenever you've any time, Jock," said he, "stick in a tree. It'll be growin' when ye're sleepin'." I would say, go and do likewise, and if you want to know where to get them—the trees, of course—and have not access to a swamp, or have not too much money to leave with the nurseryman, write to the Forestry Department at Guelph. They used to have plenty to give away, and, as far as I know, have yet. They had different varieties, Norway spruces included, and all the cost amounts to, to the sender, is the express charges.

Truly, we have a good and generous Government. Now, I need not say much about lawns and flowers. Most women love to have a garden and a flower-bed, and, if given a fair chance, would see to that part of it, but how often do we hear the complaint: "No, I've no garden this year; John hadn't time to plow it." Or, "There's no fence worth speaking of, and it would be just a waste of time to bother with it."

I once heard a woman asking her man to do a job like this for her, but he hadn't time. Oh, no; it was impossible, and he went off down the road with his team and met a neighbor and talked for two hours. Oh, those men! They can always get time for what they want to do.

An hour or two now and again fixing up a place, works wonders, and it beats my comprehension how some people can fix up inside of their houses, and fix themselves up, while all around outside there are burdocks and thistles growing right up to the front door, and all manner of rubbish thrown out at the back. I think that if the Agricultural Societies would take a hold and offer prizes for, say the best-kept place, which might include orchards, gardens, buildings, lawns, lanes, fences, etc., and general tidiness, there might be some improvement.

Man is an untidy animal (at least, some of them are), and an Ethiopian may change his skin, and a leopard his spots, easier and more readily than most untidy men would change their ways, but if some inducement of that sort were held out, and it affected their pockets in any way, why they might change a little and become tidier. Or if one or more men or women in each locality would get at it and burnish up their places, others might try to follow their example. Those who build new houses might level down the mounds of earth that are made by excavations from the cellar, and take the mortar box, etc., away, instead of leaving them there for years, as I have often seen. And those who build wire fences, instead of leaving the old rails scattered all over, or else in heaps to rot, might take the best of them home to the woodpile and make a bonfire of the rubbish that is left. And they might also make a bonfire of the burdocks in the fall, instead of throwing them over the fence onto the roadside as I have seen some men do, to be gathered up and trailed all over by their neighbor's sheep. Also, why cannot a law be passed to compel people to burn any rubbish along the front of their places? Also to cut all the weeds along the front of their places each year? And, if no such law is passed, why cannot they do it anyway? And last, but not least let me mention pigs. Pigs are not allowed to run at large, yet how often do we see them adorning the sides of the roads, and rooting and tearing up the nice greensward right into the towns and villages. Surely something could be done. Surely those in authority could see to it that they were kept in their

proper places. As spring is once more approaching, let us all try if we cannot make some plans whereby we can make some improvement and "slicken" our places a bit (for places are an indication of character), and by doing so we will be benefitting ourselves and beautifying our country. GREYBARD.

Grey Co., Ont.

A Word for Trees, and a Timely Crack at Advertising Horrors.

The editoress of this column has done me the honor of inviting me to "give a few thoughts and ideas as to why our country should be beautified. . . . Also, above all, to inspire farmers to beautify their homes; after that, roadways, school yards, and public playgrounds."

Now, Dame Durden, I really am surprised at you! Fancy, asking me, belonging, as I do, to that well-known class, "Stupid English," to write on such a subject! Why, to ask such a thing acknowledges Canada NEEDS beautifying!

When I lived over the herring-pond, Canadians who visited us gave us to understand it was such a beautiful country, with such flowers and fruits, and, above all, such a perfect climate, that nothing anywhere in the wide world could touch it. No dull weather, no fogs—in fact, nothing unpleasant—and when I came to live here (ten years ago, now), the same beauties and advantages were pointed out to me—only more so! And then to ask me to write about "beautifying it!"

Stump fences, with trailing creepers; swamps full of lovely flowers, ferns, trees, the latter, alas! getting fewer and fewer (and likely to become fewer yet if the Americans get at them, as they want to), graceful maples everywhere, and especially glorious autumn colorings, need no beautifying.

The towns, too, are laid out so prettily, with parks, and avenues broadened with shady trees, and lovely gardens beside them.

However, I am sorry to see the country and towns so utterly disfigured by horrid advertisements of every conceivable thing, from the only place to get comfortable boots and clothing, to cough medicine and smoking mixtures. All along the railway tracks, they can be counted by the dozen. In the country, at least, they should not be allowed.

Motors, too, do not conduce to beautifying the country roads—the hideousness of the machines being only rivalled by the appalling "get-ups" of the occupants! And, except for the discomfort caused by the dust they make, one is only thankful when it hides them from sight.

However, of course, they have come to stay.

As to inspiring the farmers to beautify their homes.

Why, when I see how hard they work, what long hours they have, and last, but by no means least, how little they make, I would not attempt to make any suggestion to take up more of their time or cash.

Besides, the home and garden is looked at as the wife's domain, and oh! how thankful I am that, what ought to be my flower garden, has no fence round it any good, and only produces pretty flowering shrubs, and a few things that grow of themselves, and that the sheep nibble off my so-called lawn. As I drive out, I see women who I know are worked fearfully hard, toiling away with lawnmowers. I am so pleased I cannot afford one. Sometimes the husband runs it, and then, ain't I sorry for him! I would not run down pretty gardens and well-kept homes and farms—I like them as well as anyone, and if I had the means, nothing would please me better than to have them—but not when it adds to the already overwhelming amount of work that must be done. A friend near here has a lovely garden. I pass it often, and admire the flowers from the first to the last of the season, but it takes up the whole of his time (he has nothing else to do), so what chance has the busy farmer. Almost every farm, however, could bear a great many more trees on it than there are, and these would take little time to plant.

As regards school yards, plenty of trees for shade seem the most necessary thing; and for public play-grounds, too. If children would take an interest in a good

border full of flowers, they are nice, of course, but are apt to get in the way of games; also, flowers would be at their best in holiday time.

Again, it is not everyone who can grow plants, indoors or out. For some they flourish, with no trouble, while others, like myself, cannot even keep a pot of parsley alive!

What I regret in this country is the shortness of the season, and its beauty being so short-lived. We see the flower-season at home (out of doors) starting in February with the snowdrops, and going on with one thing after another, till the end of November sometimes.

I am afraid, Dame, I've given no ideas, but really, I have not got any!

GERTRUDE LLOYD-JONES.

Burford, Ont.

Begin with the Homes—Preserve the Woods.

Canada should surely be beautified, and made the most of—now especially, since so many people's thoughts are turning to Canada. In the Old Land, they are considering Canada more and more, and it is surely a proof of this, and a great compliment to us, that our next Governor-General is to be a Prince of the royal blood, thus making Canada the first overseas Dominion to be so honored.

It seems to me that the chief reason—and it is a reason which embraces so much—why our country should be beautified, is for the added respect we should have for it, and, consequently, for ourselves. And I think it is the "home" which should receive the first attention, as that is the most near and personal thing,—but the improvements can all go hand-in-hand. An attractive and cozy home is the ideal place, makes everyone proud of it, and is a pleasure in itself, always. It tends to sociability, too, as all people like to invite people to their homes, and, in young people especially, this habit is apt to be more indulged in, if those homes are pleasing in appearance.

A beautiful or attractive home, does not necessarily mean a fine house by any means, but, rather, a comfortable and appropriate one, as, what does not look comfortable and convenient, can never look well. Beauty consists, I think, in harmony, proportion and appropriateness.

The surroundings and grounds about the house should receive their due attention; it is very pleasant work, and will more than repay anyone for the trouble.

Have trees—trees everywhere, shrubby, and some flowers,—of course, always arranged with an idea at the back of it, as it were; but they are graceful things, and not too hard to "get to look right." What could be more restful, or beautiful, than trees and green grass! How naked and unfinished any home looks which is so unfortunate as not to have any trees of any sort about it! Indeed, I think everyone in passing wonders what kind of people live in that house.

There should be plenty of trees, too, along the fences throughout the farm; they improve it in every way, as well as adding so greatly to the beauty and value in appearance. One of our Collegiate teachers, and he was a man who loved and studied nature, said that if a man planted a row of trees all around his farm, and two rows through the middle, his yield of grain would be greater than without them. This is accounted for, I suppose, by the fact that all vegetation tends to draw moisture and keep away frost. No doubt it is greatly because our timber is getting so much scarcer, that our climate is not so favorable as it used to be. It would surely be a good plan for every farmer to keep a portion of land just for the purpose of growing trees,—timber is so valuable, too,—but I think if this were done there should be some remuneration from the Government.

Our roadways are in need of better looking after—we evidently require a better system of roadwork. Old Country people always criticise our roads; I heard one genial Irishman say, in referring to a Canadian road, "the track yez call a road." People do like ease and convenience in getting about, and Canada, which is becoming more popular all the time, would be much more so if we had better roads. Besides the added comfort, the improvement to the appearance of the country would be wonderful.

The school yards should be made attractive, first and most, for education of the children, that being the time when all impressions are so strong. It is obvious, that the effect of having pretty trees about their grounds, and a well-ordered yard and playground, would be both pleasing and profitable to them. It would help, too, to make the country, as a whole, more beautiful and well-cared-for looking.

In speaking of farmers' homes and surroundings, I forgot the barns (naturally, perhaps), but it is wonderful the effect of a nice coat of paint on a barn. I was struck with this one summer, while in Dakota, where all the barns seemed to be painted. And all improvements will seem to add even more value than they really have, so that, if one should want to sell one's farm, it would seem to be worth almost twice as much.

The foregoing is almost all about improving our homes, etc., for the benefit to our own particular selves. However, I think that comes first, and, after that, we reach out naturally to the broader feeling, of pride in country.

Love of country! It always gives us a thrill when we read of what people have done for that! and when some of them have been banished from it, for some reason, how they have sighed for that "country"!

It ennobles a man (or woman), and seems to be the strength of some strong characters.

"They loved their land, because it was their own, An' would scorn to give, aught other reason why, Would shake hands with a king upon his throne, And think it kindness, to His Majesty."

MARGARET J. BIRRELL.

Ontario Co., Ont.

Let Us Not Tolerate Ugliness Because We Are Accustomed to It.

Canada in itself is a beautiful country, but man, with his works, has made it, in parts, hideous and unsightly.

Canada is a nation in the making, and we, as nation builders, must not forget "the beautiful."

To beautify Canada means to beautify the homes. From where will our country be judged? From the public highways. Then, let every farmer go out in the highway in front, or by his own particular home, and note where improvements may be made. We become accustomed to ugly objects, passing them day by day, taking no notice of what a stranger would notice at once.

Neatness, though it goes a long way, does not always mean beauty. Homes that are perfectly neat, are sometimes very ugly, with bare walls and treeless yards. Everybody loves trees. Then plant trees, and plant trees. Get everyone interested in this, especially the children. Have birthday trees—that is a tree (or shrub, or vine) planted on each birthday of every member of the family. No expense is needed to purchase these trees, as no better trees can be had than our own native hard maple, hickory, walnut, elm, etc. For shrubs, we have the sumach, dogwood and juneberry; for vines, wild clematis, grapevine, and bitter-sweet. A few evergreens should be planted for winter beauty.

Grassy lawns, with borders of flowers, are always beautiful. Sunflowers, nasturtiums, etc., can be used to cover unsightly places.

In towns, it requires united efforts to gain effects, but in the country, each may consult his own taste without danger of clashing with his neighbor. In fact, it is better to have a difference, as it would be monotonous to have all farm homes alike.

Do we all recognize the power of influence? Two boys were sent to a neighbor's for flowers. On returning, they both exclaimed on the beauty of the neighbor's home. This neighbor has only a plain frame house, but with flowers and vines at the front and sides. At the back, between the house and barn, the ground is laid out in alternate rows of flowers and vegetables, arranged with taste, and the effect is beautiful. The younger boy has this winter been studying Rennie's catalogue and proposing "That we have a garden like Mrs. F."

He Bought Her a 1900 Washer

One of Our Readers Tells How Her Husband Learned

What Washday Means to a Woman.

Dear Editor:—Most men have no realization of what "wash-day" means to a woman. My husband is one of the best men that ever lived, but he laughed when I asked him one day to get me a 1900 Gravity Washer. I told him it would wash a tubful of clothes in six minutes. "Why, wife," said he, "a washing machine is a luxury. And, besides, there's no better exercise than rubbing clothes on a washboard. It's good for the back. I think we had better wait till we get the farm paid for before fooling away money on such new-fangled things as washing machines."



John's Busy Day.

I suggested to John that he had better do the washing. We couldn't hire a girl for love or money, and the situation was desperate.

So one morning he started in. My! what a commotion there was in the kitchen. From my bedroom I occasionally caught glimpses of poor John struggling with that mountain of dirty clothes.

If ever a man had all the "exercise" he wanted, my husband was that man! Couldn't help feeling sorry for him, and yet it made me laugh, for I remembered how he made fun of me when I hinted so strongly for a 1900 Gravity Washer. When he finally got the clothes done and on the line he was just about "all in."

That evening John came to my room and said kind of sheepishly: "What's the name of the firm that makes those Washers you were telling me about?" I looked up their advertisement and found the following address:

F. A. N. Bach, Manager.
The 1900 Washer Co.,
357 Yonge St., Toronto, Canada.

That's all he said, but he lost no time in sending for their Free Washer Book. The book came in due time, and with it an offer to send the 1900 Gravity Washer on thirty days' free trial. My husband jumped at the chance to try the Washer without having to spend a cent. "We'll have four weeks' use of the Washer anyway, even if we don't decide to keep it," he said. So he told the company to send on the Washer.

It was sent promptly, all charges paid, and the 1900 Washer Company offered to let us pay for it in little easy payments. The next week I felt well enough to use it. It is the nicest Washer I ever saw, and it almost runs itself. Takes only six minutes to wash a tubful, and the garments come out spotlessly clean.

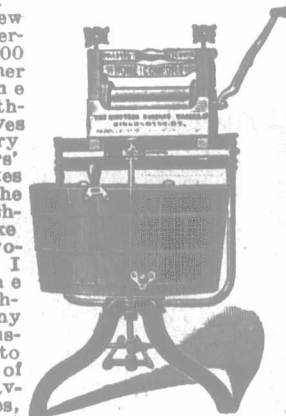
We were all delighted with the Washer, and wrote to the company that we would keep it and accept their easy payment terms of 50 cents a week. We paid for it without ever missing the money, and wouldn't part with the Washer for five times its cost.

If women knew what a wonderful help the 1900 Gravity Washer is, not one would be without it. It saves work and worry and doctors' bills. Takes away all the dread of wash-day. I feel like a different woman since I have quit the use of the washboard. If any woman's husband objects to buying one of these labor-saving machines, let him do just one big washing by hand-rubbing on the old-fashioned washboard, and he will be only too glad to get you a 1900 Gravity Washer.

Anybody can get one on free trial by first writing for the Washer Book. Don't be talked into buying any other machine—there are many imitations, but none "just as good" as the 1900 Gravity Washer.

Excuse me for writing such a long letter, but I hope, Mr. Editor, you will print it for the benefit of the women readers of your valuable paper.

Sincerely yours, MRS. J. H. SMITH.



The secret of the easy operation of the 1900 Washer is in the peculiar "S" shaped links, which no other washer can have; then it has no iron to come in contact with the clothes, and also has a removable tub, which is a great convenience.

The above offer is not good in Toronto, Winnipeg or Montreal and suburbs. Special arrangements are made for these districts.

The Noxon Co., Ltd
INGERSOLL, ONT.

The "Old Reliable" Cultivating and Seeding Line

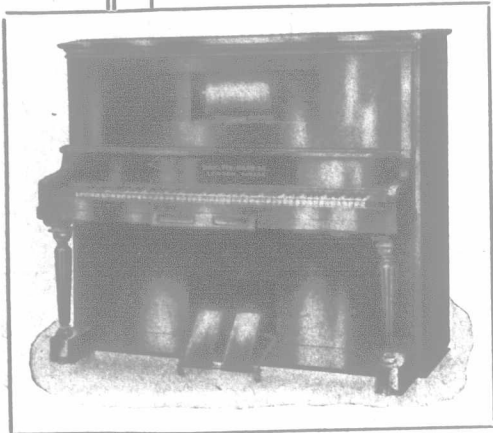
The Famous Noxon Hoosier Drill

A Strong, Efficient Cultivator

Our "Buffalo Pitts" Disc Harrow is unequalled for efficiency, durability, lightness of draft, absence of neck-weight.

Send your enquiry direct to Ingersoll.

ENJOY THE WORLD'S BEST MUSIC!



Even tho' you have no musical knowledge, with a Sherlock-Manning Player-Piano, you can render correctly any musical composition.

For this is the Player-Piano with the **Themodist** (which plays the accompaniment—*instantly omits the melody*—or correctly *accents the melody in any composition*). This is the Player-Piano with the **Metro-style** (that automatically reproduces the time and volume as originally intended by the composer). And these are only two of the many excellent features you will find in the Sherlock-Manning—

THE PLAYER-PIANO FOR EVERYBODY

Good materials and exact workmanship fit this admirable instrument for the approval of accomplished musicians. But musical ability is not necessary in order to play it perfectly.

Give yourself and your household the pleasure of a Sherlock-Manning Player-Piano. It costs less, perhaps, than you think.

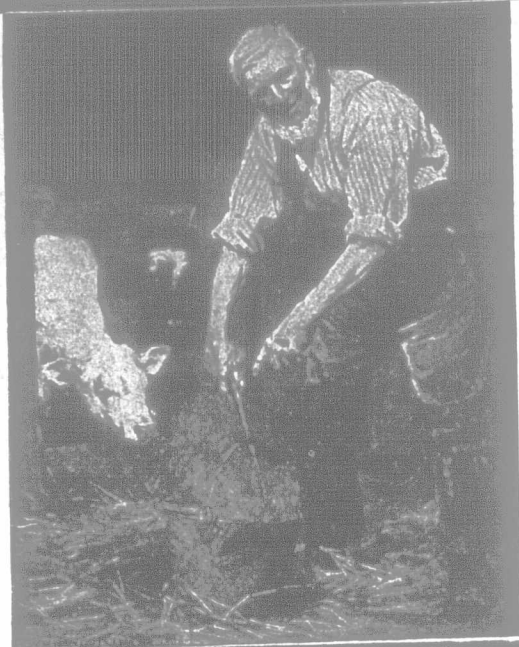
The nearest dealer will be pleased to show you this instrument. Let us tell you his name.

Sherlock-Manning

PIANO and ORGAN COMPANY

LONDON CANADA

No Street Address Necessary.



CALF MEAL

BIBBY'S CREAM EQUIVALENT

Young Calves develop and grow surprisingly well when fed "Cream Equivalent" either with or without separated milk. It is not a drug or "FAKE" meal. Made by one of the most honorable firms in England. Has the largest sale of any Calf Meal in the World. Canadian Government report shows it to contain the highest percentage of nutritive value. TRY A BAG, 50 lbs. \$2.25.

Can be fed with either Hot or Cold water.

DEALERS EVERYWHERE SELL
BIBBY'S CREAM EQUIVALENT

WM. RENNIE CO. LIMITED TORONTO
CANADIAN REPRESENTATIVES



ROOT CROPS FOR FARM STOCK

We make a distinct specialty of **ROOT SEEDS**, and are careful to see that our stocks keep pace with all the advancements being made from year to year. Anyone wanting the best should insist on

Steele, Briggs' "Royal Giant" Sugar Beet.
Steele, Briggs' "Prize Mammoth Long Red" Mangel.
Steele, Briggs' "Giant Yellow Oval" Mangel.
Steele, Briggs' "Giant Yellow Globe" Mangel.
Steele, Briggs' "Giant White Sugar" Mangel.

No other Root crops produce so large an amount of desirable cattle food for winter feeding. **Insist on having them—they're the best—refuse substitutes and others said to be just as good.**

Sold by leading Merchants everywhere in Canada

Steele, Briggs Seed Co., LIMITED
HAMILTON TORONTO WINNIPEG

One well-kept and beautiful home will start competition among others.

Some will say that all this planting and fixing will take time and money. So it does, but it is time and money well expended, as nothing gives greater returns. Not only is the value of the property increased, but one's own self-

respect is raised, and the esteem of the neighbors will be greater.

We hear a great deal about keeping the boy on the farm. Get the boy interested in beautifying the home, and it will greatly help to keep him on the farm.

Once the interest of the neighborhood is aroused in beautifying the home, ques-

tions of beautifying school yards and roadways will be settled. Children living in beautified homes will demand that their school yards and play grounds be made beautiful. What farmer with a beautified home will allow the roadway by his home to be neglected? He will either beautify it himself, or start an agitation

to have our township and county roads do it.

In Britain, the country roads are often over-arched with avenues of trees. The fences are overrun with ivy, and wherever a weed is seen, even in places flowers are cultivated by the roadside.

Let us all be workers, and not lookers, in this important work, "Beautifying Canada."

MRS. D. C. LINDSAY,
Haldimand Co., Ont.

Beautifying Canada.

The first step to be taken in the beautifying of Canada is to get Canadians interested in beautifying their own homes, and, after that, to show them the advantages they would derive from improved roads, school yards and public playgrounds.

It is easy for one who has lived amongst farmers to understand why many well-to-do country people give so little time to caring for their lawns and flower gardens. When the frost comes out of the ground, and the land dries sufficiently to allow the men and horses to work on it, you can see the farmer trudging behind his team from early morning until at least six in the evening, and then his round of chores begins. After he has finished his day's work, he is usually too tired to become enthusiastic about anything. In most cases, the housewife is equally tired when she has completed her work, and so nothing is done to promote what is beautiful.

If our young Canadians knew more about flowers and lawns, they would, I am sure, find it possible to give just a little time to each. When are they to commence this part of their education? Not after they are old enough to follow the plow, or take a man's place in the hay field. The time for them to begin plant-study is when they are children in the public schools. If attached to each school ground we had a plot for raising plants, and the teacher and pupils worked together in it intelligently, the boys and girls would learn to know and love flowers, and I feel certain it would lead them to beautify their homes. They would learn what plants would grow well on their own lawns, and, as a result, would not meet with so many failures. I have frequently seen young people start a flower garden, and then weary of it, because the plants did not grow well. Now, if they had known just what to plant and how to attend to it, they would have succeeded, and this success would have spurred them on to more extensive gardening.

Often, bare, cheerless-looking houses, are greatly improved by vines, and there, again, the beauty-seeker may meet with failure if he is ignorant of what to plant and how to train it.

If parents could be shown the refining influence of beautiful surroundings on their families, there would not be so many neglected homes. Children brought up in neat, attractive houses, will make better citizens than those who live in homes which are anything but homelike. Then, too, if one man improves his farm, his neighbor will very often follow his example, and so on, until a great many have taken up the good work.

Let us hope that the time will soon come when farmers will understand the value of "things of beauty," and will not grudge giving a part of their time to this work. Nature study brings one into closer touch with the "Maker of all things," and one who loves flowers cannot help respecting the God who has placed in this world so much for us to feast our eyes upon. "Consider the lilies of the field, they toil not, neither do they spin; yet I say unto you that Solomon, in all his glory, was not arrayed like one of these."

A FARMER'S WIFE.

Essex Co., Ont.

Beautifying Canada Because We Love Her.

In the midst of this dreadful turmoil over trade relations and money and loss and gain, it seems like leading the forlornest kind of a hope to endeavor to interest the public in anything so foreign to the subject as making Canada beautiful. Yet, it is a most opportune subject. "Away with you and your talk of beauty!" is the impatient rejoinder. "If we make Canada great, if we make her rich, if we make her a power among na-

tions, is not that sufficient? Why should we waste time and money in making her beautiful? Simply because all these aims are prompted mainly by self-interest and ambition, but the work of beautifying Canada is done because we love her. To desire the material success of our country is patriotism. But no man is a fully-developed patriot unless he also desires his country to be fair and lovely to look upon, for all love, except love of money, desires beauty in the object on which it is lavished.

In pioneer days, necessity forced our grandfathers to think only of utility. Those days are past. The log buildings constructed so hurriedly are gone. Yet, those of you who played about the old log home, or who were pupils in the old log school, can call up precious memories of early days. And, harmoniously woven into each memory, are those old log buildings, which, in spite of their utility, exactly fitted their primitive surroundings. But those of you who attended school later on, when the white-painted Noah's Ark at the four-corners became the seat of learning, can you weave the memory of that unsightly edifice harmoniously into the background of your reverie? Close your eyes, and you can see the school stand up, bare and white and ugly. You can see the careless wood-pile, the unashamed outbuildings, the tall board fence, and the unowned, dusty hay which covered the enclosed quarter of an acre. Just across the corner was a wood-lot, cool, shadowy, inviting. There were wild flowers there in spring, and nuts in autumn, and leeks and raspberries, and other dear delights in their season. How vivid is the memory of that wood, although you were never allowed to stray there. You could only look across and enjoy its delights in imagination, and you loved to look, because there were no trees within the high board fence of the school yard. And, as you went home after school, there was a place where the road curved round the hill and just over the fence, a great oak tree grew on the edge of a grassy bank. Its branches were wreathed with wild grapevines, and from beneath its roots trickled the clear, cool water of a spring. What glorious times you had there. And, a few rods farther on, a shallow, sandy-bottomed creek was spanned by such a graceful bridge; then, curving around sharply, it again crossed the road, flowed under another bridge, and went singing away through meadow and woodland to the lake. Beautiful? Yes, lovely; and this is where your thoughts linger. As children, these beauty spots held for you an irresistible charm. After the boldness of the school surroundings, you revelled in them each night, and through the dreams of your childhood's days run glimpses of their beauty.

The Noah's arks still stand on the four-corners. They are still bare and ugly. To drape them with vines, to plant bulbs and old-fashioned perennials and flowering shrubs, to grow trees, beautiful shade-giving trees, and to do away with that annual horror, the bed of sickly, weed-choked flowers which is planted on Arbor Day, and left to its own sweet devices during the summer vacation, surely this is a work of love to which the parents of the present day are called. Why should the school surroundings of our young children teach nothing but utility, utility? And are we going to let generation after generation grow up without the softening, refining influence of beautiful home and school surroundings. The love of beauty is an antidote for the ugly lust of gain, which has been making such a clamoring noise in Canada during the last few weeks. This passion, if allowed to grow unchecked, blinds men to every other. It shuts out beauty and all perception of justice and right. It creates a nation with most unlovely characteristics. Is it not, therefore, time to talk of something else in a land where there is nothing more wonderful than the profuseness with which the Maker has been pleased to show over the work of His hands an endless and boundless beauty?

MINNIE C. DAWSON.

W. H. Essex Co., Ont.

Re-transplanting Maples—Recipes.

Dame Durden.—In a recent issue of "The Farmer's Advocate," in a paper by Mrs. M. C. Dawson, President of the Parkhill Women's Institute, she states that in making improvements to their town, they

transplanted a number of full-grown maple trees, when the snow was on the ground. I would be very glad to have full particulars as to the method of transplanting trees of such a size, proper time of year, cost, etc. Would also like to know if the methods employed in Western Ontario could be successfully followed in Eastern Ontario, where our winters are so much more severe.

Our home has a northern exposure, and there are no trees near the house other than four elms to the south in a group. The prevailing wind is from the northwest, and we would like to have trees planted as a wind-break, and also some to the north for shade and ornamental purposes. Can you suggest the kind of trees that would be best to use, and a suitable arrangement of same. It would be a great advantage, of course, if full-grown trees could be used.

Perhaps this is not in your line, but I hope you will be able to help me, if not directly, then indirectly, by telling me where to apply for the desired information.

I enjoy every part of "The Home Magazine," and have found the solution to many of my housekeeping problems in the columns of the Ingle Nook. In the hope of contributing my mite towards its interest, I send the following recipes:

Steam Pudding.—One-half cup lukewarm water, 1 cup syrup, 1½ cups flour, 1 teaspoon soda, 1 tablespoon butter, 1 egg. Steam one hour, and serve with sauce. This may be varied, and made as rich as desired, by the addition of raisins, currants and candied peel.

Maple Mousse.—One cup maple syrup, yolks of 2 eggs beaten. Bring to a boil, and, when cool, add beaten whites and 1 cup of cream whipped. Freeze.

Rice Custard.—One-half cup of rice, 1 quart milk, salt. Steam or boil until rice is soft. Beat yolks of 4 eggs with 4 tablespoons sugar, and add just before taking from the fire. Flavor with vanilla. Put in a pudding-dish with beaten whites on top, and brown. Serve with cream.

Fruit or Wine Layer Cake.—One cup sugar, ½ cup butter, 1½ cups flour, ½ cup wine or fruit juice, 1 cup raisins, 2 eggs, and ½ teaspoon soda dissolved in a very little water. Bake in layers. Use white icing.

Thanking you in anticipation of the assistance asked for.

HELEN.

Any thick trees, such as Canadian pine, Norway spruce, etc., may be used for a windbreak. For shade trees, you can have nothing better than our own hardwood maple, with, perhaps, a few mountain ash for the sake of their feathery foliage and pretty red berries. Were I planting for myself, I should have a thick, irregular grove, as near to nature's planting as possible, on the side of the house that had the poorest view, or at the back. There I should plant all sorts of woods flowers, and see that they were protected from the inroads of sheep or cattle, or too greedy hands. In front of the house, I should have an open lawn, with a few trees to form a screen from the road. If the lawn were large enough to require it, I might have a solitary tree or two wherever it would look best, or even, perhaps, a clump of them. I should try to have the whole effect look as though the vine-covered house had almost grown up of itself in a natural glade, open close to the house to admit of sunshine, open to the front, and to any side that admitted a fine view. Perhaps this will not be your idea, but, at all events, avoid spotty planting over the lawn. . . . I have referred the question re transplanting to Mrs. Dawson.

Reply from Mrs. Dawson.

Dear Dame Durden.—Transplanting full-grown trees has to be done in the spring as soon as the ground will permit. Just now is the time. You first trim the trees back, leaving only the main branches. Then you cut the sod around the tree at a distance of at least two feet from the trunk. Then dig down, your object being to dig up the tree, keeping as much soil as possible undisturbed. Cut off the roots as you come to them, leaving them, of course, as long as possible. When you have your tree dug up, place the butt end on a stone-boat and move to new location. Plant in a hole well bedded with manure, and cover ground around tree with sawdust

JUST THINK!

You may only have about three weeks in which to get everything ready for seeding. Does it not strike you forcibly that you cannot afford to put off? We would like every man who thinks of buying

SEED GRAIN, CLOVERS AND TIMOTHY

To send for samples, and see for himself that

KEITH'S SEEDS

are good, and are of exceptional value. If you feel there is no time to get samples, and you have never done business with us before, send in your order, and we will ship C. O. D. to your nearest station, and grant you permission to examine goods before paying for them. We will pay the freight in Ontario on Clovers and Timothy orders of 200 lbs. or more; all other prices herewith quoted are F. O. B. Toronto.

CLOVERS.		BUCKWHEAT.	
	Per bush.		Per bush.
	Bags 25c. extra.		Bags free.
Red, "Sun" No. 1, Gov. Standard	\$10.00	Silverhull	\$ 0.80
Red, "Moon" No. 2, Gov. Standard	9.00		
(choice)	9.00		
Mammoth, "Sun" No. 1, Gov. Standard	10.25		
Mammoth, "Moon" No. 2, Gov. Standard	9.25		
(choice)	9.25		
Alfalfa, "Gold" No. 1, Gov. Standard	14.00		
Alfalfa, "Silver" No. 2, Gov. Standard	13.25		
Alfalfa, "Ocean" No. 1, Gov. Standard	10.75		
Alfalfa, "Sea" No. 2, Gov. Standard	9.25		
(choice)	9.25		
TIMOTHY AND GRASSES.		BARLEY.	
	Per bush.		Per bush.
	Bags 25c. extra.		Bags free.
Timothy, "Diamond" No. 1, Gov. Standard	\$ 7.00	O. A. C. No. 2L	\$ 1.10
Timothy, "Crescent" No. 1, Gov. Standard	6.65	Mandscheuri	.85
Orchard Grass	per lb. 20c.	Duckbill	1.10
Red Top	" 20c.		
Canadian Blue	" 13c.		
Japanese Millet	" 5c.		
CORN.		OATS.	
	Per bush.		Per bush.
	Bags free.		Bags free.
Wisconsin, No. 7, White Dent	\$ 1.15	Lincoln	\$ 0.80
Early Michigan	1.20	Early White Cluster	.80
White-cap Yellow Dent	1.10	White Wave	.80
Improved Leaming	1.10	Canadian-grown Regenerated Abundance	.80
Early Bailey	1.15	Banner	.80
Mammoth Southern Sweet	1.10	Scotch " " Banner	1.25
Red Job	1.10	Daubeny	.90
Lo-see-ow	1.50	Gonette	.90
Compton's Early	1.50		
North Dakota White Flint	1.50		
Smut Nose	1.50		
FERTILIZERS.		PEAS.	
	Per sack.		Per bush.
	Per ton. 225 lbs.		Bags free.
Nitrate of Soda	\$57.00	Golden Vine	\$ 1.25
Sulphate of Potash	58.00	Canadian Beauty	1.25
Muriate of Potash	49.50	Prussian Blue	1.50
Acid Phosphate	18.50	Black Eye	1.25
Flax Seed	per lb. 5c.		
Tares	" 4c.		
Amber Sugar Cane	" 5c.		
Sunflower	" 10c.		
SUNDRIES.		POTATOES.	
	Each.		Per bush.
Cyclone Broadcast Seeder	\$ 1.50	Early Ohio	\$ 1.10
Eureka Corn Planter	1.35	Early Eureka	1.10
Eureka Potato Planter	1.50	Quick Lunch	1.30
Yankee Seed Potato Cutter	2.75		
Keith's Prizetaker Swede Turnip	Lb. 30c.		
Keith's Prizetaker Mangel	25c.		
Keith's Giant Half-sugar Mangel	25c.		
WHEAT.		SUNDRIES.	
	Per bush.		Each.
Wild Goose, very fancy sample	\$ 1.50		
Wild Goose, choice sample	1.25		
White Russian	1.50		
Red Fye	1.50		
Emmer (40 lbs. to bush)	1.10		

GEO. KEITH & SONS
124 King St., East, Toronto, Ont.
SEED MERCHANTS SINCE 1866.

to preserve the moisture. Water the tree thoroughly every day all summer, except when the rainfall is sufficient.

Sincerely yours,
M. C. DAWSON.

P. S.—Our largest tree measured about eight inches in diameter.
M. C. D.

Flower Queries.

I have a Hoya Carnosa which does not flower. It is about seven and a half years old. Is planted in a horseshoe-nail box, gets enough water to keep it damp, is trained on a rack, and, when held up, is five feet high. Gets waterings of weak manure, is healthy, leaves are very green, large, and broad. It is planted in bush soil. Has never had a single flower. Does it need to be transplanted? If so, what size of box, or would you advise shaking out roots carefully and placing fresh soil in the same box? Should it have little or much water? Would it be best to take slips and dispose of the old plant? What kind of soil should it be planted in? Does liquid manure harm or help it? Should it be rested? If so, how? Should it be cut back?

If I take slips of my geraniums early

A Thick Neck

This is the name usually given to Goitre, a most uncomfortable, unsightly and dangerous condition. A few years ago we were asked to prepare our home treatment for Goitre, a trial having been so satisfactory in one case. Since that time our

GOITRE SURE CURE

has been a winner. Letters of gratitude from those who have used it received frequently. A young man recently said: "My collar is a size smaller in three weeks, and my health is better. Internal and external treatment. Price \$2, express paid."

SUPERFLUOUS HAIR, Moles, Etc., permanently removed by our reliable treatment—Electrolysis—which is given only at our offices here. Satisfaction assured. Booklet "F" mailed free.

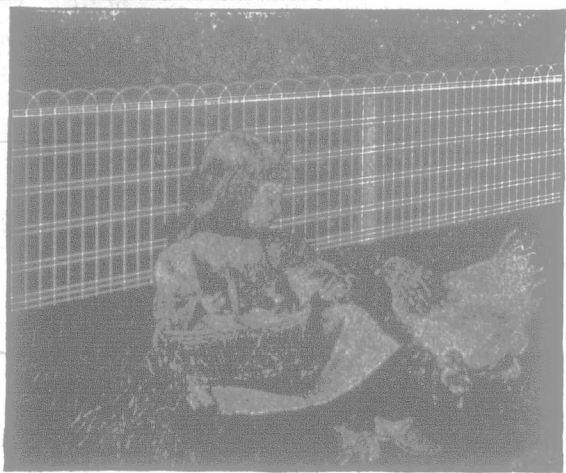
Hiscott Dermatological Institute, 61 College St., Toronto. Estab. 1892

"the finish" "that endures" M L Floorglaze

gives woodwork a surface glass-hard, mirror-bright, beautiful, lasting. Fine for floors, because M L Floorglaze can't be marred by boot-heels, castors, nor chair-legs. M L Floorglaze stays glossy; you can wash it with soap and water as you'd wash a window; it doesn't fade; it stays new and bright longer than anything else you get. Easy to put on M L Floorglaze—do it yourself—it dries hard overnight. Renovate with M L Floorglaze.

M L FLOORGLAZE comes in tins of just the size you want. Seventeen colors in solid enamels. Seven other colors in Lacs that admirably imitate hardwoods; and also a Transparent (natural finish) M L Floorglaze. Coat 500 square feet with a gallon. Just ask your dealer, or drop us a post card for news of a hundred uses your home has for the finish that endures.

Imperial Varnish & Color Co. Ltd., Toronto



A fence of this kind only 16 to 23c. per running foot. Shipped in rolls. Anyone can put it on the posts without special tools. We were the originators of this fence. Have sold hundreds of miles for enclosing parks, lawns, gardens, cemeteries, churches, station grounds, etc., etc. Supplied in any lengths desired, and painted either white or green. Also, Farm Fences and Gates, Netting, Baskets, Mats, Fence Tools, etc., etc. Ask for our 1911 catalog, the most complete fence catalog ever published.

THE PAGE WIRE FENCE CO., LTD., Walkerville, Ont.

Branches—Toronto, Cor. King and Atlantic Ave. Montreal, 505-517 Notre Dame St. W. St. John, 37 Dock St.
The largest fence and gate manufacturers in Canada. 505

AUCTION SALE OF 60 HIGH-CLASS

Registered Holsteins Thursday, April 6th, 1911,

At 12 o'clock sharp
At FOREST RIDGE STOCK FARM, STRAFFORDVILLE, ONT.

This sale comprises our entire stock of 15 A. R. O. cows, fresh or in calf; 13 head untested cows and heifers, fresh or in calf. The balance yearlings and calves. Catalogue containing A. R. O. records, extended pedigrees and cuts furnished on application to the proprietor. There will be a special train leave Ingersoll at 9.15 a.m., connecting with early morning trains at Tillsonburg.

Auctioneers: Colonel Perry, Columbus, Ohio.
R. H. Lindsay, Aylmer.
T. Merritt Moore, Springfield.
G. Ferguson, Tillsonburg.
L. H. Lipsit, Prop.
Straffordville, Ont.



Blatchford's Calf Meal—The Perfect Milk Substitute

Three or four calves can be raised on it at the cost of one where milk is fed
No mill feed The only calf meal manufactured in an exclusive Calf Meal Factory
Established at Leicester, England, in 1800

STEELE, BRIGGS SEED CO., LTD., TORONTO, ONT.

this spring and keep the buds picked off, will they flower better the coming winter? Do pansy and ivy geraniums seed? How would you transplant a sea onion? What time in the fall should an Easter lily be planted to flower by Easter, the next spring?

MABEL A. JOHNSON.

Possibly your hoyo (wax plant) has not bloomed because you have not rested it. We quote you from Bailey, a well-known authority: "Hoyas are summer-blooming plants, of comparatively easy culture. They need an intermediate or warm temperature. Let them rest or remain very slow in winter (50 degrees in a dryish place), but start into growth towards spring. In their growing and blooming season, give plenty of sun and air. For potting compost, use fibrous loam (coarse), in two parts, to one of leaf-mould, with some charcoal pounded fine, brick dust, or lime rubble, instead of sand. They are often found doing well in loam and sand. When in growth, use weak liquid manure. . . . Do not cut off the spur which remains after the flowers pass, for this spur bears flowers again." Give plenty of water during growing season, very little while it is dormant. The hoyo may be propagated by starting cuttings of the top growth in spring, also by layering.

Geraniums which are to blossom during winter, should never be permitted to bloom in summer. Nip off the buds as they appear. You may root cuttings in spring, and pinch them back by taking off the ends of the branches to force them to make a bushy, sturdy growth. Keep in pots that are rather small for the size of the plant, shifting to slightly larger ones when necessary. Give liquid manure once a week after buds appear.

Pansy and ivy geraniums may be raised from seed, but may be more quickly grown by cuttings.

Transplant sea onion, or Urginea Scilla, as you would any other large-sized bulb, if necessary, but bulbs seldom need transplanting. If you mean "shift," simply strike the edge of the pot on something to loosen the soil, turn the latter out in a ball, and place in the pot to which you wish to transfer it, without disturbing the roots.

Pot Easter lily bulbs in September or October, very firmly. If the soil is heavy, set the bulb on a handful of sand. Put in a cool cellar to root, then bring up about the 10th or 15th of December.

This was No Joke.

The other day, over in the town of G—, Ontario, Mrs. R. came into Mr. B's store and asked for a couple of packages of Dye. He was selling the Old Style Dyes that require a Separate Dye for Wool and Cotton, and asked her if she knew what KIND of cloth her goods were made of. Mrs. R. said she wasn't sure, so he advised her to go home and make the following test:

"First to take a small piece of the goods, and ravel out the threads each way of the Cloth, then put a match to them. Cotton would be apt to burn freely with little odor, Wool might merely singe, and would be apt to give out a disagreeable odor, something like burning hair. Silk would burn less freely than Cotton, and smell like burning Wool. Now, if it did not smell very much, she was to use a Dye for Cotton, if it did, she was to use Wool Dye, but she was to look out to see that it did not smell too much or too little."

Now, unfortunately, Mrs. R. had a cold in her head at the time, and she couldn't smell ANYTHING, so she naturally thought that the goods were Cotton, and used the Cotton Dye. It turned out that her goods were really all Wool, and naturally her dyeing was a failure. Since then, B. has put in an assortment of the Guaranteed ONE DYE for ALL KINDS of Cloth, which does away with all chance of using the WRONG Dye for the Goods one has to color.

Mrs. R. is naturally much relieved, as well as B's other Lady Customers. She now uses Dyall's one dye for all kinds of goods.

"That's right," said the teacher encouragingly to the very small boy who was laboriously writing "Jas. A. B. C's." "Now, what comes next?"

The Garden of a Commuter's Wife.

(By Mabel Osgood Wright.)

CHAPTER XI.—Continued.

He looked rather cynical, made a rapid calculation in which the quantities I had ordered and the square feet seemed inextricably mixed, and then said:

"Far be it from me to limit you, but, at a moderate estimate, allowing for the usual failures to sprout, you are ordering enough seeds to sow two acres. Where do you mean to plant them?"

"Why, in the sun garden, of course," I stammered, beginning to realize that the gardening possession is like intoxication, for when under its influence you see double, and not only do your flower beds increase in number, but in size also. "You know we planned to keep all the perishable summer flowers together there; that is, except the nasturtiums and sweet peas, which, of course, must go either side of the long walk."

"With the quantities limited, the list is fairly conservative," he continued, "but I see a dozen annuals there that we surely have no room to waste upon, and they will leave a bare spot early in September, if not sooner. I do not expect that you will give them up without a trial—nothing less will convince you—but I'll lay you a wager of a new rose arbor to nothing, that their names will not be on your list next year," and as he spoke he checked off a name here and there, adding a remark, as if dismissing the plant for good:

"Sweet alyssum: Only good for formal edgings."

"Amaranthus in mass: All too big and weedy for a small garden."

"Castor beans: Too pretentious for your garden, and not in character."

"Tassel flower (cocalia): Feebly inefficient. Belongs to the days of little choice."

"Annual chrysanthemums: Turn to mush in a rainy season, and require as much care as bedding plants."

"Gourds: Grotesque. Only fit for a child's garden, and they harbor squash bugs."

"Everlastings in variety: Belong to the days of dried apples and herb tea. Not needed by those who can buy fresh flowers in winter."

"Love in a mist: Trivial."

"Annual poppies: Either dry up or decay. Climate too uncertain for the annual varieties, excepting fall-sown Shirleys."

Until finally my list, chastened and much reduced, is copied for the last time. Of annuals, it has asters in separate colors, Truffants, Victoria and pompon; calendulas, coreopsis, centaurea or bluets, cosmos, lobelia erecta, mignonette, climbing nasturtiums, Japan pinks, portulacca, salvia splendens, white "cut-and-come-again," stocks, sunflowers in variety, sweet peas, wall flowers of the annual dwarf kind, verbenas of the mammoth tribe, evening primrose, nicotiana affinis—the white night-blooming tobacco—cheerful balsams, and zinnias in many shades.

The perennial and biennial plants and bulbs of the hardy borders we shall renew by seed or root division, but the list of what were here already, or were set out in November, is a brave one: Peonies (colors unknown), phlox, columbines, Canterbury bells, foxgloves, bleeding-heart, white, yellow and red day lilies; Spanish, German and Japan iris; honesty (lunaria), golden glow, rudbeckia, pyrethrum, oriental poppies, hollyhocks, monkshood, anemone-Japonica, larkspurs of all shades, from white to deep metallic blue; hardy white, pink, and red-fringed pinks, lupins, evening primroses, bee balm, and hardy pomoon chrysanthemums.

I have also here a list of roots and

bedding plants to stock the garden with, that I hope to keep from year to year in a flower pit with a stove in it that I have in mind, if god-mother's fifty pounds hold out; and I think they will, because Evan has been so good and forgiven me a small sheaf of bills that I expected to pay from it, so that it's only been sampled as yet. These plants are heliotrope, scarlet and fragrant geraniums, lemon verbenas, tender roses, chrysanthemums, both Japanese and Chinese; dahlias, double, single, and cactus, and gladioli in plenty.

How long it will seem from the time my seed list goes until the hot-bed is ready for the planting! Middle March is quite early enough, because, if you begin sooner, unless you pot off the plants, they grow too big, and are mashed when the sashes are opened and closed.

I haven't shown Evan the list of things that I ordered from the "Yellow Journal" catalogue, and now he is over in father's study, where he has politely gone to take a hand at what, so I will not disturb him.

Father wishes to interest the local clergy in the hospital and have them all on the board, so that the institution shall be unsectarian, but not irreligious, which is what that poor word often seems interpreted to mean. I wonder how it will work!

If sects could exist without bigotry, I think it would be so much better than trying to abolish them. As this is a material, and not a spiritual world, a certain amount of competition seems necessary to keep things going; so religion has got to have a physical body and sex, so to speak, just the same as people. Only cherubim and seraphim can afford to do without either.

Three of the clergy dined here tonight—the Roman Catholic, the Anglican Catholic (ours), and the Severely Protestant.

We had a very good dinner—that is always a safe thing; but if the Board meetings are to be like the conversation, I'm afraid they won't do, for there will be no food as a bond of sympathy.

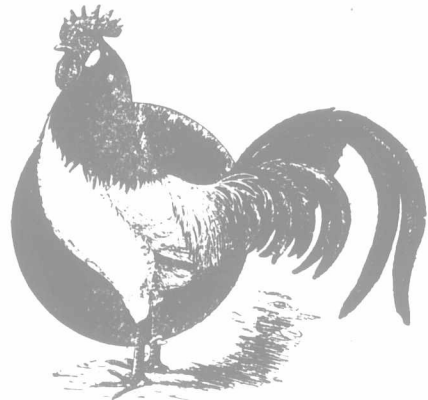
The S. P. bubbled over with good fellowship of the "dear sister in the faith" order, only he took it that everybody else was of his opinion, and didn't wait to see. He is a peculiar man, and religiously inconsistent, constantly doomed to deplore his own actions. He has, like John Rogers, nine children, which he uses alternately as flags of triumph and alms basins. As it is spring, he waved them vigorously at the R. C.; autumn, the time of new shoes and flannels, is the alms-basin season. The R. C. ate in comparative silence, watched, fed the dogs quietly, and smiled. The A. C., really a charming and cultivated man, felt himself between two fires, and was so aggressively uncomfortable that I did not know him.

The reason that Evan is over there playing whist is because the S. P. doesn't believe in cards, or at least says politely that he "can't play." Blessed "can't." Neither can I. The card cell was left out of my brain, or perhaps was early absorbed by the gardening cell, which should lie next door to it, both being games of chance.

My defect, however, has kept us from joining the Hillside Social Whist Club, without giving offence, because, of course, Evan isn't expected to go without me, and for a person who can't play to join a whist club of seasoned matrons and patrons would be worse than for a blind man to go to a pantomime.

Then permanent clubs, that go on winter after winter (I think Aunt Lot joined this one when I was sixteen), are so well, so stupefying, to say the least; and the supper is likely to be of what Evan calls the surprise order, because you are surprised if you get any, and I'm so hungry if I sit up after ten o'clock in winter. Then imagine voluntarily leaving a tete-a-tete with Evan in a garden full of books all in full bloom. Not mention seed catalogues, for

Lakenvelder Belted Chickens AND HAMPSHIRE SWINE.



LAKENVELDER COCKEREL. "A living picture in black and white."

From our flock of Lakenvelders we are offering for sale eggs from different pens, including our Guelph winners. Have some also from our imported pens, including Boston and New York winners. Have 25 good cockerels to spare.

In Hampshires we are getting sold down very close, have 40 head only ready for shipment now. These are 1911 pigs of January and February farrow, and weigh from 60 to 70 pounds each, handsomely belted, and the good, smooth, strong-boned, robust-looking kind, and are from our show stock. Can furnish pairs or trios not akin.

Send for prices, or visit the farm.

Bell phone connection at Lucan.

A. O'NEIL & SON,
Birr, Ont., Middlesex Co.

Stations: Lucan, G.T.R.; Denfield, L.H. & B.

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.

BARRED ROCKS

EXCLUSIVELY. CANADA'S CHAMPIONS. The world's best

FIVE-DOLLAR COCKERELS
Reduced in price after April 1st to \$3 each. Orders booked now. Sati fraction guaranteed or money refunded. JOHN FRINGLE, LONDON, ONTARIO.

ANCONAS, White Leghorns, Fertile Eggs. New circular free. Use my germ killer. Twenty-five cents, postpaid. Saves little chicks. Edmund C. Apps, Box 224, Vice-President International Ancona Club, Brantford, Ontario.

AGRAND lot of Barred Rock cockerels and pullets. Exhibition and laying strain. Eggs from best pens, \$1.00 per setting. A. E. Donaghy, Colborne, Ontario.

BARRED ROCKS—Large size, combined with heavy winter-laying qualities; Bradley Bros.' strain, direct; none better at any price. Fertile eggs: 15, \$1.00; 60, \$3.00; 100, \$4.50. R. J. Gibb, Galt, Ontario.

BIG MONEY in Anconas, S.-C. White Leghorns. Free circular. 95% fertile eggs; any quantity. Baby chicks. Write quick. E. C. Apps, Box 224, Vice-President International Ancona Club, Brantford, Ontario.

BARRED AND WHITE ROCK EGGS—\$1.00 per 15; \$4 per 100. S. L. Jayne, Grafton, Ontario.

BARRED ROCKS EXCLUSIVELY—Chicks. 20c. each; eggs, \$1.50 per 15, or \$6.00 per 100. These are from large, vigorous, well-developed, pure-bred stock. Persons desiring chicks should write immediately. Mrs. J. S. Patterson, Amulree, Ontario.

BRED FROM CANADA'S BEST—Rose and Single Comb Rhode I. Reds, Barred Rocks and Single Comb White Leghorns. Eggs, \$1.00 per 15. Send 4 cents in stamps for new Standard of Perfection on Rhode Island Reds. W. J. Mihm, 225 Waterloo Ave., Guelph, Ont.

BABY CHICKS—Single Comb Black Minorcas, Rose Comb Brown Leghorns, and Barred Rocks, \$6.00 for 25; \$11.00 for 50; \$20.00 for 100. These chicks will be from pure-bred stock. J. H. Rutherford, Box 62, Caledon East, Ont.

BARRED ROCK EGGS—Choice utility stock. Heavy winter layers. One dollar per fifteen. Satisfaction guaranteed. Arthur Hayward, Eastwood, Ontario.

BARRED ROCK COCKERELS—Eggs for hatching from pure-bred birds. Write me. Leslie Kerns, Freeman, Ontario.

BARRED ROCK EGGS—Choice stock, one dollar for thirteen. Satisfaction guaranteed. Nelson Smith, Jerseyville, Ontario.

BUFF ORPINGTONS, Barred Rocks, White Wyandottes. Pure-bred, carefully mated, and bred to lay. Farm-raised, strong, vigorous stock. Eggs that hatch. Write for price card. "Ingleside Farm," Hamilton, Ontario.

BUFF WYANDOTTES—Large, vigorous, pure Golden Buff birds; excellent layers and prizewinners. Eggs, \$3.00 per 15. W. Fyfe, Port Arthur.

BUFF ORPINGTONS—150 pure-bred cockerels and pullets, bred from exhibition stock splendid breeders; prices reasonable; eggs in season; satisfaction guaranteed. Hugh A. Scott, Caledonia, Ontario.

B. P. ROCK EGGS—One of the best laying strains in Canada. One dollar per setting. Mrs. J. R. Henry, Waterdown, Ont.

CANADA'S BEST BARRED ROCKS—Winners wherever shown. Bred for beauty and utility. Prices moderate. Thos. Andrew, Pickering.

EXCLUSIVE breeder of pure Barred Plymouth Rocks, Pringle strain. Heavy winter layers, \$1.00 per setting. Write for circular. Riverside Poultry-yards. Jas. E. Metcalfe, Hanover, Ontario.

EGGS FOR HATCHING—Rose Comb Brown Leghorns, \$1.50 per 15; \$2.75 per 30. Rouen Duck eggs, \$2.00 per 15. Mammoth Bronze Turkey eggs, \$3.50 per 9. Guaranteed fertile. J. H. Rutherford, Box 62, Caledon East, Ontario.

EGGS FOR HATCHING—From silver-cup winners. Barred and Buff Rocks; 13 for \$1.00; 30 for \$2.00. Joseph Forter, Brampton, Ontario.

EGGS FOR HATCHING—Rhode Island Reds, Wyandottes, Dark Brahmans, Rocks, Leghorns. 15 eggs, \$1.00; 100 eggs, \$4.00. Rouen and Mammoth Pekin duck eggs, 13, \$1.00. Satisfaction guaranteed. Wade & Son, Sarnia, Ontario.

EGGS FOR HATCHING—Barred Rocks exclusively; utility birds. Males, nine to ten pounds each; females, seven to eight. Good layers. Standard color. One dollar per setting. A. E. Sherrington, Walkerton, Ont.

EGGS from choicest matings of three greatest breeds—Single Comb Black Minorcas, Cornish Indian Games, White Plymouth Rocks. Our customers win. Zimri Seely, Iroquois, Ontario.

EGGS for hatching, of several varieties, \$1.00 per 15. Send for mating list. Robert Houser, Canboro, Ontario.

FOR SALE—A few nice Rose Comb Brown Leghorns. Four Golden-laced Wyandotte cockerels from prizewinning stock. Prices right. Eggs in season. Peter Daley & Son, Box 26, Seaford, Ontario.

FOR SALE—Pure-bred White Wyandotte cockerels and eggs. V. M. Stanley, Granton.

GOOD LAYING S.-C. WHITE LEGHORNS—Eggs, one dollar per 15; five dollars per hundred. Martin Robertson, Kent Centre.

LEGHORNS (Single Comb White, Single and Rose Comb Brown), White Plymouth Rocks, Columbian Wyandottes. Eggs, two-fifty per thirteen; express paid. Kedwell Bros., Petrolia, Ontario.

MINGRCAS—Record layers; Rose Comb Black; winners of lots of prizes. Eggs, \$3.00 per 15; \$5.00 per 30; \$15.00 per 100. Guaranteed to hatch. Square dealing. Walter Bowron, care Sandford Co., Hamilton.

PRIZE BARRED ROCKS, with egg record. Eggs, one to three dollars for fifteen; six dollars hundred. Pekin duck eggs, one and two dollars for twelve. Jas. Coker, Jerseyville, Ontario.

ROSE-COMB BROWN LEGHORN EGGS, \$1.25 per 15. W. M. Sproule, Westbrooke, Ontario.

ROSE-COMB RHODE ISLAND REDS—Heavy laying imported stock. Eggs for setting, one dollar for fifteen. Fred Colwell, Cooks-ville, Ontario.

S.-C. Black and White Minorca cockerels, \$3 and \$5. Brown Leghorns, \$2. Eggs, \$3 per setting. Choice pens of exhibition birds at \$5 per setting; \$10 per 30. Order early. E. Tackaberry, Lion's Head.

S.-C. W. LEGHORNS—I breed according to the American Standard, but to fill the egg basket, not the exhibition coop. During past months of December, January and February, flock laid 398 dozen. Eggs, \$1.00 per setting, from selected matings. Jno. H. Stewart, Elliott, Ontario.

WHITE ROCK Cockerels, three dollars. Eggs from imported Black, Buff Orpingtons, two dollars; from White Rocks, headed by first-prize cock, Toronto, three dollars, fifteen eggs. Fred A. Andrews, London, Canada.

WHITE ORPINGTON EGGS—From prize-winning birds. Heavy winter layers, \$3.00 per setting of 15. H. Ferns, 715 William St., London, Ontario.

S. G. HANSON'S STANDARD WHITE LEGHORNS

The breeding hens for the season 1911 are part of the flock of 402 pullets which in January, February and March established a record for flocks of that size, by laying 23,532 eggs. The cockerels heading the breeding pens are bred from trap-nested hens, with individual records in their pullet year of 200 eggs and over. Birds from these matings must give exceptionally good results. Book your orders for hatching eggs well in advance, if you want early-laying pullets.

EGGS FOR HATCHING

March and April—\$3.00 per 15; \$15.00 per 100.
May—\$2.50 per 15; \$12.50 per 100.
June—\$2.00 per 15; \$10.00 per 100.
Prices of day-old chicks on application.

S. G. Hanson, Hillcrest Poultry Farm,
Box 147, Duncan, B. C.

WHITE WYANDOTTES—Bred to lay, and are year 'round layers, with size and beauty. Farm raised. 90 per cent. fertile eggs: 15, \$1.00; 50, \$3.00; 100, \$5.00. R. J. Gibb, Galt, Ontario.

WYANDOTTES—Golden, Silver, Laced, and White cockerels, at \$2.00, \$2.50, \$3.00; big, strong birds. Eggs: Golden, \$2.00; White, \$1.50; Buff and Black Orpingtons, \$2.00. Harry T. Lush, 182 Dublin St., Peterboro.

SHOEMAKER'S BOOK ON POULTRY
and Almanac for 1911 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chicken-dom. You need it. Only 15c. C. C. SHOEMAKER, Box 990, Prospect, Ill.

a whist party, even if you could play.

What do I hear? The jingle of glasses, and father's room is full of smoke, too. Evan is actually offering the S. P. hot Scotch! The wretch! Has he no tact?

Ah, the S. P. is taking it! Yes, of course, "a little for the stomach's sake," etc.; he has a cold, and father is prescribing it professionally. Wicked father! All three have colds!

The R. C. smiles and makes no apologies. He seems a companionable sort of fellow, after all. (To be continued.)

GOSSIP.

Clydesdale importations for Canada, which sailed from Glasgow the first week in March, included consignments by T. H. Hassard, Markham, Ont.; T. D. Elliott, Bolton, Ont.; Joseph McKenzie, Kirkfield, Ont.; C. F. Lyell, Strome, Alta.; Alex. Murray, Calgary, Alta.; I. S. Lee, Hazel-cliffe, Sask.; Francis Nicolson, Perley, Sask.; R. R. McKerracher, Stonewall, Man.; H. M. Lusk, Okotoka, Alta. The total number of Clydesdales exported since January 1st, 1911, is 264, as against 200 for the same period of 1910.

DONALD FERGUSON'S SALE OF SHORTHORNS AND CLYDESDALES, MARCH 28th.

With feeding cattle at record prices, and any kind of dairy cattle in strong demand, farmers should be encouraged to stock up with breeding cattle that have every encouragement for the future. In the sale under the above heading, these may be found. The proprietor has spent many years in breeding up this herd to its present dimensions, always using sires that have given good satisfaction, and rearing the heifers so that they should perform at the pail, and, at the same time, produce stock that will feed and produce feeders. The herd has been cared for just as farm stock should be developed, with ample feed, without anything in the way of pampering. Some extra good heavy horses of all ages are included, with the imported Clydesdale stallion, Lorne Prince, at the head; also registered Shropshire sheep and Yorkshire swine. The sale should appeal to any farmer who wishes to improve his stock, or start a herd or stud. The sale is to be held on the farm, two miles from Glanworth Station, six miles north of St. Thomas, and ten miles south of London.



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.

A TWO-HUNDRED-ACRE FARM, just west of Village of St. George, Brant County. Good buildings; splendid young orchard. Apply: Dr. Baugh, Hamilton.

ARMSTRONG, B.C.—The Garden District of the Okanagan Valley; an established, self-supporting and unboomed district, with mildest winters; permanent markets and unlimited pure water supply; no irrigation; no syndicate land holdings; fruit-growing, dairying, mixed farming, poultry and market gardening. Booklet sent on application to Secretary Board of Trade, Armstrong, B.C.

FOR SALE—Regenerated Abundance Seed Oats. Great yielder; stiff straw; from imported seed; 60 cents per bushel. Wild Goose wheat, \$1.00 per bushel. Geo. Robinson, Claude, Ontario.

FARM hand, married, experienced, seeks position; commence early in April. Reply, stating wages, etc.: F. Aldington, Gowie, Perth County, Ontario.

FOR SALE—Choice O.A.C. No. 21 strain seed Barley, 90 cts. per bushel. Improved Regenerated Banner Oats, seed imported from Scotland last season, 75 cts. per bushel. Bags, 25 cts. extra for grain. Potatoes—Carmen No. 1 and Gold Coin, selected stock. Two best table and shipping varieties. Bags free; \$1.25 per bag. J. H. Wooley, Burford.

FOR SALE—Iron, Pipe, Pulleys, Belting, Rails, Chain, Wire Fencing, Iron Posts, etc.; all sizes very cheap. Send for list, stating what you need. Agents wanted; good commission. The Imperial Waste & Metal Co., Queen St., Montreal.

FOR SALE—5½ acres on South St. West in Aylmer, on which is a good 1½-story brick house, with coal hot-air furnace, acetylene lighting, good cellar with cement floors; barn, hog and henhouse. Orchard of apples, pears, plums, peaches and cherries. Small fruits, grapes, thimbleberries, blackcaps, raspberries, gooseberries and strawberries; black, red and white currants; asparagus and rhubarb, with abundance of good water. Suitable for retired farmer or market gardener. Apply on premises. R. S. Wait, Aylmer West, Ontario.

GOVERNMENT STANDARD SEEDS FOR SALE—O. A. C. No. 21 Barley, 90c.; Golden Vine Peas, \$1.00; Banner, White Siberian, Silver Mine, Scottish Chief Oats, 60c.; Red Clover, \$9.00; Alfalfa, \$13.00; bags extra. Ask for samples. Caledonia Milling Co., Ltd., Caledonia.

MEN WANTED—Age 18–35, for firemen, \$100 monthly, and brakemen, \$80, on all Canadian railroads. Experience unnecessary; no strike. Positions guaranteed competent men. Promotion. Railroad Employing Headquarters—over 400 men sent to positions monthly. State age; send stamp. Railway Association, Dept. 545, 227 Monroe Street, Brooklyn, N.Y.

ONE OR TWO GOATS in or with kids wanted. Montreal price. Frank Oehler, St. Lambert, Montreal.

O.A.C. NO. 21 SEED BARLEY FOR SALE—Grown from selected seed. Fine sample, \$1 per bushel; bags extra. Samples on application. J. M. McCallum, Shakespeare, Ontario.

OUR BUSINESS is to put you in touch with parties looking for farms in Ontario. We can also put you in touch with some of the best farms offered in Ontario. If you want to buy or sell your farm, write us. Wooley & Farewell, 177 King St. E., Hamilton.

O. A. C. NO. 21 BARLEY—Our supply is going fast, but we still have some left at old price. Best cotton bags 30c. Jno. Elder, Hensall, Ontario.

POTATOES—Empire State; heaviest yielder, best quality. Registered seed, 3 years' selection, \$1.50 bag. A. Hutchinson, Mount Forest, Ontario.

SEED GRAIN FOR SALE—Mensury Barley, per bushel, 75c.; Bumper's King Oats, per bushel, 50c.; Scottish Chief Oats, per bushel, 50c. Bags extra. Apply: J. W. MacDonald, Bridgen, Ontario.

SEED OATS—Selected Banner seed oats, 50 cents per bushel. Samples on application. Chester Nicholson, Mt. Forest, Ontario.

STRAWBERRY PLANTS—Stocky and well-rooted. All tested varieties. Catalogue and price-list free. S. H. Rittenhouse, Jordan Harbor, Ontario.

SCOTCH young woman wishes situation. Working housekeeper. Good cook on farm. Miss Lizzie McGregor, care J. P. Prouse, Box 1, Ingersoll, Ontario.

WANTED—Persons to grow mushrooms for us in waste space in gardens, yards, sheds or cellars, \$15 to \$30 per week. Send for illustrated booklet and full particulars. Montreal Supply Co., Montreal.

WANTED—A yearly position on farm by married man (3 children). Five years in last place. C. L., care "Farmer's Advocate," London.

WANTED—Man to fit, show and travel Hackney stallion, season 1911. Must be sober. State age, experience, wages. Apply: K., "Farmer's Advocate," London, Ont.

Clearing Auction Sale

FARM STOCK AND IMPLEMENTS

Wednesday, March 29, 1 o'clock

Near Lambeth, 6 miles from London; Station 20, Traction Line.

3 Pure-Bred Aberdeen-Angus Cows and 2 Bull Calves

One Imp. Clydesdale mare 7 years old. All other stock, implements and feed.

LT.-COL. W. M. GARTSHORE, Proprietor
J. W. LAIDLAW, AUCTIONEER.



DO IT NOW

Don't wait till you get into the field with a run-down horse. But get a 50c. package of

HACKNEY STOCK TONIC

and use it now. It will put your horse in shape to start the work you have before them. You will say as others have said, "IT IS WORTH DOUBLE." Sold all over Canada, or write to 18 Millstone Lane, Toronto, for booklets, etc.

IMP. CLYDESDALE STALLION for sale, cheap. A right good one; five years old. Bred right in the scarlet. Splendid action, good disposition; sure foal getter; gets splendid stock. In good condition. A bargain for someone if sold at once. Phone or write: J.A. Sandham, Tillsonburg, Ont.

THE DELHI TANNERY WANTED—2,000 hides to tan for robes, coats, etc. All kinds of hides, skins and furs dressed soft and pliable. Dealers for buck, or with the hair on. Send them to me and have them dressed right. B.F. Bell, Delhi, Ont.

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.

LYMPHANGITIS—A CORRECTION—DISSOLVING CORROSIVE SUBLIMATE.

1. I noticed in your January 19th issue, page 112, treatment for lymphangitis, to give 4 drams nitrate of potash, three times daily for three days; also, in February 16th issue, on page 296, you say to give 3 drams nitrate of potash daily. I would like to know what would be a safe dose in a case of lymphangitis. Why such a difference in your different issues?

2. Would like to know how to dissolve corrosive sublimate, and will it stay dissolved in water? J. R.

Ans.—1. The dose varies somewhat, according to the particular case, but the prescription in our issue of February 16th was misprinted, owing to a stenographer's error in leaving out the words "three times." It should have read "3 drams three times daily." We regret the error very much, as special pains is exercised in our office to avoid such, but slips will sometimes occur in spite of the best of care. We heartily thank our correspondent for bringing the matter to our attention.

2. Corrosive sublimate will dissolve in water, but usually alcohol is used, and water added to dilute it. Once dissolved it will stay so.

CRIPPLED PIGS.

What is the cure for crippled pigs? J. M.

Ans.—This matter of pigs getting lame is usually brought on by feeding heavy, concentrated food, such as peas, too exclusively, and by lack of exercise. A rheumatic condition may be present also, due to cold or dampness in bed or elsewhere. Sometimes the trouble has reached the stage when there is no cure. But, if not, reverse the conditions. Turn the pig out. Make him run around. Feed chiefly on bulky food, such as roots—not too much grain. Let the man consist largely of stalks and middlings. Free his stomach's sicks, let him urinate in the ashes, charcoal and such.

GOSSIP.

White-belted Hampshire hogs and White-belted Lakenfelder poultry, are the specialties bred by A. O'Neil & Son, Birr, Ont., the claims of which for favor are set forth in their advertisement on another page in this issue. The demand for and sale of which is growing as these classes are becoming better known. Young Hampshire pigs and Lakenfelder cockerels are for sale. Look up the advertisement, and write for prices and particulars.

At a sale of Percherons at Lewis, Iowa, March 8th, seven stallions sold for an average of \$732, the highest price being \$1,400. Eighteen mares sold for an average of \$515. Twenty-two Shire mares sold at the same time and place for an average of \$515, the highest price being \$965. Four Belgian mares sold for an average of \$548. At Kirkville, Mo., March 6th, eight Percheron stallions sold for an average of \$782, three selling from \$1,000 to \$1,050 each.

On Wednesday, March 29th, at 1 o'clock P. M., as advertised in this issue, Col. W. M. Gartshore, of London, will sell at auction at the farm near Lambeth, six miles from London, and close to Section Station 20, on the Electric Traction Line, three pure-bred Aberdeen-Angus cows, one Thoroughbred mare, seven years old; also all the stock, implements and feed, as the farm has been sold. Everything goes to the highest bidder.

H. J. Davis, Woodstock, Ont., writes: I have recently sold the following Shorthorns: To Capt. Robson, London, a very promising young bull (Rosewood Chief), for use in his own herd, his sire being the Duthie-bred Missie bull, Westward Ho, and his dam the good breeding cow, Collynie Rosewood, also bred by Mr. Duthie, this being a combination of breeding that should bring good results. To Wm. Smith, New Hamburg, the eight-months bull calf, Senator, by the same sire, dam Oxford Queen 2nd.

LAST CALL FOR THE HAMILTON SALE OF SHORTHORNS.

As previously announced, there will be sold at Wm. Hamilton's farm, two miles from Bright, G. T. R., and four miles from Innerkip, C. P. R., a number of good Scotch Shorthorns, that, for dual-purpose cattle, are hard to excel, and when the common milk cows of the country are bringing from \$80 to \$100 at auction sales, surely a good, pure-bred Shorthorn cow is still much better buying. The cattle are just in good breeding condition, and have a nice appearance, likely to do their purchasers good wherever they may go. Be sure and make a note of the date, March 29th, as advertised in this paper, and endeavor to attend the sale.

A FINE "LONG-DISTANCE" MILK RECORD.

The Holstein cow, Flora Wayne of Riverside, owned by the Nova Scotia Agricultural College, made a remarkably good showing, both as a producer and breeder. Her record for five years is as follows:

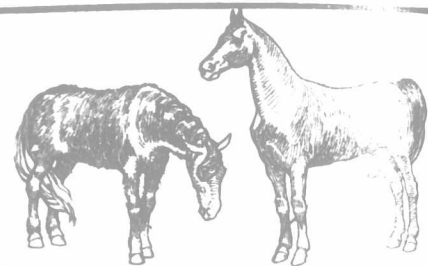
Calved March 12, 1907, calf weighing 126 lbs.; produced in 365 days, 18,000 pounds of milk, testing 3.1 per cent.

Calved February 11, 1908, calf weighing 136 pounds; produced in 273 days, 12,001 pounds milk, testing 3.14 per cent.

Calved January 20, 1909, calf weighing 128 pounds; produced in 272 days, 12,826 pounds milk, testing 3.12 per cent.

Calved February 6, 1910, this year officially tested, milking 317 days, producing 14,683 pounds, testing 3.21 per cent.; calf weighing 120 pounds.

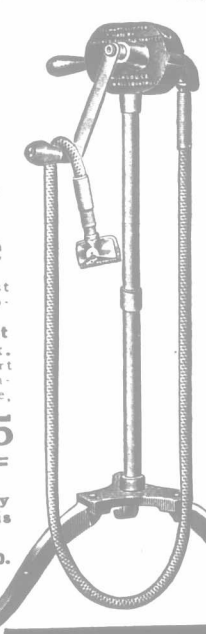
Calved January 30, 1911, calf weighing 123 pounds; Record-of-Merit tested. Highest day's production during first month, 97 1-10 pounds milk, testing 3.02 per cent. fat. Highest 30-day production, to date, 2,849 1/2 pounds. (owing to an accident in the fall of 1907, she has been milking from three years.) This is one of a number of very fine producing Holsteins, and is one of the best owned by the Nova Scotia Agricultural College.



CLIP YOUR HORSES IN THE SPRING

Clipped horses have the best of it in every way. They not only look better, but they are fresh and full of life and vigor. Their feed does them more good, they rest better and do better work. They are not subject to coughs, colds, pneumonia, etc., which ruin many good horses. Clip before you put the horses at the spring work. You can clip a horse in 30 minutes with this

Stewart Ball Bearing Clipping Machine



It turns easiest, clips fastest and lasts longest of all clipping machines. Anyone can operate it and do good work. It has the famous Stewart one-cut tension knife—highly-esteemed. Price of machine, all complete, as shown, at your dealer's, is only \$9.75. If your dealer hasn't it write us direct. Beware of poorly made imitations of this machine. Chicago Flexible Shaft Co. 110 LaSalle Ave., CHICAGO

SUMMARY OF REPORT OF OFFICIAL TESTS OF HOLSTEINS FOR FEBRUARY.

Twenty-nine full-age cows were accepted in the Canadian Record of Merit for Holsteins during February, averaging 15.89 lbs. fat and 468.65 lbs. milk for seven days. The highest test was made by Evergreen March (3896), at eight years, who made 23.56 lbs. fat, equivalent to 29.45 lbs. butter (figured on 80-per-cent. basis), and 711.2 lbs. milk, an average of 101.6 lbs. milk per day. In thirty days, this cow made 97.81 lbs. fat, equivalent to 122.26 lbs. butter, and 2,988 lbs. milk, which is the highest test for thirty days made in Canada.

Thelma De Kol of Lulu (4709), at seven years, made 20 lbs. fat, equivalent to 25 lbs. butter; milk, 533.28 lbs. Owned by J. M. Steves.

One cow was tested in four-year form, making 13.58 lbs. fat and 16.98 lbs. butter; milk, 423.1 lbs. Owned by Thos. Goodison.

A new record was made in the three-year class, by Lady Pietertje Canary (9546), owned by Miss Mary A. Steves. This heifer made 21.14 lbs. fat and 26.42 lbs. butter in seven days; milk, 491.52 lbs. In thirty days, she made 84.39 lbs. fat and 105.49 lbs. butter, and 2,104.07 lbs. milk.

Canary Queen De Kol (9545), owned by J. M. Steves, also made a remarkable test, standing next to the above cow in the three-year list. In seven days, she made 20.71 lbs. fat and 25.89 lbs. butter, and 491.22 lbs. milk.

Seven heifers in the three-year-old class were tested, averaging 15.53 lbs. fat and 424.55 lbs. milk.

Seven two-year-old heifers were tested for seven days, averaging 11.84 lbs. fat and 352.55 lbs. milk. Blanche Akkrum 2nd (10088), owned by C. J. Pearce, made 13.62 lbs. fat and 17.03 lbs. butter, and 404.2 lbs. milk. Lina of Lulu 2nd (12044), owned by Miss M. A. Steves, made 13.52 lbs. fat and 16.90 lbs. butter, and 389.64 lbs. milk.

Three two-year-old heifers were tested for thirty days, averaging 37.30 lbs. fat, and 1,105.5 lbs. milk.

Four cows in the full-age form were tested for thirty days, averaging 69.34 lbs. fat, and 2,184.92 lbs. milk—G. W. Clemons, Secretary.

QUESTIONS AND ANSWERS.
Miscellaneous.

STEEL SILO—HORSE-STABLE FLOOR.

1. I am thinking of building a silo. I would like to know about the cost of a steel silo, and how long it would last. It would be 14 feet across and 18 feet high. I would set it on a wall 8 feet in the ground. Where would a person apply for one?

2. How long would two-inch elm plank last for horse-stable flooring? Would it be more comfortable for the horses than cement? Some horses fall on cement.

Ans.—1. So far as we are aware, steel silos are made only by the Waterloo Engine Works Co., Ltd., of Brantford, from whom any information as to cost may be obtained. It may be said that there is very little difference in cost between a silo of steel and one of cement. W. C. Good, Brantford, who has a steel silo, and also a cement one, writes us that, owing to the difficulty of getting a satisfactory coating for the inside of steel silos, he would at present recommend intending builders to put up cement, as with them there is no risk. Steel silos have been in use only a short time, so that it is not known as yet how long they will last.

2. Elm plank for horse-stable floor should last six to ten years. Much would depend on the kind of elm, and on the condition in which it was kept in the floor. It would be better for the horses to stand on than cement, though there is no reason for horses slipping on cement. It can be left rough on the surface.

GOSSIP.

Young Aberdeen-Angus bulls and females are advertised for sale by James Sharp, Rockside, Ont., Cheltenham Station, C. P. R. and G. T. R.

J. A. Carswell, of Bond Head, Ont., the well-known breeder and exhibitor of Oxford Down sheep and Large English Yorkshires, in ordering a change of advertisement, writes: Our Oxfords and Yorkshires are wintering fine, and sales were never better. I wish to thank "The Farmer's Advocate" for the splendid service it gives its patrons. It is certainly an excellent advertising medium. Had no trouble getting rid of all our rams last season; had several orders for rams which we could not fill. We have at present for disposal, a limited number of choice, good-sized and well-covered yearling and two-shear ewes, by imported sires, and bred to lamb in March to our imported Hobbs ram, Hamptonian 222nd. In ewe lambs, we have a nice lot, including the second pen at Guelph Winter Fair, a number of which are for disposal. Maple Villa Yorkshires were never doing better. At our County Fairs, we won everything in sight, for both breeding and bacon type. At present we have a number of splendid young boars fit for service, a bunch of fine young sows to farrow this spring; also an excellent lot of young stuff coming on, all descendants of imported stock.

TRADE TOPICS.

"The attention of our readers is drawn to the advertisement of The Crown Fence & Supply Co. (Toronto), in another column. E. L. Dyer, Manager, has been in the fence business for sixteen years, and has made good with over 12,000 fence-users. He knows how to save you money in fence-purchasing, and our readers should take advantage of his knowledge when open to buy."

H. Ralph Steele, who has been for five years sales manager of the Loudon Machinery Co., of Guelph, Ont., has resigned his position to undertake the management of the Canadian Gate Co., which is practically a branch of one of the largest, if not the largest, gate manufacturing companies in America, viz., the Iowa Gate Co., of Cedar Falls, Iowa. Mr. Steele has been recently doing business at 29 Park Avenue, Guelph, Ont., but is now getting settled in temporary quarters at the old Morlock factory, which he will occupy while building a new factory.

"Dey an' dey quick"
Mont Salina

In thousands of homes wash day is looked upon as one of ordinary pleasant occupation since the advent of the New Century Washer.

☞ Start your washing at 8 o'clock in the morning and you are through before 10, with the clothes on the line, the kitchen cleaned up and the assurance that every particle of dirt or stain has been removed from the clothes without the slightest injury to the fabric, if you use a

New Century Washer

☞ Just ask the women who has one. This machine is not classed with ordinary Washers. They are Better Machines, Better Made on a Better Principle, and do Better Work in Better Time.

☞ The NEW CENTURY is well made and the smallest details in its construction are given the closest attention. The wood in the tub is the best Louisiana swamp cypress, ribbed like a washboard, tongued, grooved and reinforced inside by a rust-proof steel ring to prevent warping and leaking. All metal parts in contact with water are galvanized by a secret process—will not rust or stain the clothes. All parts are made by automatic machinery, are absolutely interchangeable, and can thus be readily replaced in case of accident.

☞ The NEW CENTURY is sold by all the best dealers. If your's don't handle them write us direct.

"Mont Salina's Wash Day Philosophy" is our new FREE Book, and gives many valuable hints on the washing of all kinds of fabrics. Send us a postal and get it to-day.

MUMFORD DOWSWELL Limited
HAMILTON, ONT.

PURITY FLOUR

"More bread and better bread"

Makes just the kind of biscuits you like to make

41

NORTHWEST FARM LANDS

Half a million acres of wild and improved lands near railway. All specially selected in the most fertile districts.

Special excursion in the spring to see these lands.

Write now for particulars as to prices and location.

STEWART & MATHEWS CO., LIMITED
A few good agents wanted. **Galt, Ontario.**

A FLOOD OF LIGHT FROM KEROSENE COAL OIL

THE ALADDIN LAMP gives more brilliant than gas or electricity. It is simple, durable, portable, odorless and safe. Satisfaction guaranteed.

AGENTS MAKE BIG MONEY by showing the lamp, the light makes the sale. It revolutionizes rural lighting needed in every home. The **SUNBEAM** burners fit all ordinary lamps. Ask for Agency proposition or how you can obtain a lamp **FREE** to introduce it.

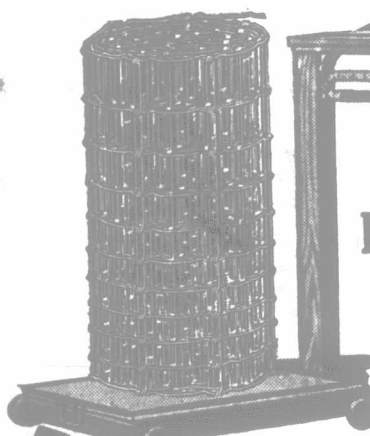
The **ALADDIN LAMP CO.** of America, Chicago, Winnipeg and Dept. B **MONTREAL.**

For Sale: Beautifully marked and richly bred heifer calf, born 25th Feb., 1911; sire Mercena Mechthilde Prince, son of Tidy Abbekerk Mercena's Posch; dam Jewell Mechthilde of Willowsbanks, whose sire is Johanna Rue 4th Lad. Will crate securely and ship to any station, price \$60, with registered pedigree.

E. L. GARNER, M. D., WELLAND, ONTARIO

When Writing Advertisers, Please Mention "The Farmer's Advocate."

AMERICAN FENCE



Made of Hard, Stiff Wire, of Honest Quality

Heavy Fence Means Long Life

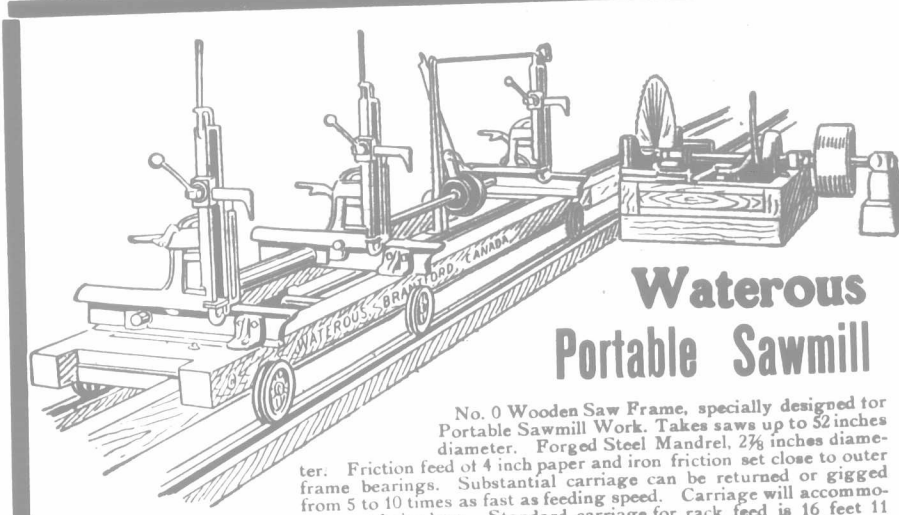
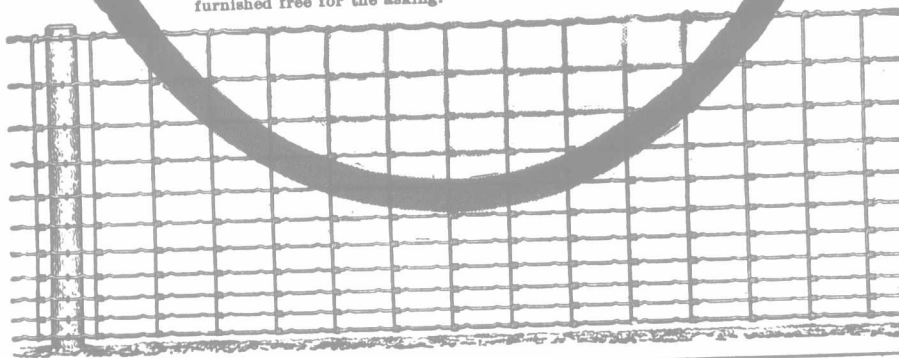
Put the fence you buy on the scales. Any American Fence dealer will be glad to do this for you because he is proud of the amount of steel he can give for the money.

American Fence is a heavy fence. The gauge of the wire is larger. Compare with any other fence. The eye is easily deceived on the size of the wire, so put the roll on the scales and weigh it. This test will convince you that the fence you thought was cheap is most expensive when pounds of steel are considered. Weight in fence means strength and durability, and our years of experience have taught us that the heavier the fence the better. No argument for light fences can dispute this.

American Fence is made of hard, stiff steel. It is made of a quality of wire drawn expressly for woven-wire-fence purposes by the largest manufacturers of wire in the world. Galvanized by latest improved processes, the best that the skill and experience of years has taught. Built on the elastic hinged-joint (patented) principle, which effectually protects the stay or upright wires from breaking under hard usage.

The Canadian Steel & Wire Co., Limited
HAMILTON, ONT. WINNIPEG, MAN.

NOTE.—Dealers everywhere. See the one in your town and have him show you the different designs and give prices. Also get from him booklet entitled "HOW TO BUILD A CHEAP CONCRETE FENCE POST," furnished free for the asking.



Waterous Portable Sawmill

No. 0 Wooden Saw Frame, specially designed for Portable Sawmill Work. Takes saws up to 52 inches diameter. Forged Steel Mandrel, 2 1/2 inches diameter. Friction feed of 4 inch paper and iron friction set close to outer frame bearings. Substantial carriage can be returned or giggered from 5 to 10 times as fast as feeding speed. Carriage will accommodate good size logs. Standard carriage for rack feed is 16 feet 11 inches long; rope feed 17 feet 6 inches long. Frame extra wide, of heavy red pine stringers, edges bound with heavy iron. Log seats heavy web. Six-inch eye-beams. Knees and rack cast in one piece. Knees have 3-inch independent taper movement, and are fitted with our patent upper and lower steel hook. Peel Dogs, operated by overhead, single-acting ratchet setworks, having large ratchet wheel. Split steel setting and holding Pawls, designed to eliminate lost motion and permit a set of 1-16 inch. Steel-set shaft 1 1/2-16 inches diameter and 16 feet long. Carries pinions which operate knees, and is fitted with heavy cast iron hand-wheel for hand setting. Track 54 feet long. This is one of the finest portable sawmills made. It will pay you to send for our free catalogue, which describes it, as well as many others, in detail. Drop us a card to-day.

THE WATEROUS ENGINE WORKS CO., LTD.,
BRANTFORD, ONT.

Please Mention this Paper.

QUESTIONS AND ANSWERS. Miscellaneous.

MARE WEAK IN KNEES.

Please give treatment in your paper for a mare five years old that is weak in the knees. J. B.

Ans.—Our veterinarian advises keeping in a box stall with level floor, removing all hay racks and feed boxes, and feeding hay on the floor, and oats in a box set on the floor.

COW DIES AFTER PURCHASE.

A sold a cow to B, and after B had it six weeks the cow died, and B had a veterinary to examine the cow, and did not notify A until six days after. Can B compel A to stand the loss. The cow was apparently in good health when B bought her. On examination of the cow, it was found that her stomach was grown to her ribs.

AN OLD SUBSCRIBER.

Ans.—From the facts as stated, there is nothing to indicate that A is in any way liable to B by reason of the cow's death.

BARLEY VS. OATS ON SOD—ROLLED OATS FOR CATTLE—BEST MANGEL—POTATOES ON SOD—CURING HAMS—EGG-EATING HENS—CHECKING BINDWEED.

1. Would barley do better on sod plowed in the fall, than oats?
2. Are rolled oats as good for cattle and cows as chop?
3. What is the best thing to feed a pig that is foundered?
4. Which is the best kind of mangels to sow?
5. Would you recommend planting potatoes on sod plowed in spring? How deep would you plow it? Would you manure first?
6. There is an oat called the Improved Banner. Do you think they are the same as the old Banner oats?
7. Could you give me a good recipe for curing hams?
8. What would you do with hens that eat the eggs?
9. I have a piece of land that is bad with bindweed and other weeds. I was thinking of cultivating it till middle of June, and then sowing rape. Do you think it would check the weeds? E. B.

Ans.—1. Oats would do better on fall-plowed sod than would barley.

2. We would prefer thoroughly-rolled oats rather than chop for cattle. They are much less likely to form into a solid mass in the stomach than is finely-ground chop.

3. A foundered pig is almost invariably one that has been overfed with concentrated food, such as peas. Correct the trouble by giving roots, and a very light measure of grain.

4. For ourselves, we prefer one of the good feed varieties of sugar beets to mangels of any kind. They yield practically as well, are more nutritious, and keep better.

5. Nothing beats a clover sod for potatoes, and they will do very well on other kinds of sod. Seed should be planted three or four inches deep, if possible.

6. What is called the Improved Banner is doubtless but a selected strain of the old American Banner.

7. To cure a ham: Boil together for half an hour, 6 quarts water, 1/4 pound brown sugar, 1 ounce saltpetre, and 2 pounds salt. Skim well and set aside until cold, then pour over the fresh ham. Let stand for two weeks in a cool place, then drain and wash well. Without wiping, roll it in bran until thickly coated. Smoke for a week, then brush off the bran, wrap in brown paper, and hang up until wanted. A very large ham should be smoked from ten days to two weeks.

8. For egg-eating hens, give plentiful supply of lime, feed them away from the nests, have nests in a dark place, and, if they still persist in their evil practice, eat the hens.

9. Bindweed cannot be killed by treatment suggested. It would probably not seriously lessen the growth of rape, and would seem checked, but would be as bad as ever, or worse, the next year. The worst patch of bindweed can be killed by frequent cultivation during growing season, for two years in succession, sometimes in one year.

Children's Dresses



STYLISH little suits and dresses can be made for the children out of father's or mother's, or the older children's discarded garments by Dyeing them with

DY-O-LA
ONE DYE FOR ALL KINDS OF GOODS

and making them over.

Send for Sample Card and Story Booklet. The Johnson-Richardson Co., Limited, Montreal, Can. 80

\$1.00

for this 16-in. PLUME

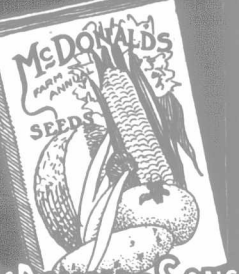


This plume is just the kind for which you would have to pay \$5.00 at any retail store. It is extra wide, fully 16-inches long, in all colors, with willow flues of great length that do not lose their curl easily. Send us \$1.00 today, for this is an opportunity not to be missed. We offer also an extra large and handsome \$7.50 plume at \$2.50.

Send your money by mail, express or money order. Remember that your money will be refunded if the plume is not entirely satisfactory. New York Ostrich Feather Co., Dept. T. T. 513-515 B'way, N.Y.

FARMERS! GARDENERS! YOU NEED THIS BOOK

IT TELLS ALL ABOUT THE SEEDS THAT BRING THE DOLLARS MAILED FREE WRITE TO DAY



KENNETH McDONALD & SONS DEPT. O - OTTAWA

SOUTHDOWN SHEEP

Unequaled for quality of mutton and wool, hardy constitutions and early maturity.

STRIDE & SON will sell by auction, at Chichester, Sussex, England, on August 16th and 17th next, about

10,000 REGISTERED SOUTHDOWN EWES 1,000 SOUTHDOWN RAM AND RAM LAMBS

Commissions carefully executed.

Stride & Son, Chichester, Sussex, England. Telegrams: "Stride," Chichester, England.

Pleasant Valley Farms EGGS FOR HATCHING.

White Wyandottes, \$1.25 per 15; \$5.00 per 100. Special mating, \$3.00 per 15. Also S.-C. W. Leghorns, pen headed by first-prize C. N. E. cockerels, \$1.50 per 15.

Geo. Amos & Sons, Moffat, Ont. O. A. C. NO. 21 SEED BARLEY and Short-horn Bulls.—Look up our ad. in Want and For Sale column if you want a supply of the best barley ever grown in Ontario. It is as cheap at \$1 per bush, as other varieties at nothing. We have still four Shorthorn bulls left, fit for service; one a grand two-year-old, with both weight and quality, and an extra dark red calf 10 months old. Jno. Eider & Son, Hensall, Ont.

Proud Motorist—"Yes, it took me about six weeks' hard work to learn to drive my machine."

Pedestrian—"And what have you got for your pains?"

Proud Motorist—"Liniment."

GOSSIP.

Alex. F. McNiven, Clyde Park Farm, St. Thomas, Ont., writes: You may now inform your readers that one insertion of the advertisement did the business, and sold both the Shire stallion and mare, Matthew H. Penhale, St. Thomas, got the stallion, Holdenby Mack, to ship West. The mare I sold to W. E. Penty, St. Thomas.

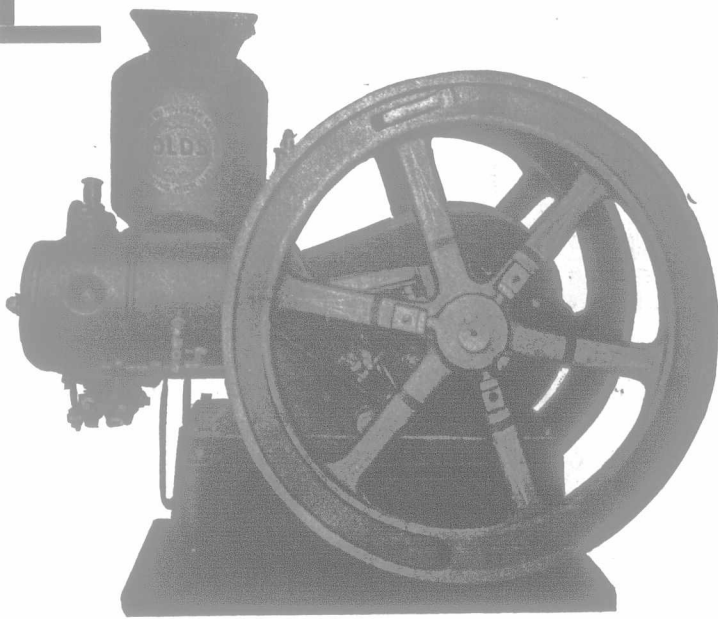
RIDGEDALE FARM HOLSTEINS.

This splendid herd of Holsteins, the property of R. W. Walker & Sons, of Utica, Ont., are coming through the winter in fine shape, and paying a big margin of profit on cost of feed and interest on money invested. The Messrs Walker, in common with practically all the dairy cattle breeders in the Province, have made the start for an official test of their entire herd. At present there are three in the running for qualification, one mature cow and two heifers, the former giving 65 lbs. a day, and the heifers varying from 40 to 44 lbs., testing on an average thus far, 3.8 per cent. of butter-fat. And this represents an average of those milking this winter, on ordinary care and regular feed. The stock bull is Imperial Pauline De Kol, sired by Tidy Abbekirk Mercena Posch, whose dam and sire's dam have records that average 28 lbs. butter in seven days, and on his dam's side, both the dam and grandam are in the official record. For sale, are six young bulls, from one to seven months of age, all got by the stock bull, and two mature cows, in calf to the stock bull. The farm is one mile from Manchester Station, on the Whitby-Port Perry branch of the G. T. R., and five miles from Myrtle Station, C. P. R., and is connected with long-distance phone.

THE HUME AYRSHIRES.

The great Hume herd of Scotch and Canadian-bred Ayrshire cattle, the property of Alex. Hume & Co., Menie, Ont., were found by a "Farmer's Advocate" representative, when visiting the herd a few days ago, in the best possible condition, and looking every whit what they are, one of the best show herds, and one of the very best producing herds in Canada. For many years this herd has been annually strengthened by importations personally selected by Mr. Hume, and has, therefore, been kept up to a very high standard, with particular attention paid to type and conformation of udder. A number of them are in the official Record of Performance, and a number of others are now in the test, and not one of the lot has tested below 4 per cent. of butter-fat. Among the latter are such good ones as Imp. Stonecroft Lady Ellen, who was first and reserve champion at Toronto last fall. She is running along from 40 to 44 lbs. of milk per day, and will pass with a big margin. Bargenock Snowdrop (imp.), who was second in the dry-cow class at Toronto in 1909, is also giving along 44 lbs. a day. Lady's Maid is giving on an average of 45 lbs. a day. Clerkland Kate (imp.), who was first as both a two- and three-year-old at Toronto, is giving about the same. Dozens of others that have been imported or bred by Mr. Hume have qualified for the record in other hands, many of them on the other side of the line, two of them now owned by the Ashley Farm, at Media, Pa., were in the quartette that won third in the Home Dairy Test, in competition with a large number of entries from several of the leading dairy States. It is worthy of mention that these two cows were bred by Mr. Hume. It is well known that this herd has for a great many years been singularly successful at the leading shows, particularly Toronto, London and Ottawa, and Mr. Hume is particularly proud of the fact that the great majority of his winnings have been with animals of his own breeding. The present stock bull is Auchebraun Hercules (imp.), bred in the noted Auchebraun herd of Robert Wallace. This is an exceptionally choice bull, true and level in his lines, perfect in type, and has high official backing. A limited number of choice heifers and young bulls are for sale. In Yorkshires, for sale, are a few young sows of breeding age, and one boar old enough for service, and both sexes two months of age, sired by Alex 29166, a son of Imp. S. H. Albert, dam Lady Bess, a daughter of Imp. Dalmeny Lady 1, and 12th. The sows in breeding are big, fine ones, of modern type and breeding.

RELIABLE POWER FOR THE FARM



Power for pumping, sawing wood, grinding and cutting feed, running the grindstone, cream separator, churn, washing machine, etc.—Ready at any time—Is best secured by installing an

OLDS GASOLINE ENGINE

Backed by an experience of over thirty years in gasoline-engine building. Built in the largest factory in the world devoted entirely to the building of gasoline engines.

MASSEY - HARRIS CO., LIMITED

Toronto, Montreal, Moncton, Winnipeg, Regina, Saskatoon, Calgary, Edmonton.

HURST SPRAYERS ON FREE TRIAL

NO-MONEY-IN-ADVANCE PAY AFTER IT HAS PAID FOR ITSELF

LET US SEND YOU ANY OF THESE SPRAYERS—to try for 10 days, then if you buy, you can pay us cash or we'll wait till you sell your crop, then you can pay us out of the "extra profit." We pay freight. Wholesale dealers' prices.



Man-Power Potato and Orchard Sprayer.

Sprays "anything"—potatoes or truck, 4 rows at a time. Also first-class tree sprayer. Vapor spray prevents blight, bugs, scab and rot from cutting your crop in half. High pressure from big wheel. Pushes easy. Spray arms adjust to any width or height of row. Cheap in price, light, strong and durable. **GUARANTEED FOR FIVE FULL YEARS.** Needs "send-a-cent" to get it "on trial." You can get one free if you are first in your locality. Write today.

Horse-Power Potato and Orchard Sprayer.

For big growers. Most powerful machine made. 60 to 100 gallon tank for one or two horses. Steel axle. One-piece-heavy-angle-iron frame, cypress wood tank with adjustable round iron hoops. Metal wheels. "Adjustable" spray arms and nozzles. Brass ball-valves, plunger, strainer, etc. Big pump gives vapor spray. Warranted for five years. Try this machine at our expense with "your money in your pocket." See free offer below. Write today.

Fits-All Barrel Sprayer.

Fits any barrel or tank. High pressure, perfect agitation, easy to operate. Brass ball-valves, plunger, strainer, etc. Automatic-strainer. No "cup leathers or rubber" about any of our sprayers. Furnished plain, mounted on barrel, or on wheels as shown. Five year guarantee. It don't cost you "a cent" to try it in your orchard. Get one free. See below. Write today.

FREE—Get a sprayer FREE!—After you have tried the sprayer and are satisfied that it is just as we recommend it, send us a list of the names of your neighbors and we will write them and quote them price and have them call and see your machine work, and for every Fits-ALL Sprayer we sell from your list we will credit you with \$2.00 or send you check if you have paid cash.
For every Man-Power Potato and Orchard Sprayer we sell we will credit you with \$3.50 or send check.
For every Horse-Power Potato and Orchard Sprayer we sell we will credit you \$8.50 or send check.
We do all corresponding and selling. All you need do is to show the sprayer. Many have paid for their sprayer in this way. This offer is good for only the first order in each locality. Don't delay. Send the coupon or post card NOW.

COUPON — Fill Out and send to-day This Coupon will not appear again.
THE ONTARIO SEED CO., Successors, 138 King Street, Waterloo, Ontario
Send me your Catalogue, Spraying Guide, and "special offer" on the sprayer marked with an X below.
Man-Power Potato and Orchard Sprayer.
Horse-Power Potato and Orchard Sprayer.
Fits-All Barrel Sprayer.
NAME.....
ADDRESS.....



Said one old horse unto his mate,
There does not seem to be a gate,
The clouds have quite o'erspread the moon,
The cyclone will be on us soon.
Let's try the fence—there came a shock,
They'd struck the "Cyclone one-piece lock."

Across the fields they fairly flew,
And had no trouble getting through.
They owed their freedom to one thing—
"The other folks' two-piece ring."

The Cyclone Woven Wire Fence Co., Ltd.,
137 Youville Sq., Montreal. 1170 Dundas St., Toronto.

A Bank Account Is a Real Home Comfort

- It reminds you to put something away regularly.
- It means prosperity and home insurance.
- You always have money when you need it.
- If you pay by check, it shows you where your money went—when, how much—and every check is a receipt.
- We would be glad to have you as a depositor.
- We pay 3½% interest, and \$1.00 will start an account. \$2,000,000 Assets secure you against loss.

Agricultural Savings & Loan Co.
109 Dundas St., London, Ont.

Corn That Will Grow COMPTON'S EARLY.
Hand sorted. An early variety and large yielder of fodder and grain. Write for prices.
W. B. ROBERTS, SPARTA, ONT.

The Belleville Breeders' Holstein Club

IN THEIR
FIRST ANNUAL CONSIGNMENT SALE
TO BE HELD IN THE CITY OF BELLEVILLE, ONT., ON

Friday, April 7th, 1911

WILL sell to the public, the greatest number of officially tested cows and heifers, and their progeny, ever offered at public auction in Canada, including descendants from DeKol Plus, May Echo, Francy 3rd, Sir Admiral Ormsby, Count Echo DeKol, Velstra's Triumph, Dolly Inka DeKol, Pontiac Hermes, and the Canadian record cow in yearly work, 1910. All will go without reserve to the highest bidders.

Contributors: A. D. Foster, S. J. Foster, Ed. Mallory, F. R.

Mallory, G. A. Brethen, Geo. Anderson, J. A. Caskey.

A forfeit of \$50 will be imposed on any contributor returning an animal to his stables.



75 Selected Holsteins from seven of the best dairy herds in the Belleville District means something to the public, especially when each contributor is striving to get the best average price.

This is the great Holstein event of this year.

Be sure and write the Secretary:

F. R. Mallory, Frankford, Ontario
FOR A CATALOGUE.

GOSSIP.

IMPORTANT HOLSTEIN SALE.

As indicated in the advertisement in this issue, the Belleville District Breeders' Club will hold a contribution sale of high-class Holstein cattle, in the City of Belleville, on Friday, April 7th, when 75 head of selected Holsteins, from seven of the best herds in the district, will be sold, without reserve, to the highest bidder. Included in the sale are many officially-tested cows and heifers, and their progeny by high-class sires, bred from high-testing dams, and more remote ancestry. This sale should attract dairymen from far and near. Write for the catalogue to F. R. Mallory, Frankford, Ont.

Geo. Amos & Son, Moffat, Ont., write: Our Shorthorns are coming through the winter well. Have a good bunch of calves coming up, by Scottish Signet, Waverley, and Scottish Crown. Trade has been exceptionally good this season. We wish to report the following recent sales: To Fox & Gallagher, Oregon, Wis., Waverley, one of our stock bulls; to F. W. Harding, Waukesha, Wis., Nonpareil 44th, Pleasant Valley Bud, Pleasant Valley Fragrance, and Victoria of Pleasant Valley. Most of these will be remembered as members of our 1910 show herd, one daughter of Old Lancaster and one granddaughter, and two daughters of Imp. Ben Lomond, also Royal Fragrance, by Ben Lomond, for importation to Argentine, this being our second best young bull of our 1910 crop, James Leask, Greenbank, securing Orange Ember, our best. W. J. Abernethy, Bond Head, Ont., takes Scottish Crown, by Ben Lomond, and out of Imp. Scottish Queen. This should prove a good investment to Mr. Abernethy. To A. J. McPhedran, Nassagaweya, Ont., Kentucky Marshal, by Whitehall Marshal; to Bert Hewins, Mountsberg, Ont., Bud's Benedict, by Lancaster Floral. We have still a few females we could spare, and one good bull calf, just turned twelve months, a red, by Imp. Ben Lomond, and from a Mysie cow, that should prove a good investment to someone. Have also eggs for hatching, from select pens of White Wyandottes, and S. C. White Leghorns. See advertisement.

While sending in change of advertisement, Mitchell Bros., Burlington, Ont., report the following sales of Shorthorns since November: To W. S. Beswetherick, Bender, Sask., a good yearling bull and a very choice yearling heifer, from imported sire and dam; through her representative, H. D. Smith, of Ingleside Farm, Hamilton, we sold to Ethel D. Norris, Carstairs, Alberta, a pair of good two-year-old heifers, a Jilt and a Roan Rolla, and Bandsman's Duke, a twelve-months show bull calf, by Bandsman (imp.). This was one of our best bull calves, and is a good prospect for both a show and breeding bull. To Thos. Robinson, Newton Robinson, Ont., a very stylish, well-bred Marr Roan Lady bull, by Redstart (imp.); to James Brown, Norval, Ont., Braemer Champion (imp.), a thick, massive Cruickshank Butterfly bull, used two years in our herd. His dam was one of the highest-priced cows at the dispersion of the Uppermill herd; to E. W. Hardy, Kent Bridge, Ont., a very promising, thick, low-down yearling bull, a Cruickshank Victoria; to C. H. Quick, Leamington, Ont., a deep-bodied, stylish bull, a Marr Roan Lady, by Braeman Champion (imp.); to Paul Smeltzer, Becher, Ont., a good yearling bull, by Redstart (imp.); to R. J. Campbell, Alport, Ont., one bull calf, by Village Duke (imp.); to Jacob Miller, Harlowe, Ont., a blocky bull calf, by Village Duke, and from an imported dam; to H. W. Graham, Huntley, Ont., a large, good breeding young cow, a Campbell Claret, by Grengill Victor (imp.); to T. S. Disher, North Pelham, Ont., a choice bull calf, by Village Duke, and from an imported cow; to Geo. L. Miller, Varencey, Ont., a Claret bull calf, by Village Duke; to John Bell, Glanford Station, Ont., a thick, low-set yearling bull, a Duchess of Gloster, by Newton Ideal (imp.). While we have had more inquiries this season than for years, and have made a number of sales, we still have for sale seven good bulls, of serviceable age, three of which are from imported sire and dam; also have fourteen promising bull calves coming on for next winter's trade. We can also supply heifers and young cows at most reasonable prices.

Dr. Stewart's Pure Condition Powders

For horses, cattle, hogs and poultry—net a stock food, but a scientific blending of roots, herbs and barks; makes good solid flesh naturally, not artificially. Makes pure blood and cleanses the system. Try it for coughs, scratches, distemper and worms. Two cans guaranteed to put your horse in first-class condition. One large can, 50c., prepaid, at most dealers, or Palmer Medical Co., Windsor, Ont. Veterinary booklet sent free on application.



"ELECTRO BALM"

CURES ECZEMA,
Also Piles, Burns, Scalds, Chapped Hands and Face.
Gentlemen use it after shaving. The Balm is handled by the best firms and is highly recommended by those who have used it.
Write for Free Sample
ENCLOSE 2c. STAMP FOR POSTAGE.
50c. a Box at all dealers or upon receipt of price from
THE ELECTRIC BEAN CHEMICAL CO.,
LTD., OTTAWA.

Daniel O'Connell, in replying to an opponent, was led once to phrase his remarks strongly.
"Order, order!" exclaimed the speaker, pounding with his gavel.
Again, in a minute or two, did the son of Erin return to his charge of wilful misstatement. Again was he called to "order."
It was a critical moment. His colleagues, for motives of policy, did not wish him to be out of the debate, so they hinted so by tugging vigorously at his coat tails.
Now, it is a very dangerous matter to trifle with the tails of an Irishman's coat, save in the cause of friendship. Nevertheless, the indignant, yet good-natured member recognized the command of his party, and sat down after delivering his Parthian dart.
"I obey the ruling of the House, and I beg to retract what I was about to observe."
That one touch of Irish oratory took the whole house by storm.

DISPERSION SALE PURE-BRED 40 Shorthorn Cattle 40 ALSO HEAVY HORSES



Registered Shropshire Sheep and Yorkshire Swine
Property of DONALD FERGUSON, Glanworth P.O. and Sta. (Pere Marquette R. R.), will be held on the farm, 2 miles from Glanworth

Tuesday, March 28th, 1911
COMPRISING: 14 COWS, 16 HEIFERS, 10 BULLS.

1 Imp. Clydesdale Stallion. 12 Shropshire Ewes. 5 Pure-bred Yorkshire Sows, with litters, or due to farrow at an early date.
6 Heavy Mares. 5 Shearling Ewes.
Also Colts and Fillies. 12 Shearling Rams.

Trains arrive at Glanworth as follows: From north, 10.11 a. m.; from south, 8.27 a. m. and 1.23 p. m. Sale commences 1 o'clock. Terms: Six months' credit on approved joint notes, or a discount of 6 per cent. per annum for cash. Catalogues on application to:

DONALD FERGUSON, GLANWORTH, ONTARIO
EIGHT MILES SOUTH OF LONDON.

IMPORTANT AUCTION SALE Wednesday, March 29th, 1911 Scotch - bred Shorthorn Cattle

Consisting of a number of the famous Buckingham strain, one of the best milking tribes on the American continent today. The offering consists of twenty cows and heifers, mostly young; all of breeding age; are in calf or calf at foot. Also two bulls, one yearling and the stock bull, both of the best quality and breeding. The sale will be held on lot 7, 10th concession of Blandford, Oxford Co., two miles from Bright, G. T. R. station, and four miles from Innerkip Station, C.P.R. Teams will meet trains on morning of sale. Sale commences at 2 o'clock. Terms: 6 months' credit on bankable notes.

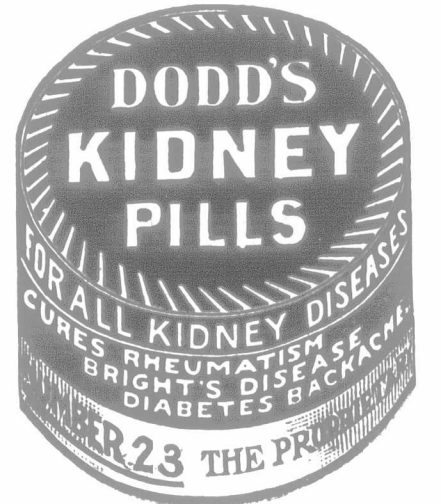
Capt. T. E. Robson, London, Auctioneer. Wm. Hamilton, Bright, Ont., Prop.

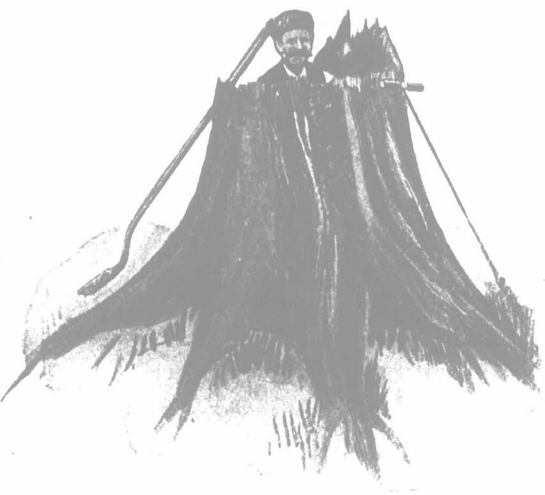


BAX LEGAL WILL FORM
Costs only 35 cents—you can draw up your own will and we guarantee it as legal and unbreakable as if a lawyer did it and charged you \$5. We send full directions and sample will filled out so you will make no mistake. Don't delay. Mailed in plain envelope. Send 35 cents to Bax's Will Form Co. 1250' Huron Ave., Toronto.

LIGHTNING

Send for fine, free book, all about lightning and the Dodd System of protection. Installed with binding guarantee of money refunded on damage made good. The standard everywhere. See insurance companies endorse and reduce rates on D.S. rodded buildings. Act now. Tomorrow may be too late. Address: DODD & STRUTHERS, 465 6th Ave., Des Moines, Ia.






The Stump.

STUMPING POWDER

DO YOU KNOW
The Value of Stumping Powder on the Farm
—AND THAT—
MONEY, TIME AND LABOR
can be saved by using
HAMILTON POWDER CO'S STUMPING POWDER

Blowing Out Stumps, Blowing Out and Breaking Up Boulders,
Turning Up and Aerating Subsoil, Digging Ditches,
Splitting Logs, Excavating Cellars and Foundation Trenches,
Digging Pole and Post Holes.

Write for Descriptive Catalogue on Stump and Boulder Blasting
and Prices to



What happened to the stump by using
Stumping Powder.

HAMILTON POWDER CO., MONTREAL, P.O. TORONTO, ONT.
COBALT, ONT. VICTORIA, B. C. NEAREST OFFICE TO WHERE YOU RESIDE.

QUESTIONS AND ANSWERS.
Miscellaneous.

IMPROVEMENT DISCOURAGED.

I would like to know why the townships or Government assesses the farmer heavier every time he adds a little to his home or surroundings to improve. I have met men who refuse to fix up a lawn or do much, owing to that reason. Simcoe Co., Ont. PADDY.

Ans.—They do it in obedience to the law. [Many believe the law should be changed. If you think so, agitate. Our columns are open.—Editor.]

DISLOCATION OF PATELLA.

I have a colt nine months old that got her stifle knocked out of place. Sometimes it goes back into place of itself. Is there anything could be done to keep it in place? I have tried two veterinarians. They gave me stuff to rub on it, but still she is lame if the bone be not put back. SUBSCRIBER.

Ans.—The colt will probably come around in time, but a blister helps to strengthen the joint. Clip the hair off the front and inside of the joint. Get a blister composed of 1½ drams each biniodide of mercury and cantharides, mixed with two ounces of vaseline. Rub well into the parts; tie so she cannot bite or lick the joint. In 24 hours, rub well again, and in 24 hours longer, wash off and apply sweet oil. Let her loose now, and oil every day. Repeat the blister every month for four or five months.

RHUBARB CULTURE.

We want to grow enough rhubarb for our family use. Our garden is sandy soil. Will you please tell me what kind of roots to get, and where to get them; whether the ground should be enriched, and whether you should loosen soil and work around roots occasionally; or should they be left undisturbed? Do they require much moisture, or land well drained; a sunny situation, or a sheltered corner? MRS. J. E. S.

Kent Co., Ont.

Ans.—Rhubarb roots may be obtained from any of the large seedsmen, or possibly even from some neighbor who may have a good variety. The variety most generally grown is called the Victoria, although much more depends upon the cultivation given than upon the variety. The roots should be planted when the plants are dormant, either in the fall or very early in the spring before they begin to make growth. Rhubarb is a gross feeder, and the land for it cannot be too rich or too deep. The plants should be set at least four feet apart, and should be given good cultivation to keep the surface soil loose and open. The more frequently the ground is enriched with well-rotted manure or compost, the more vigorous the growth. The plants should not be set in shade of buildings or trees, as they enjoy full sunlight, nor should they be allowed to exhaust themselves by producing seed. All seed stalks should be broken out as soon as they show themselves. In three or four years after the plants become well established, three or four should be taken up every fall before the ground freezes, and be left on the surface exposed to severe freezing for a

Fertile Hatching Eggs

From our Poultry Farms at Bondville, Que.; Lorette, Que., and Holmesville, Ont., we can supply you with high-class Hatching Eggs from bred-to-lay stock in Barred Rocks, White Rocks, White Wyandottes, Golden Wyandottes and Rhode Island Reds.

Put these eggs in Gunn's

Prairie State Incubator

and you get the perfect combination—and big, strong, healthy chicks. If you haven't a "Prairie State" Incubator yet, write us to-day for free catalogue.

Eggs from Special Matings:

1 setting (15 eggs) \$2.00 4 settings (60 eggs) \$5.00
2 settings (30 eggs) 3.00 Per hundred 8.00

SEND ORDERS DIRECT TO

GUNN, LANGLOIS & CO'Y, LIMITED, 235 ST. PAUL ST. MONTREAL.

A. P. HILLHOUSE ARTHUR DELCORDE N. W. TREWARTH
Mgr. Bondville Station Mgr. Lorette Station Mgr. Holmesville Station

THE LAST WORD IN BIBLE INDEXES

NOW READY, PATENT NO. 405.

The King's Printers' Chromatic Cut (or Thumb) Index

The Chromatic Cut (or Thumb) Index denotes the various groups of the Bible by the distinctive colors of the Index labels, thus:

The Pentateuch.....Scarlet color labels.
Historical Books.....Sapphire " "
Poetical Books.....Red " "
Etc., Etc.

For Bible Students, Sunday School Teachers, and all Bible Readers, the Chromatic Index is a great acquisition. None can afford to be without it.

The following King's Printers'

All the above are bound in the Best French Morocco, Yapp Edges, with round corners and red-under-gold edges.

RETAIL AT ALL BOOKSELLERS.

Bible may be had with the Chromatic Index:

RUBY 24 VO.
SIZE 5½ x 4½ x 1½ INCHES.
Price, \$1.50.

MINION 16 VO.
SIZE 7 x 5 x 1½ INCHES.
Price, \$2.25.

LONG PRIMER 8 VO.
SIZE 8 x 5¾ x 1¾ INCHES.
Price, \$3.00.

Anything from a BERRY PLANT to a SHADE TREE is waiting your order



No better stock or value offered than at the old reliable CENTRAL NURSERIES. We ship direct to customer with satisfaction. Send for priced catalogue before placing your orders. It will pay. If you have not had good results from others, TRY OURS—31st YEAR.

The new hardy Hydrangea HILL of SNOW, a Beauty; the New Snow Queen Rose; Baby Rambler, in bloom all summer, by mail, 35c. each.

Apple, Pear, Plum, Cherry, Peach and Ornamental Trees, Roses, Shrubs, Seed Potatoes, etc.

A. G. HULL & SON, St. Catharines, Ont.

When Writing Advertisers, Please Mention "The Farmer's Advocate."

few weeks, after which they should be put in a dark vegetable cellar and allowed to grow in the dark. In such position, they will produce a splendid crop for winter use, which is much finer than the crop produced out in the open. In a cellar of moderate temperature, such as potatoes would be kept in, the roots should begin bearing about the middle of February, and may be cropped until the supply comes on outside in the spring. Roots which have been forced in this way are exhausted themselves, so that they are valueless for further use. To keep up a supply for this purpose, a good plantation could be maintained in the garden.

H. L. HUTT.

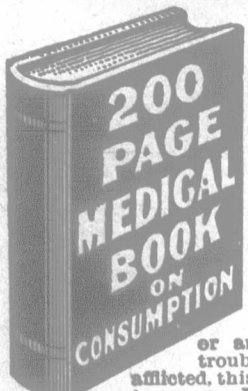
Ontario Agricultural College.

GOSSIP.

THE BRAMPTON JERSEY HERD.

The 250 head of choicest Jersey cattle that now make up the renowned Brampton herd of B. H. Bull & Sons, of Brampton, Ont., were never in better fit than now, and never showed so heavy a milk production as this winter. During the last year a large number of them qualified for the Record of Performance, including the great heifer, Brampton Lady George, who, in her two-year-old form, has finished her yearly test with 11,000 lbs. milk and 536 lbs. butter, and freshened again within thirty days of completion of her test. Out of this heifer is a yearling bull, sired by Brampton Sweet Briar, a son of the four-times Toronto grand champion, Imp. Blue Blood, her calf this time being a heifer, and in the herd is a yearling sister of hers and a brother bull calf. Aristocratic Fanny, winner of the breed's dairy test at Guelph last year, has, in the six months she has been in the test, given enough milk and butter to qualify for the R. of P., and present indications are that she will equal her illustrious stable mate. She has a bull calf, dropped in September last, sired by Stockwell's Trinity Prince, a son of the \$11,500 bull, Stockwell. This cow, when fresh, gave 55 lbs. a day, that tested 6 per cent. butter-fat, and her dam, Monplaisir's Fanny (imp.), winner of championship at Toronto in 1909, is in the official record of her Island birthplace, and she, too, is the dam of Brampton Stockwell, the Toronto junior champion of last year. Twenty-two of the herd are now in the official test, with bright prospects of all passing with a good margin. In the herd are several daughters of the great bull, Noble of Oakland, for which T. S. Cooper paid over \$15,000. There are, all told, thirty young bulls, five fit for service. The stock bulls in service are the champion, Blue Blood, Brampton Stockwell, and Brampton Jolly Oakland (imp.), a Golden Jolly, out of an Oakland dam, having an official butter record of 3 lbs. per day. The Messrs. Bull are the largest importers of Jerseys in Canada, their last year's importation being fifteen head, and they are now preparing for a spring importation. Practically anything in the herd is for sale, either singly or in car lots, a specialty being highly-bred herd-heads.

Consumption Book

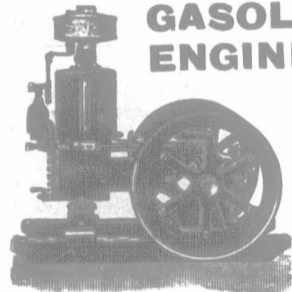


FREE

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the **Yonkerman Consumption Remedy Co.**, 1632 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait—write today. It may mean the saving of your life.

STICKNEY GASOLINE ENGINE



A Boy Can Run It

Did you ever figure up just how much you would save in a year in millers' tolls and in time by having a **STICKNEY GASOLINE ENGINE**?

Most people have the idea that a gasoline engine is very hard to run, and needs an expert mechanic to look after it. But our agent can show you in **ten minutes** all that is necessary to know to run a Stickney. It is so simple and yet so strong and powerful. And another important thing, it very rarely, if ever, gives any trouble. It can't—there is nothing that can go wrong. And that explains why so many farmers are buying Stickneys. Write for our catalogue.

The Ontario Wind Engine & Pump Co., Ltd.
Winnipeg. Toronto. Calgary.

Cowan's Cake Icings

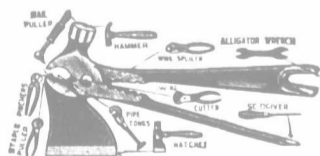
If you had trouble with prepared Cake Icing, it was not Cowan's.

Even a child can ice a cake perfectly, in three minutes, with Cowan's Icing. Eight delicious flavors. Sold everywhere.

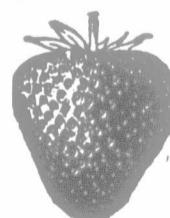
The Cowan Co. Limited, Toronto. 89

Agents are Coining Money

selling this Combination Tool. Sells at night. Farmers, farmers' sons and others having time at their disposal this winter should write to-day for our Agents' offer.



MAY MFG. CO., ELORA, ONTARIO.



Strawberry Plants
40 leading varieties. Sold at reasonable prices. Catalogue and price list free. 100 plants sent postpaid to any address in Canada for \$1.00.

Downham's Strawberry and Pheasant Farm,
Strathroy, Ontario

PLEASE MENTION THE ADVOCATE.

QUESTIONS AND ANSWERS. Miscellaneous.

EXECUTORSHIP.

An Executor, his co-Executor being deceased, now assumes the sole responsibility of distributing an estate in which a widow has a life interest.

1. Should he predecease her, upon whom would the Executorship devolve?
2. Can he in any way provide for such a contingency in his will?

Ontario.
Ans.—1. Upon his own Executor.
2. Yes—By simply appointing an Executor in respect of his own will.

MARE LOSES MILK.

We have an aged mare in foal: Three weeks ago she began making bag and running her milk. She is not due to foal until first of May. Last year she was not in foal, but two years ago she picked foal about this time. S. B.

Ans.—Feed mare moderately and give regular exercise. Little more can be done for her. What causes the trouble is not certainly known. Where much milk has been lost, the colt is apt to come weak, though not always, and careful watch should be kept at time of birth. After colt is able to stand, oil the forefinger and insert carefully into the rectum and remove the meconium (the feces present at birth), and then give an injection of raw linseed oil. Do this four times daily until the feces become yellow.

BROWN SPOTS IN APPLES.

Apples seems all right in the fall when they are gathered, but after they are in a couple of months, they have brown spots all through them. They look all right before they are pared, but when cut open, are all full of dry, brown spots; those are in my orchard at home. It is a young orchard, having been out about fifteen years, getting worse every year; have not been spraying it. I have a farm rented with an orchard on, which has been a splendid bearer of first-class fruit. Until this last few years we used to spray it, but it got the scale in it this last year, and we have not sprayed it, but I never saw any in it with those brown spots until this last year. Is this a disease? If so, is it infectious to other apple trees? Are those apples good for use? Should those apples be marketed? Would the San Jose scale have anything to do with it? Is there any remedy for it? Will spraying with lime, bluestone and Paris green be of any use for it? Will it pay to try to save those trees, or would it be better to find out which trees it is and destroy them?

A SUBSCRIBER.

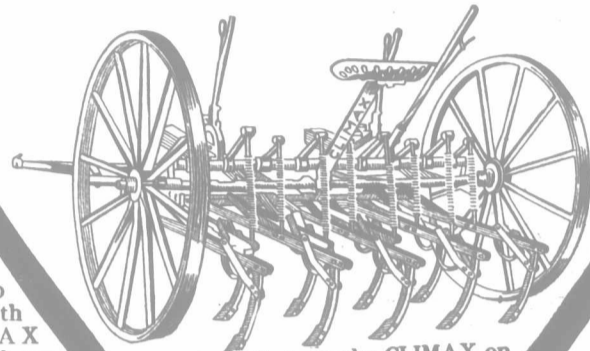
Ans.—Your subscriber from Ridgetown describes a trouble with apples which it is hard to determine without actually seeing one or more specimens. I am inclined to think that the injury is due to the railroad worm, though I did not know of this pest being at all common in his district. Possibly the railroad worm may not be the cause, but what is known as the fruit pit, a peculiar disease due to weather conditions. If the trouble had occurred only in one season, I should have felt pretty sure that fruit pit was the cause, but as it occurs each year, one is inclined to suspect very strongly the presence of the railroad worm. Whatever may be the trouble, the San Jose scale is not the cause of it, and there is no reason for cutting down the trees. If Subscriber will send me specimens of the apples next season, or any that he may now have in storage, I can easily tell him whether the railroad worm is the culprit, and will also give him information on how to control this pest.

Briefly, one may state that the best-known method of control is to allow hogs to run in the orchard through the last week in July, up to the end of the season. The hogs must be sufficiently numerous to destroy the apples very soon after they fall. Any other means of destroying the apples promptly will have the desired effect.

Spraying with lime-sulphur and arsenate of lead, or with Bordeaux mixture and arsenate of lead or Paris green, at the times recommended in your spray calendar, will help to keep the apples in good condition, also cultivating the soil in the early part of the season, will give the trees vigor and improve the quality and size of fruit. L. CAESAR.

It soon earns its cost

In any soil, on any farm, the CLIMAX earns money for you every minute you use it



Very Strong

You can rip sod land with the CLIMAX and a 3-horse team—so it MUST be built strong! Yet the teeth won't smash if they strike a stone—their joints unlock and fly back to pass over unharmed.

Manitoba College used a CLIMAX on land rank with wild mustard; got rid of that bad weed; and grew oats 7 1/2 inches in the straw without a weed in the whole crop! The CLIMAX certainly does destroy weeds!

Easy Handled

Each pole has a tilting lever; and these, with the pressure lever—all in easy reach of operator—exactly regulate depth of cut. Teeth go right for the roots of the weeds, and rip them out of the soil.

This is the stiff-tooth cultivator that gets the weeds OUT of the soil—not merely cuts off their tops or just tickles the roots a little. On dirty land you surely need the

Frost & Wood Climax Cultivator

You can have your choice of points—2, 4, 7 or 10 inch. You ought to learn all the merits of this money-making weed-banisher. May we send you Catalogue F 65?

The Frost & Wood Co. Ltd. Smith's Falls Canada 65



Union Horse Exchange

UNION STOCK YARDS, TORONTO, CANADA

The Great Wholesale and Retail Horse Commission Market.
Auction Sales of Horses, Carriages and Harness every Monday and Wednesday. Horses and Harness always on hand for private sale. The only horse exchange with railway loading chutes, both G. T. R. and C. P. R., at stable doors. Horses for Northwest trade a specialty.
J. HERBERT SMITH, Manager

Clydesdale Stallions and Mares

Our new importation has just arrived at our stables here. All the animals are in good condition, of big size and quality. Come and inspect them.

Dalgety Bros., London, Ont. SCOTLAND'S BEST IN CLYDESDALES

I believe I can show intending purchasers of Clydesdale stallions or fillies a bigger selection, better breeding, bigger horses, more character, more quality, more right-down high-class individuality, and will sell them for more reasonable prices, and give better terms, than any other man in Canada. Let me hear from you if you want a topper.

T. H. HASSARD, MARKHAM, ONT.

7 Imported Clydesdale Stallions 2, 3, 4 and 5 years of age. We are showing a choice selection, with type, quality, breeding and character unexcelled. Our prices are right, and our terms are made to suit. Phone connection.
Crawford & McLachlan, Widder P. O., Ont. THEDFORD STATION.

IMP. CLYDE STALLIONS AND FILLIES

Imported Clyde stallions and fillies always on hand, specially selected for their size, type character, quality, faultless action and fashionable breeding. Prices right. Terms to suit.
GEORGE G. STEWART, Howick, Que.

Imported Clydesdales

1910 have arrived. They were selected to comply with the Canadian standard, combining size, style, quality and faultless underpinning with Scotland's richest blood. They will be priced right, and on terms to suit.
BARRER BROS. GATINEAU PT. QUEBEC

Salem Stock Farm offers for a quick sale the grand four-year-old SHOW STALLION, LORD BANCHORY, IMP. [844] (14478). He is one of the very best Clyde stallions in Canada. Could take in part payment a few Scotch Shorthorns or good work horses.
J. A. WATT, SALEM, ONT.; ELORA STATION, G. T. R. AND C. P. R.

WASH THOSE PIMPLES OFF

Use D. D. D., that mild, soothing wash, that recognized remedy for Eczema and all skin troubles. First drops take away that awful burning itch, cleanse the skin—wash away every pimple—every impurity. Nothing like D. D. D. for the complexion. Get a trial bottle at least. Write for it to-day to the D. D. D. Laboratories, Dept. A, 49 Colborne street, Toronto. (For sale by all Druggists.)



Digging asphalt from Trinidad Lake

A roof is only as good as its waterproofing.

Knowing this, will you buy the covering for your roof on its "looks" alone, and not know what it is made of?

Genasco
the Trinidad-Lake-Asphalt Roofing

is waterproofed entirely with natural asphalt. In Trinidad Lake this asphalt has resisted blazing sun and terrific storms for hundreds of years. It has natural oils that give it lasting life in a roof despite the buffeting of rain, snow, sun, wind, heat, cold, and fire.

Man has tried to make lasting waterproofers—and always failed. Ordinary ready roofings show you what happens. They are made of mysterious "compositions" or coal tar; and they soon crack, break, leak, and go to pieces. Yet as for looks, they are mighty good imitations.

The life and backbone of Genasco is Trinidad Lake Asphalt—the natural everlasting waterproofer—and that makes Genasco last.

Genasco is made with mineral and smooth surfaces. Guaranteed, of course.

The Kant-leak Kleet waterproofs the seams of roofing thoroughly without the use of smeary unsightly cement, avoids nail-leaks, and gives the roof an attractive appearance.

Ask your dealer for Genasco Roofing, with Kant-leak Kleet packed in the roll. Write us for the Good Roof Guide Book and samples.

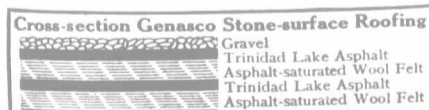


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Largest producers of asphalt, and largest manufacturers of ready roofing in the world.

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CANADIAN National Horse Show

WITH MILITARY EVENTS
Armouries, Toronto

April 25, 26, 27, 28 and 29, 1911

For prize lists and all information, apply to:

W. J. STARK, Secretary
12 Wellington St. East, Toronto.

PLEASE MENTION THE ADVOCATE.

QUESTIONS AND ANSWERS.
Veterinary.

URINARY TROUBLE.

I treated mare for sprained back, from which she recovered. Now her urine is thick, and of a yellowish color. C. E.
Ans.—Give her six drams nitrate of potassium once daily until the urine becomes normal. V.

RE VETERINARIANS.

1. What income does the average veterinarian make?
 2. What would a good practice cost?
 3. How much would new instruments necessary to conduct a general practice cost?
 4. What education is necessary in order to enter a veterinary college as a student?
 5. How much would it cost? A. T.
- Ans.—1. Probably about \$1,500.
2. Good practices usually have to be acquired by merit and attention. They cannot be bought. A person may purchase a veterinarian's good-will, but this does not ensure the practice. When a practitioner wants to sell, he is usually satisfied to accept a fair price for his property, office fixings, drugs, instruments, horses, rigs, etc., and take, in addition, whatever he can get for his good-will, be it much or little.
3. About \$300, but a person can spend as much more as he likes on instruments.
4. In order to enter the Ontario Veterinary College, Toronto, a student must produce evidence that he has received an education equal to that which would admit him to a high school, or pass an examination in reading, spelling, composition, writing from dictation, letter writing, arithmetic and geography of Canada and the United States.
5. There are three sessions of 6 months each. The tuition fees are \$75 per session; board, \$4 and upwards per week; books, say \$100; subjects and dissecting-room fees, say \$100, and other expenses according to circumstances. A careful student may graduate at a total expense of, say \$1,500. V.

Miscellaneous.

MANGEL SEED PER ACRE.

Please inform me as to the amount of mangel seed used for planting an acre of land. I. S.

Ans.—If the land is in proper condition for germinating seed, and the mangel seed is fresh, four or five pounds of seed per acre are quite enough.

ETHEL G.

Is there a Standard-bred mare by the name of Ethel G.? If so, when was she foaled, and by what sire and dam? TROTTER.

Ans.—Ethel G. (Vol. 8, A. T. R.). Chestnut mare, foaled 1888, bred by J. D. Goodpasture, Mateland, Mo., U. S. Sire Robert Rysdyk 6060, dam Lady Westmount; sire Westmount 2580, dam Poll.

TUITION FEE.

What is right in the following: A man moved into a school section, being hired as overseer and gardener on an estate. He was only kept one year. The first six months the school had a teacher, but he sent his little girl to a kindergarten school in the town nearby, and others did the same. At midsummer, said school was closed for want of scholars, there being only two left who attended the school the six months before closing. These two were granted street-car fare and tuition fee in town school. Now, the said man claims fee for his child who never went to said school. Said man pays no taxes, and said he would not take said child away from kindergarten if the school was open.

1. Can he claim fees the same as were granted the two that attended the school before the school was closed for want of pupils?

2. Would the Trustees be justified in taking school money to pay said fee? Ontario. RATEPAYER.

Ans.—1 and 2. We think not.

Clydesdales and Hackneys FOR SALE

We have more prizewinning Clydesdale fillies for sale than any other firm. We have them any age or color you want. Also Hackney and Clydesdale stallions.

Hodgkinson & Tisdale

Simcoe Lodge, Beaverton, Ont.

Long-distance 'phone. G. T. R. C. N. R.

Clydesdale Stallions; Fillies Hackney Stallions

We have been importing Clydesdales and Hackneys for 5 years, and in that time have won at the leading shows in Canada and the United States the grand total of 40 championships against all comers on both sides of the line, besides dozens of firsts, seconds and thirds. We never had a better lot on hand than just now. They were winners in

Scotland, winners at New York, and winners at Guelph and Ottawa. They are the best types of the breed, with size, character, quality, action and breeding, and we sell them as reasonably as inferior ones can be bought, and give terms to suit. Clydesdale stallions and fillies and Hackney stallions. Long-distance 'phone.

Our barns are situated at Bedford Park, 3 miles north of Toronto. Take Yonge Street car. Address all correspondence, Bedford Park P. O., Ont. Send telegraph messages to Toronto, Ont. Telephone North 4483, Toronto.

GRAHAM & RENFREW CO., BEDFORD PARK, ONT.

JUST 35 MILES EAST OF TORONTO TO Smith & Richardson's, Columbus, Ont.

There you are always welcome, and can always see first-class CLYDESDALE STALLIONS AND MARES of all ages, and moderate prices. MYRTLE, C. P. R. Long-distance 'phone. BROOKLIN, G. T. R.

IMPORTANT TO INTENDING BUYERS

MR. JOHN SEMPLE, of the firm of Semple Bros., Spring Hill Stud Farm, Milverton, Ont., and Luverne, Rock Co., Minn., U. S. A., importer of high-class Clydesdales, Shires and Percheron Horses, sails for Europe on Jan. 6th for his second shipment since August, 1910. This shipment will never have been equalled for their high-class breeding and individual merit. Intending buyers should see this shipment before purchasing elsewhere. By doing so they will save hundreds of dollars. Please note their arrival.

CLYDESDALES—Imported and Canadian-bred
Our several importations per year place us in a particularly favorable position to meet all demands for the best and most fashionably bred representatives of the breed. We are never undersold, and give favorable terms. **ROBT. NESS & SON, HOWICK, QUE.**

A FEW CLYDESDALE SELECTS LEFT. I have one 6-year-old Clydesdale stallion that is hard to beat for size, quality and breeding; 6 others, rising 3 years, that are big, drafty, character colts, and bred the best; 3 Percherons rising 3. There is no better selection in Canada, nor no better prices for a buyer. **T. D. ELLIOTT, BOLTON, ONT.**

Mount Victoria Stock Farm, Clydes and Hackneys.
We are just now offering exceptional values in Clydesdale and Hackney stallions and fillies, of all ages; prizewinners and champions, highest-class types of the breed, to make room for our new importation. **T. B. MACAULAY, Prop., Hudson Heights, Que. ED. WATSON, Manager.**

Auction Sale of Fifteen Imported Clydesdale Fillies
AT ORMSBY GRANGE STOCK FARM, ORMSTOWN, P. Q., on the 2nd day of Ormstown's Great Spring Show, 18th May. They are by Baron's Best, Lord Derwent, Pride of the Lothians, Sir Geoffray and Silver Cup. D. McEACHRAN. A rare opportunity to buy the best at lowest prices.

NEW IMPORTATION ARRIVED
Our 1910 importation of Clydesdale Stallions and Fillies are now at our stables. We can show some of the best individuals and best breeding sires imported. Our prices are right, and terms to suit. **JOHN A. BOAG & SON, Queensville, Ont**
'Phone connection.

HORSE OWNERS! USE
COMBAULT'S CAUSTIC BALSAM.
 A safe, speedy and positive cure. The safest, best ELIXIR ever used. Removes all bunches from horses. Impossible to produce scar or blemish. Send for circulars. Special rates free.
THE LAWRENCE-WILLIAMS CO., Toronto, Canada.



Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbones, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements. This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederic A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:

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For forty-six years renowned as the best of the breed. Six large importations since February 1, 1910 (the last arrived October 12th), insure fine selection, as each animal was individually selected for size, bone quality and excellence. If you want choice stallions or mares, write for catalogue, illustrated from life.

W. S., J. B. & B. DUNHAM WAYNE, ILL.

ABSORBINE
 Will reduce inflamed, strained, swollen tendons, ligaments, muscles or bruises. Cure the lameness and stop pain from a splint, side bone or bone spavin. No blister, no hair gone. Horse can be used. \$2.00 a bottle, delivered. Horse Book 2 E free.
 Before After
 Mr. S. Nixon, Kibridge, Ont., writes, Jan. 21, 1910: "I have used ABSORBINE with success on a curb."
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 Lyman, Limited, Montreal, Canadian Agents.

MESSRS. HICKMAN & SCRUBY
 Court Lodge, Egerton, Kent, Eng.
 Exporters of Pedigree Live Stock of all Descriptions.
 From now on we shall be shipping large numbers of horses of all breeds, and buyers should write us for particulars before buying elsewhere. If you want imported stock and have not yet dealt with us, we advise you to order half your requirements from us, and obtain the other half any way you choose; we feel confident of the result, we shall do all your business in the future. Illustrated catalogues on application.

NOTICE TO HORSE IMPORTERS
Gerald Powell, Commission Agent and Interpreter, Nogent Le Rotrou, France, will meet importers at any port in France or Belgium, and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking and pedigrees. Many years' experience; best references; correspondence solicited.

Percheron, Belgian, Shire and Hackney Stallions and Mares.
 As fine a lot as there is in America; 3 to 4 years old; with lots of quality and good individuals; weighing or maturing 1,900 to 2,200 lbs. Prices on imported stallions, \$1,000 to \$1,200; American-bred stallions, \$600 to \$900. Importations to arrive February 18 and March 1.
Lew W. Cochran, Crawfordville, Ind.
 Office 109 1/2 South Washington St.

Clydesdales FOR SALE—Imp. and Canadian-bred stallions and mares, ranging in age from foals upwards. Seven imp. mares in foal. Keir Democrat (imp.) (12187) (7018) at head of stud. Also a number of work horses. Long-distance phone. **R. B. Pinkerton, Essex, Ont.**

Clydesdales AND TAMWORTH SWINE
 For sale: Reg. Clydesdale stallion rising 3 years, bred from best blood in Scot and; also a few Tamworths, both sexes, bred from the best blood in England. Write, or call on: **Chas. Currie, Morriston, Ont.**

For Sale: Extra Heavy Clydesdale Stallion
 Coming three years old, bred from imported sire and dam. **Wm. Hamilton, Bright P.O., Ontario.**
 Mention "The Farmer's Advocate."

QUESTIONS AND ANSWERS.
 Miscellaneous.

TUMOR.

My collie dog has a hard lump the size of a bowl in the skin of his right shoulder. Is there any danger of it causing death, and is it dangerous to have him around?

A. W.
Ans.—This is a tumor. It is not contagious or dangerous to people. It should be carefully dissected out, the wound stitched, and the dog muzzled to prevent him biting it, and it should be dressed three times daily until healed, with a five-per-cent. solution of creolin in water.

MAMMITIS IN EWE.

There is a lump at the base of ewe's teat, and the half of the mamma was swollen. She had three lambs. I could get no milk out of the teat, so I forced a quill up through the lump. Then I could get blood, and sometimes a little milk mixed with blood.

C. S.
Ans.—This is a serious case, and will probably prove fatal. The introduction of quills, knitting-needles, etc., into teats, is usually followed by serious complications. An operation of this nature can be performed with reasonable safety only by a veterinarian who has the proper instruments and observes the necessary antiseptic precautions. Apply heat to the part, either by poulticing or frequent and long bathing with hot water. Rub the mamma well four or five times daily with camphorated oil, and draw the fluid out of the teat frequently. If the passage closes again, get your veterinarian to operate, or get a teat syphon; boil it, and then insert it.

SWEENEY.

Colt, in jumping wire fence, got her foot caught, and went lame for a while, the foot being brought forward with a rotary motion. The lameness has disappeared, but the muscles of the shoulder are shrunken. Will it be wise to work her?

M. C. M.
Ans.—She is sweeneyed, and should not be worked, especially on soft or uneven ground, until the muscles of the shoulder have regained their normal size. Recovery is slow. Get a blister made of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces vaseline. Clip the hair off the parts. Tie so that she cannot bite them. Rub well with the blister once daily for two days; on the third day apply sweet oil. Turn loose in a box stall now, and oil every day. As soon as the scale comes off, tie up and blister again, and, after this, blister once every month until cured.

MISCELLANEOUS.

1. Horse has been troubled with scratches for a few years. He now knuckles in hind fetlocks.

2. Horse had off fore coronet trampled on several times by his mate. There is now a ridge around the coronet, and he frequently goes lame, and points the foot when standing.

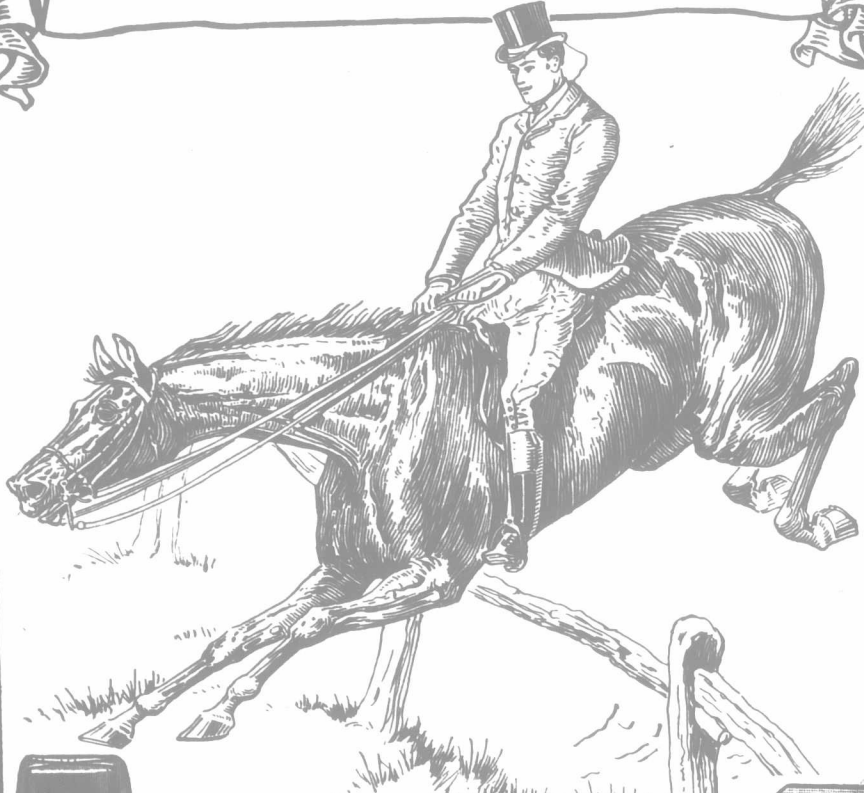
3. Mare is blind from cataract in one eye. Her yearling foal has discharged fluid from one eye several times during the fall and winter.

W. S. M.
Ans.—1. The knuckling is not due to the scratches. Some horses are predisposed to scratches, and require very careful feeding and regular exercise in order to prevent them. The knuckling is due to a weakness of the joint, and treatment consists in rest, and blistering all around the joint repeatedly. If he still has scratches, purge with 8 drams aloes and 2 drams ginger. Apply hot linseed-meal poultices to the legs for three days and nights, and then keep dry and apply three times daily a lotion made of 1 ounce each sulphate of zinc and acetate of lead to a pint of water.

2. The growth and enlargement indicate ringbone. You had better get your veterinarian to nip and blister it.

3. The foal inherited the predisposition to ophthalmia from its dam, and it is probable it will also go blind from cataract. Nothing can be done to prevent the attacks. Treat each attack by keeping excluded from drafts and sunshine, bathing the eyes three times daily with hot water, and putting into each, after bathing, a hot poultice of 10 grains atropia to 2 ounces of hot water.

ELLIMAN'S EMBROCATION




Royal in the Stable, ELLIMAN'S
 for Sprains, Rheumatism, Curbs, Splints when forming, Sprung Sinews, Capped Hocks, Overreaches, Bruises, Cuts, Broken Knees, Sore Shoulder, Sore Throat, Sore Backs in Horses, Sprains in Dogs, Cramp in Birds, etc.

Universal, Human Use ELLIMAN'S
 for Rheumatism, Sprains, Bruises, Lumbago, Sore Throat from Cold, Neuralgia from Cold, Cold in the Chest, Chronic Bronchitis, Cramp, Backache, Soreness of Limbs after exercise, etc. Elliman's added to the Bath is Beneficial.

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J. B. HOGATE, Proprietor,
 IMPORTER OF
Clydesdale and Percheron STALLIONS
 Clydesdales sired by such noted sires as Hiawatha, Baron of Buchlyvie, Baron Winsome and others. Dams equally as good.
 Percherons of the best blood of France.
 I can sell you a ton stallion for less money than any man in the business. Don't buy undersized stallions and think you will breed draft geldings and mares from them. Come and see my ton horses and get prices. I will surprise you and save you plenty of money. Weston is reached by the G. T. R. and C.P.R. For further particulars write:
J. B. Hogate, Weston, Ont.



J. B. HOGATE, Weston, Ont.

OIL CAKE
 The finest feed known for stock. Once a user, always a user. Sold either fine or coarse ground. Write:
J. & J. Livingston Brand
DOMINION LINSEED OIL CO., LIMITED,
 BADEN, ONTARIO. 31 Mill St., MONTREAL, QUE.

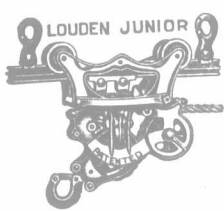
PERCHERON STALLIONS
 We still have on hand a few very choice two and three year old Percheron stallions of the big, drafty, heavy-boned type that will make ton horses when finished. Greys and blacks in color, and by the best French sires. All buyers looking for a good Percheron stallion, at a reasonable price, will do well to get our price, as we are in a position to sell below competition. We also have a splendid Hackney stallion, by Garton Duke, that we will sell well worth the money. We invite correspondence of intending purchasers.
R. HAMILTON & SON, SIMCOE, ONTARIO

Fistula and Poll Evil



Any person, however inexperienced, can readily cure either disease with Fleming's Fistula and Poll Evil Cure—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Adviser. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durably bound, indexed and illustrated. FLEMING BROS., Chemists 35 Church St., Toronto, Ontario.

DON'T WAIT TILL HAYING
to look into the matter of Hay Tools.
NOW IS THE TIME



to install an up-to-date outfit. This is a cut of our LOUDEN JUNIOR CAR. The simplest, strongest and best working Hay Fork CAR made.

For slings use our LOUDEN JUNIOR SLING CAR. Write for our free catalogue to:
LOUDEN MACHINERY CO.,
Guelph, Ontario,
Manufacturers of Hay Tools, Litter Carriers, Cow Stalls, Stanchions, Barn-door Hangers, etc.

Aberdeen-Angus Cattle—Stock all ages, good strains, at reasonable prices. Apply to **ANDREW DINSMORE, Manager,** "Grape Grange" Farm, Clarksburg, Ont.

FOREST VIEW I have lately purchased the **HEREFORDS!** Governlock herd of Herefords, and have for sale sons and daughters of Toronto winners and g. champions; also Galloways of both sexes. A. E. Caulfield, Mount Forest, Ont. P. O. and Station.

ABERDEEN - ANGUS CATTLE
3 choice yearling bulls for sale, at reasonable prices. Also females any age. Parties requiring such will get good value. Correspondence invited.
Geo. Davis & Sons, ALTON, ONT.

Aberdeen-Angus The "TWEEDHILL" herd has been before the public for 25 years, and means quality and individual excellence. Young bulls, 12 to 15 months, and females all ages for sale. Write **James Sharp, Rockside, Ont.** Cheltenham Sta., C.P.R. & G.T.R.

ABERDEEN - ANGUS
Will sell both sexes; fair prices. Come and see them before buying.
WALTER HALL,
Drumbo station, Waddington, Ont.

Scotch-bred SHORTHORNS!
During the present month am offering four very choice young bulls, ready for service, of the best breeding and quality, at very reasonable prices. Also some good young cows and heifers, with calves at foot.
H. J. Davis, Woodstock, Ontario
Long-distance Bell 'phone.

Willow Bank Stock Farm SHORTHORNS AND LEICESTERS.
Herd established 1855; flock, 1848. The great Duthie-bred bull, Imp. Joy of Morning = 3070, and the Missie bull, Royal Star = 72502, heads my herd. Choice selections to offer at all times in both bulls and females.
JAMES DOUGLAS, CALEDONIA, ONTARIO.

Glenburn Stock Farm
A few nice **Shorthorn** calves of both sexes. **Shropshire** ram lambs, ewes and ewe lambs. Barred Rock cockerels of Hawkins' strain. **JOHN RACEY, Lennoxville, Quebec.**

SHORTHORN FEMALES
OF ALL AGES FOR SALE.
Prices to suit all kinds of customers. Have one red eleven-months-old bull left; a Clipper; price \$100.
J. T. GIBSON, DENFIELD, ONTARIO.

Shorthorns and Yorkshires—A choice lot of young bulls and heifers at reasonable prices, from such noted families as Miss Ramsden, Cinnamon Flower, Lady Sarah and others. Also a fine lot of improved Yorkshires, prize-winning stock.
ISRAEL GROFF, Elmira, Ont.

QUESTIONS AND ANSWERS.
Miscellaneous.

SICK SERVANT.

Have man hired by the year. He has been off work with la grippe about a month. Am I liable for his time on the sick-list, and, if so, for how long?
A SUBSCRIBER.

Ans.—We think so, and for the entire period of such illness.

GOVERNMENT AID IN REFORESTATION.

Would like information as regards reforestation. Is it possible for me, a farmer, to secure trees such as pine and spruce, from the Government? If so, under what conditions?
A. H.

Ans.—The Forestry Department, Ontario Agricultural College, Guelph, has the following varieties of evergreen trees for distribution in 1911: White pine, Scotch pine, White cedar. Applications for material must be in on or before the 31st of March, and will be filled in order of arrival. Late applications may have to be held over till next season if the material is exhausted. The Department prefers that plantations be made on such waste portions of the farm as steep hillsides, light sandy, rocky, or gravelly spots, swamp land, portions of farm cut off by streams or otherwise. The Department reserves the right to accept or refuse applications, if, in the opinion of the officers in charge, the location offered does not afford satisfactory facilities for the experimental and educational features of the work. Two acres will be the largest area for which the Department will undertake to furnish planting material for any one year. Trees are sent by express to nearest station, the receiver paying express charges. The owner, on his part, must prepare the soil, plant and care for the trees, and do all the actual work in connection with the plantations, in accordance with the directions of the officers of the Department, one of whom directs as to preparation of soil, varieties to plant, manner of planting, and after care. The owner shall also agree to provide protection for the planted trees against animals by fencing or otherwise, and, where necessary, against fire, by some effective means. Anyone interested in reforestation, and it is hoped that many are, would do well to send to E. J. Zavitz, B.A., Forester, Guelph, Ont., for literature on the subject, which will be furnished promptly and free.

WATER SUPPLY FROM ARTESIAN WELL.

I have an artesian well running a three-inch pipe full of water, and having a fall of 20, and, possibly, 30 feet. What horsepower can be developed from this? What kind of wheel or turbine would be best?
X. Y. Z.

New Westminster, B. C.

Ans.—It is impossible to answer your question definitely from the data given. A three-inch pipe running full of water doesn't mean anything definite. If the water flows very slowly, as it would under certain conditions, a small amount would be delivered, but if it flows rapidly, as it would under other conditions, a larger amount would be available, and, moreover, you do not state the distance in which your water would have a fall of 20 or 30 feet. Let us suppose this distance to be 100 feet, and that there is as much water as can possibly run through 100 feet of three-inch pipe, with a fall of 20 feet; the amount of water required for this would be 3.6 gallons per second, or 216 gallons per minute, and the horse-power developed would range from one-thirteenth to one-eighth, according to the kind of wheel used. If the distance were 200 feet for a fall of 20, then it would require 2.5 gallons per second, or 150 gallons per minute, to keep the three-inch pipe flowing full constantly. The horse-power developed at the outlet ranging from one-fortieth to one-twentieth. If the fall was 30 feet in 100, it would require 4.5 gallons per second, or 270 per minute, the horse-power developed ranging from one-seventh to one-third. But with a 30-foot fall in 200 feet of pipe, it would require 3 gallons per second, or 180 per minute, and develop power ranging from one-twentieth to one-twelfth. As the power developed is so small, it is hardly worth while considering the type of wheel, although an Overshot or Turbine would give best results.
WM. H. DAY.

How "Eastlake" Steel Shingles will save you money



Talk No. 3

Economy In Laying

By
The Philosopher of Metal Town

It's a one-man job laying "Eastlake" Shingles—that means a big reduction in first cost.
Most roofs can only be laid properly by practical roofers.
The laying of all roofings calls for the time and labor of two or three men—Excepting "Eastlake" Metallic Shingles.
The "Eastlake" is easy to lay—takes just one quarter the time and labor of the four-lock shingles.
There is only one side-lock and gutter, which prevents all leaking and allows for ample expansion and contraction.
Then the "Eastlake" counter-sunk cleat, a special patented feature, holds the bottom of the shingles solidly in place, allows for no sifting in of rain or snow.
"Eastlake" Steel Shingles are absolutely weathertight.
Roofs covered with "Eastlakes" 25 years ago are in perfect condition today. That is the only sure test of quality.
Read about these roofs—some may be in your neighborhood. Send for our illustrated booklet, "Eastlake Metallic Shingles." Write to-day.
N.B.—An "Eastlake" roof means clean rain water for household use.



We also manufacture Corrugated Iron, House and Barn Siding, Metallic Ceilings, Eavetrough, Conductor Pipe, Ventilators, etc.
The Metallic Roofing Co. LIMITED
Toronto - Winnipeg A63

AGENTS WANTED IN SOME SECTIONS.
SHORTHORNS AND CLYDESDALES
THE FOLLOWING CHOICELY-BRED YOUNG BULLS ARE FOR SALE:

Name	Color	Age	Sire	Dam
1 Village Favorite	= 77497 = Red	Sept 6, 1909	Prince Favorite (imp.)	Village Bride.
2 Ramsd-n Recuit	= 77495 = Red	Nov. 9, 1909	Bullrush (imp.)	Martha 6th.
3 Royal Bud	= 81056 = Red roan	Jan. 4, 1910	Royal Winner (imp.)	Silver Rose 2nd.
4 Royal Emblem	= 81060 = Red	Jan. 26, 1910	Royal Winner (imp.)	Ury's Star 4th.
5 Royalty	= 81059 = Red	Apr. 22, 1910	Royal Winner (imp.)	Claret 34th.

Heifers and cows of various ages and choicest breeding. A choicely-bred Clyde stallion, rising two years, from imported sire and dam. Burlington Jct. Sta., G.T.R. Long-distance phone. **W. G. Pettit & Sons, Freeman, Ont.**

ORCHARD GROVE HEREFORDS
Young bulls and one- and two-year-old heifers, of show-ring quality and most fashionable breeding; thick-fleshed, smooth and even.
L. O. CLIFFORD, Oshawa, Ont.

Maple Hall Shorthorns
We have 13 young bulls for sale between 10 and 15 months old, and they are a choice lot. There is not a poor one amongst them. There are two Cruickshank Duchesses of Gloucester, five Cruickshank Butterflies, five Crimson Flowers, one Sheppard Rosemary.
DAVID BIRRELL & SON, GREENWOOD P. O., ONT., CLAREMONT STATION.

Maple Leaf Shorthorns and Hampshire Hogs
Offering for sale Shorthorn bulls and heifers and young Hampshire pigs.
PORTER BROS., APPLEBY P.O., BURLINGTON STA. 'Phone.

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. FORWARD MEYER, Box 378, GUELPH, ONT.**

Springhurst Shorthorns and Clydesdales
I am now offering a number of heifers from 10 months to 3 years of age. Anyone looking for show material should see this lot. They are strictly high-class, and bred on show lines. Also several Clydesdale fillies, imp. sires and dams, from foals 2 years of age off. **Harry Smith, Hay, Ont., Exeter Sta.**
PLEASANT VALLEY SHORTHORNS
For Sale: 1 red, 1 roan, 2-year-old show bulls. Several good bull calves, also some yearling heifers. Some show propositions among them. If interested, write or call and see us before buying.
GEO. AMOS & SONS, MOFFAT, ONTARIO.
Farm 11 miles east City of Guelph on C. P. R. 1/4-mile from farm.

Elmhurst Scotch Shorthorns and Large English Berkshires
FOR SALE: Two young bulls, red and roan, fashionably bred with quality. Young sows bred for April litters.
H. M. VANDERLIP, Cainsville, Ont. Langford Station.
B. H. Radial in sight of farm. B ll phone

10 Scotch Shorthorn Bulls 10
FROM 10 TO 14 MONTHS OLD

The Princess Royal, Secret, Bessie, Village Maid families are represented in lot. First-class herd headers and farmers' bulls for getting market-topping steers. Prices very reasonable.

JOHN MILLER, BROUGHAM, ONT.
Claremont Station, C. P. R., three miles.

Woodholme Shorthorns are of the richest Scotch breeding, modern in type and quality. For sale: One- and two-year-old heifers, several young bulls, thick-fleshed, low-down and mellow.

G. M. FORSYTH, Claremont, Ont.
100 yards from station. Phone connection.

MAPLE LODGE STOCK FARM
1854 Very desirable young 1911

SHORTHORN BULLS FOR SALE.
Have best milking strains. **LEICESTER SHEEP** of highest quality. Lucan Crossing, G. T. Ry. Telegraph, Ailsa Craig. Telephone.

A. W. SMITH, Maple Lodge, Ont.

HIGH-CLASS SHORTHORNS

I have on hand young bulls and heifers of high-class show type, pure Scotch and Scotch-topped, sired by that sire of champions, Mildred's Royal. If you want a show bull or heifer, write me.

GEO. GIER, Grand Valley P.O. and station, also Waldemar station.

SPRING VALLEY SHORTHORNS

If you want a good Short-horn bull, we have them, Canadian-bred and imported. Females all ages. Also a few good YORKSHIRES—boars and sows. Prices right.

Phone connection. **Kyle Bros., Ayr, Ont.**

FLETCHER'S SHORTHORNS

Imported Shorthorn bull for sale. Just turned 4 years old. Benachie (imp.) = 69954, bred by A. T. Gordon; sire Scottish Farmer, grandson of Scottish Archer; dam Beatrice 22nd, which produced Bandmaster, the first-prize Royal winner.

GEO. D. FLETCHER, BINKHAM, ONT.
Erin Sta., C. P. R.

Shorthorns

Present offering: 12 bulls from 5 to 20 months old; 40 cows and heifers to choose from. Nearly all from imported bulls. At prices to suit everyone. Come and see them, or write: **Robert Nichol & Sons, Hagersville, Ont.**

4 Shorthorn Bulls FOR SALE,

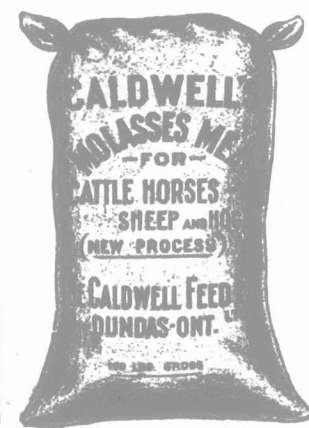
with size and quality. Several females, all bred from heavy-milking dams.

Thomas Graham, Port Perry, Ontario.

Imp. Scotch Shorthorns

When looking for Shorthorns, be sure to look me up. Young bulls fit for service, and females all ages; bred in the purple, and right good ones. **A. C. PETTIT Freeman, Ont.**

CALDWELL'S



Molasses Meal

For Horses, Cattle, Sheep and Hogs

Contains from 80 to 84 per cent. pure cane molasses (not a particle of sugar-beet by-product enters into its composition). A digestive feeding meal, convenient to handle, economical to use, and gratifying in its results. Nothing to equal it for finishing stock. Ask your dealer, or write:

The Caldwell Feed Company, Dundas, Ontario



SCOTCH SHORTHORNS
100 HEAD IN HERD.

Headed by the imported bulls: Bandman, a half-brother to the \$6,500 Count Crystal, the highest priced calf on record in Scotland; and Village Duke, a son of Villager, winner of 18 first and special prizes in Scotland. For sale: 12 good young bulls of the choicest breeding, and 40 young cows and heifers. All of noted Scotch breeding. In calf to our stock bulls.

Farm 1/4 Mile from Burlington Jct. Sta.
Long-distance 'phone.

Mitchell Bros., Burlington, Ont.



H. CARGILL & SON

have to offer at the present moment an exceptionally good lot of young bulls, which combine all the requisites necessary for the making of superior stock sires, viz.: Quality, Size, Conformation and Breeding. If interested, come and make your selection early. Catalogue on application.

John Clancy, Manager, Cargill, Ontario.

Robert Miller, Stouffville, Ont.,

Can supply young bulls and heifers of the very choicest breeding, and of a very high class, at prices that you can afford to pay. The young bulls are by one of the greatest sons of Whitehall Sultan. They are good colors, and will make show bulls. I also have two good imported bulls at moderate prices and of choice breeding, and some cows and heifers in calf to Superb Sultan; the calves should be worth all the cows will cost. Some beautiful young imported Welsh Ponies still to spare. It will pay you to write, stating what you want. Glad to answer inquiries or show my stock at any time. Business established 74 years.

QUESTIONS AND ANSWERS
Miscellaneous.

BUCHU LEAVES FOR LYMPH-ANGITIS.

There appeared a number of years ago in your valuable paper, a cure for lymph-angitis in which buchu leaves were used. I lent a number to a neighbor in which it was in, and he lost it.

OLD SUBSCRIBER.

Ans.—The prescription, as communicated to us by a correspondent, is as follows: "At first symptoms of the trouble, give 1/2 ounce buchu leaves, divided into three equal doses, 12 hours apart. Steep each dose in a little water, and pour all over oats or bran, and they will eat it readily." We have never tried the recipe, nor referred it to our veterinary editor. It is simply reproduced as told to us.

INAPPETENCE.

I have a valuable Holstein cow that freshened last December. In about three weeks' time, the cow would only eat about one-half the quantity of hay that she ought to eat. She is fed two quarts of corn meal and forty pounds of pulped turnips, and all the hay that she will eat. The cow has got very thin in flesh, and I have noticed lately that she does not chew her cud. She does not have any cough, and gives about two-thirds as much milk as she did a year ago.

1. Is there such a thing as a cow losing her cud?
2. What would I have to do to get the cow's cud back again? C. E. C.

Ans.—1 and 2. You may have overfed the cow on the start. Purge her with 1 lb. Epsom salts and 1 ounce ginger. Follow up with 2 drams each of nuxvomica, ginger, gentian and bicarbonate of soda, three times daily. A cow ceases chewing her cud when sick. When the cow's digestive organs are restored to their normal condition, she will again chew her cud.

SMALL SILO — PORCELAIN VS. BRASS FOR SPRAY-PUMP CYLINDER.

1. How small can a silo be built and be successful?
2. How large would a silo have to be built to feed eight cows twelve months; or eight months, and a little all summer, as my farm is small, and would not keep much for pasture, say about three acres? Jersey cows; just keeping them for cream.
3. Which makes the best cylinder for a spray pump, porcelain or brass? J. H. M.

Ans.—1. We are not prepared to answer this question definitely. A good deal depends. We should not care to build one much smaller than eight feet in diameter, inside, and 24 feet in height. The less the diameter, the greater the percentage of deteriorated silage around the edge; and the less the height, the greater percentage of waste at the surface, if one does not commence feeding right after filling. Besides, the shallow silo gives little opportunity for settling, and does not admit of feeding for a very great length of time. The silage must be lowered at a reasonable rate to prevent spoiling.

2. Allowing 35 pounds per head per day, you would require for eight months' feeding of eight cows, about 34 tons, and adding six or ten tons for summer feeding, you would require 40 to 44 tons. To feed these cows twelve months would take about 50 tons of silage. A silo 9 feet in diameter by 30 feet in height would hold 35 tons, if refilled a couple of times. Similarly, a silo 10 feet in diameter by 32 feet high could be made to hold nearly fifty tons, but we would advise making the silo not less than 34 feet. We question whether it would be satisfactory trying to feed as few as eight Jersey cows for a whole year out of one silo, on account of the difficulty of keeping the silage good while being lowered at such a slow rate as would necessarily be the case.

3. Upon this point, Prof. J. W. Crow, of the Ontario Agricultural College, expresses his opinion as follows: "Porcelain of high quality is very hard, and is not subject to wear to the same extent that brass is. The difficulty with it is that it is liable to chip unless of very best quality. So far as I know, it is as good as brass, especially when backed up by a manufacturer's guarantee to replace it if not satisfactory."



What should a good Cream Separator do?

FIRST.—A good cream separator should skim close. The Frictionless Empire skims to a trace. That means the loss of less than one pound of butter-fat in every five thousand pounds of milk, which is equal to the loss of less than one pound of butter in all the milk a cow gives in one year. The Frictionless Empire gets thirty per cent. more cream than old-style methods. Thirty per cent. more profitable to you.

SECOND.—A good cream separator should be easy to clean thoroughly. The few smooth skimming devices of the Frictionless Empire are as easily and thoroughly washed as a glass tumbler. This cannot truthfully be said of skimming devices with corners, slots and crevices that soon get clogged up and cannot be thoroughly cleaned. Cream in perfect condition—cream without a taint—cream that commands the highest price—can only be obtained from a separator that can be thoroughly cleaned.

THIRD.—A good separator should save you work. The Frictionless Empire does the skimming in a small fraction of the time required with old-style methods. It saves many hours of work. It almost runs itself. So nearly frictionless that it will run for half an hour after you've completed the skimming, unless you use our brake to stop it.

FOURTH.—A good cream separator should be durable. The average cost per Empire machine has been but 17 cents per year for repairs (outside of rubber rings and brushes) during 20 years of service. Years of service prove their worth.

No other separators will do all these things. Many claim to do so, but they cannot, because Empire patents prevent them. These exclusive patented features are found only in

Some day you'll own an Empire

An Empire will make more dollars for you, cost less to run, save you more time, than any other make you can purchase. Fill in the coupon below, and we will send you a copy of our latest book, No. 2, the most unbiased, the most informing book on separators ever published. Mail the coupon immediately. And, remember also, that there's an Empire dealer in almost every town in Canada.

The EMPIRE Line of Cream Separators

Please send your latest book No. 2. I am interested in dairying, and I promise to read your book carefully. I have at present (state number) cows.

Name

P. O. Address

County Province

which embraces all sizes in Frictionless Empire (cone method) and Empire disc machines—everything that's good in cream separators. Whichever machine you buy, you are bound to be satisfied, for every Empire Separator carries with it a binding guarantee—a guarantee as good as a gold bond.

The EMPIRE CREAM SEPARATOR COMPANY OF CANADA, Ltd.

Winnipeg. Toronto. Montreal. Sussex, N. B.

All Skin Diseases Can be Directly Traced To BAD BLOOD.

Therefore to get rid of these skin diseases it is absolutely necessary that the blood should be thoroughly cleansed of the accumulated poisons, and for this purpose there is nothing so equal as Burdock Blood Bitters.

This remedy has been on the market for over thirty-five years and when you use it you are not experimenting with some new and untried remedy.

Miss Stella Eichel, Maitland Forks, N.S., writes: "I have been bothered with Salt Rheum on my hands for three years and it itched so I didn't know what to do. I tried everything but nothing seemed to be any good. I heard of Burdock Blood Bitters and bought two bottles of it, and now I am perfectly cured and have no Salt Rheum on my hands any more. I cannot speak too highly of Burdock Blood Bitters."

Manufactured only by The T. McBurn Co., Limited, Toronto, Ont.



Rock Salt, \$10.00 ton.
Toronto Salt Works, 128 Adelaide St. E., Toronto, Ont.
G. J. CLIFF, MANAGER.

WE NEED THE MILK

For our milk contract, so all the bull calves from fifteen choice cows and heifers, due to freshen by April 1st, must go. This means attractive prices for you. Write us, you'll be surprised how good a calf you can buy for how little money.

MONRO & LAWLESS,
Elmdale Farms, Thorold, Ontario

Riverside Holsteins

Choice bulls 6 to 9 months old, sired by Sir Pieterje Posch De Boer and Prince De Kol Posch. Latter is the only son of champion cow, dairy test, Guelph, 1908 and 1909, and out of R. of M. dams.

J. W. Richardson, Caledonia, Ont.
Haldimand Co. Long-distance phone.

THE MAPLES HOLSTEIN HERD

Everything of milking age in the Record-of-Merit. Nothing for sale at present but a choice lot of bull calves sired by King Posch De Kol. Write for prices, description and pedigree.

Walburn Rivers, Falden's, Ontario

Notice! In public test we have the champion and 2nd highest scoring cow; world's record 3-year-old, junior champion 3-year-old in official test. Average per cent. fat 4.55. Herd headed by Grace Fayne 2nd's Sir Colantha. Sir's dam and sister with 35 pounds butter records each. M.L. Haley and M.H. Haley, Bull calves for sale. Springfield, Ontario.

HOLSTEINS AND YORKSHIRES

R. HONEY, Brickley, Ont.
Northumberland Co.

Offers a choice lot of boars and sows ready to mate; also orders taken for the coming crop of calves from Prince Posh Calamity Bleake and R.O.P. cows.

Lake View Dairy Farm I have several of noted Francy breeding, also daughters of Sir Admiral Ormsby. Present offering: Bull calves and heifers. W. F. BELL, BRITANNIA BAY, ONTARIO.

Elmwood Holsteins

Offer choice young cows to freshen during March and April, 1911. Spring crop calves. Sired by Ykema Sir Posch and Pontiac Sarcastic—a grandson of Henderveidt DeKol. Prices right. Express prepaid. Safe delivery guaranteed. E. D. George & Sons, Putnam, Ont.

Springbank Two choicely-bred bull calves for sale. One is 10 months, the other 8 months. From high-class milkers. Prices reasonable. For particulars and breeding write to: Wm. Barnett & Sons, Living Springs, Ont. Fergus, C. P. R. and G. T. R.

Holstein Cattle—The most profitable dairy breed. Illustrated descriptive booklets free. Holstein-Friesian Ass'n of America, F. L. HOUGHTON, Secy, Box 127, Brattleboro, Vt.

Evergreen Stock Farm offers bulls 2 to 12 months, from high-testing stock, giving 12 lbs. at 2 years to 22.58 lbs. for mature cows. Sired by Sir Mercena Favorite. Dam and her dam have average record of 24.60 lbs. butter in 7 days. F. E. PETTIT, Burgessville, Ont.

Holstein Bulls From one to three years, from R. of P. cows, for sale. Write to TACKBERRY, Lion's Head, Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

GESTATION PERIOD OF EWES.

How long do ewes carry their young?

Ans.—The usual period is put at 142 to 145 days; or about five months.

OFF FEED.

Could you prescribe something to make a cow have an appetite? We have a good cow that we think we tried to hurry too much after calving. She was badly caked for two weeks, so we fed her sparingly then, and now, three weeks since then, she is snooply, and not giving within five or six pounds of what she gave when caked udder commenced to get well. She is a special cow, a Holstein, and expensive. How long should it take to get a cow up to a heavy milker's full feed?

QUIZZ.

Ans.—Quite likely it is as you suppose, that you have been trying to crowd the feed in the cow—rather heavily. That is a mistake that is often made. To get her back into good appetite again, she must be fed only what she will eat up clean, and some tonic powders from the veterinary might wisely be procured and given. In such a case, you might try, for a limited time, one of the advertised stock foods.

ANNUAL PASTURE CROP, ETC.

1. How many acres would I need to sow of the Zavitz annual mixture for pasture, to pasture five cows?
2. Where can I get the Early Amber sugar-cane seed?
3. Would it be safe to sow it before May 1st? I have a field I could sow early.
4. What kind of corn would I sow, mainly for fodder? The hill corn seems to be good for keeping stock in flesh.

Ans.—1. Prof. Zavitz reports that more than one animal per acre can be pastured on the crop produced from a mixture of 1 1/2 bushels oats, 30 lbs. Early Amber sugar can, and 7 lbs. red clover. However, as the College farm is in a high state of fertility, it might be well on ordinary soil to allow 1 1/2 acres per cow.

2. Most, if not all, of the leading seedsmen, sell Early Amber sugar-cane seed.
3. Better not sow before May 1st, as the sugar cane is a Southern plant.
4. White Cap Yellow Dent is an excellent variety of corn for fodder and silage purposes.

MUSHROOMS - PIG FEED.

1. Would you give me some information about growing mushrooms; how to make the beds, and what attention they need? What price per pound do they sell for? Is there anything to be made by growing mushrooms for sale?
2. I have a piece of ground that I manured the last three years, and grew turnips on this each year. Last season the crop was not nearly so good as the other two seasons. This ground is near the pig-house, and I have it for pig feed. Would it be safe to put mangels or sugar beets on it this season, or what crop can I put on that would make good pig feed?

A SUBSCRIBER.

Ans.—1. See article on Mushrooms, in the Garden and Orchard Department of "The Farmer's Advocate" of January 26th. Mushrooms are usually considered a somewhat risky crop to grow commercially, but you might succeed. They are profitable if you are successful, but a great many have tried and failed. Local purveyors advise us that they are importing their supply, in the face of a duty of 30 per cent. They tell us, that for any considerable regular supply, they would be willing to pay 50 or 60 cents a pound, but for a small sporadic supply they could not pay such prices. In cities like Toronto, Montreal and Ottawa, even better prices would probably be obtainable, though as to this we are not definitely informed. Better begin by growing a few for your own use.

2. No wonder your crop was not good. Sow something that will restore humus to your soil. If the land is well drained, try alfalfa, though you must not expect much of a crop this year. Indeed, it should not be pastured this year at all. Rape would produce a lot of hog feed, but, as stated above, we advise seeding the place down. If not suitable for alfalfa, try clover. Vetches also make good pig pasture, and may be seeded with clover.

BIG REDUCTION IN SCALES

Drummond's Cut-in-Half Price is a Spring Special to Dairy Farmers. Order Now.



We have bought cheap for cash 1,000 Chatillon's Improved Spring Balance Milk Scales (which are recommended by the Dominion Government), in addition to Household Scales, which we are willing to sell to every reader of this paper at a saving of 50c. on the dollar.

With these Milk Scales you can tell exactly what profit you are getting from each cow, or if you are keeping any cow at a loss. You can't afford to be without a Chatillon Scale.

Every scale bears the Government stamp, certifying accuracy. The Milk Scales are made in two different sizes, the Household Scales in three sizes.

60-lb. Circular Spring Balance Milk Scale, marked in decimals, and always sold at \$7.00. Our special price.....\$4.50

30-lb. Circular Spring Balance Milk Scale, marked in decimals, and always sold at \$5.00. Our special price.....\$3.50

25-lb. Straight Spring Balance Household Scale, marked in half-pounds, and always sold at 75c. Our special price.....38c.

50-lb. Straight Spring Balance Household Scale, marked in pounds, and always sold at \$1.10. Our special price.....59c.

40-lb. Straight Spring Balance Household Scale, marked in half-pounds. Sold regularly at \$1.25. Our special price.....75c.

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LAKEVIEW HOLSTEINS

Two young bulls, calved March 27th and April 25th, sired by Count Hengerveld Fayne De Kol, whose sire is the sire of De Kol Creamelle, 10,017 lbs. milk in 100 days, and whose dam is the dam of Grace Fayne 2nd's Homestead, who made 35.55 lbs. butter in 7 days. These two bulls are mostly white, and are smooth and big. Must make room for this season's calves, and will sell reasonably.

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HOLSTEINS AND YORKSHIRES

More high-record cows in our herd than in any other in Canada, including the champion Canadian-bred three-year-old, and the champion two-year-old of the world for yearly production. The sire of these champions is our main stock bull. We have a large number of heifers bred to him that will be sold right to make room for our natural increase. Also bull calves for sale. We are booking orders for spring pigs, also sows safe in pig. We invite inspection of our herd. Trains met at Hamilton when advised. Long-distance Bell phone 2471 Hamilton.

D. C. FLATT & SON, MILLGROVE, ONT. R. F. D. NO. 2

Fairview Farms!

We are offering sons of Pontiac Korndyke, sire of the world's record Pontiac Clothilde De Kol 2nd, 37.20 lbs. butter in 7 days, and the sire of seven daughters that average 31.13 lbs. each in 7 days. Also sons of Rag Apple Korndyke, whose dam, Pontiac Rag Apple, 31.62 lbs. butter in 7 days, is a full sister to the world's record cow, making these two full sisters records average for the seven days 34.41 lbs. each, equalled by no other two full sisters of the breed. Also sons of Sir Johanna Colantha Glad, whose dam and sire's dam average 33.61 lbs. each, which is higher than can be said of any other sire of the breed. Dams of many of these calves are high-record daughters of Pontiac Korndyke and Rag Apple. Write me for breeding and price. E. H. DOLLAR, Heuvelton, St. Law. Co., N. Y.

Holstein Bulls

From high-class, officially-tested cows. Ready for service. Also bull calves. R. F. Hicks, Newton Brook, Ont., York Co. Toronto Shipping Point.

Silver Creek Holsteins

We are now offering about a dozen yearling heifers and 3 young bulls. They are all of superior type, and records average for the seven days 34.41 lbs. each, equalled by no other two full sisters of the breed. Also sons of Sir Johanna Colantha Glad, whose dam and sire's dam average 33.61 lbs. each, which is higher than can be said of any other sire of the breed. Dams of many of these calves are high-record daughters of Pontiac Korndyke and Rag Apple. Write me for breeding and price. E. H. DOLLAR, Heuvelton, St. Law. Co., N. Y.

officially backed on both sides. King Fayne Segis Clothilde, whose 7 nearest dams have 7-day records that average 27 lbs., is at head of herd. A. H. TEEPLE, CURRIES P. O., Ont. Woodstock Station. Phone Connection.

Centre and Hill View Holsteins

We have added to head our herd a young bull from King Segis, world-record sire, and a 26-lb. 4-year-old dam. Have 2 bulls born in January from Bonheur Statesman. Their grandams have over 21 lbs. butter in 7 days. Also younger ones from good A. R. O. dams. These will be P. D. Ede, Oxford Centre, Woodstock Stn. sold right, considering their backing. LONG-DISTANCE TELEPHONE.

BUSINESS-BRED AYRSHIRES

My herd of Ayrshires have for generations been bred for milk production. They are nearly all in the R.O.P. My present offering is several young bulls most richly bred. James Begg, R. R. No. 1, St. Thomas, Ont. Bell phone.

AYRSHIRE CATTLE!

Several choice cows and heifers for sale. Good teats; good udders. Record-of-Performance a specialty. White choice bull seven months old. Wyandotte cockerels, \$2 each. WM THORN, Trout Run Stock Farm, LYNEDECH, ONTARIO. Long-distance phone in house.

PLEASE MENTION THE ADVOCATE.

Ayrshires & Yorkshires Our Ayrshire herd is in fine form. We can fill orders for a number of bulls fit for service, of good dairy breeding, or imported stock for 1911. Females any age. Young calves either sex. Young boars fit for service. Young pigs ready to ship. Write for prices and particulars. Long-distance phone. ALEX. HUME & CO., Menie P. O., Ont.

AYRSHIRES

We are now selecting in Scotland our 1911 importation of Ayrshires. Over 20 already secured as a result of our visit in Oct. Write us about young bulls and females. Reasonable prices. Home offering: A few very choice males. Deepest milking strains. ROBT. HUNTER & SONS, Maxville, Ont.

AYRSHIRES

Bull calves, from 4 months to 9 months, from imported sire and Record of Performance dams. Records 50 to 63 pounds per day. N. Dymont, R. R. No. 2, Hamilton, Ont.

STONEHOUSE Ayrshires

The champion Canadian herd for 1910 at the leading shows. 32 head imp., 56 herd to select from. R.O.P. official records, the best and richest bred types of the breed. Anything for sale. Young bulls, females all ages. HECTOR GORDON, HOWICK, QUE.

Had Severe Pains In Back. Felt As If It Must Break.

Mr. Alfred E. Davis, Gorrie, Ont., writes:—"For some years I suffered from severe pains in my back, and could hardly work at all, and when I stooped down to pick up anything felt as if my back must break. I was advised to try Doan's Kidney Pills and after taking two boxes was entirely cured, and I feel that I cannot speak too highly in their favor.

"This was nearly four years ago and I still remain cured."

For Backache, Lame Back, Weak Back, there is no remedy equal to Doan's Kidney Pills for taking out the stitches, twinges and twinges, limbering up the stiff back and giving perfect comfort.

Doan's Kidney Pills are 50 cents per box or 3 boxes for \$1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont. In ordering direct specify "Doan's."

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"I hear, doctor, that my friend Brown, whom you have been treating so long for liver trouble, has died of stomach trouble," said one of the physician's patients. "Don't you believe all your hear," replied the doctor. "When I treat a man for liver trouble, he dies of liver trouble."

FROM EVERY CORNER OF THE DOMINION

Come Reports of Cures Made by Dodd's Kidney Pills.

Magdalen Islands, Quebec, tell of Mrs. Cormier, a sufferer for six years, who was made a new woman by Dodd's Kidney Pills.

Amherst Island, Havre Aubert, Magdalen Islands, Que., March 20.—(Special).—That suffering women in all corners of Canada are being restored to health by Dodd's Kidney Pills, is shown in the press every day, and this island is not without its striking example. Mrs. Peter C. Cormier, a well-known and estimable resident, tells the following story of her cure:

"For six years I suffered with Rheumatism, Backache, and Nervousness. I could not sleep nor eat, and I was always tired. My limbs were heavy, and I had a dragging sensation across the loins.

"Hearing of cures by Dodd's Kidney Pills, I decided to try them. Seven boxes made a new woman of me."

For a number of years, Dodd's Kidney Pills have been in use in Canada. They have been used in thousands of cases, and there is not on record a single case where they have failed to cure diseased kidneys. Thousands of Canadian men and women will tell you they own their good health to Dodd's Kidney Pills.

Potato Fertilizer Tests.

Editor "The Farmer's Advocate":

As the fertilization of crops is naturally being considered more or less by most farmers at the present time, the following results may not prove uninteresting. These figures were obtained by averaging the results of 107 experiments, conducted in various parts of the Dominion, by reliable farmers, in conjunction with the Dominion offices of the Potash Syndicate, during the years 1907-1910, inclusive. These tests were made on various classes of soils, and under varied climatic conditions, so that the average obtained for the four years should have more than passing significance. The crop chosen was the potato crop, as it was considered that the results obtained would have a wider interest throughout the Dominion, as the potato is perhaps the most commonly fertilized of all the field crops. While the amounts of the various fertilizer ingredients given are a little in excess of the quantities most generally used in practice, particularly where a dressing of barnyard manure is applied, they were considered satisfactory for this purpose.

The prices used in estimating the cost of the fertilizers were as follows:

Sulphate of potash.....\$3.00 per 100 lbs.
Acid phosphate 1.00 per 100 lbs.
Nitrate of soda 3.00 per 100 lbs.

These prices are also slightly higher than those paid by most farmers, except where very small quantities are bought. A perusal of the table given, which explains itself, should prove interesting:

No. of plot.	Fertilizer applied per acre.	Average yield per acre.	Value at 50c. per bushel.	Cost of fertilizers.	Profit after deducting cost of fertilizers.
1.	Unfertilized	175			
2.	Sulphate of potash..... 200 Acid phosphate..... 400 Nitrate of soda..... 150	260	\$42.50	\$14.50	\$28.00
	Acid phosphate..... 400 Nitrate of soda..... 150	216	20.50	8.50	12.00

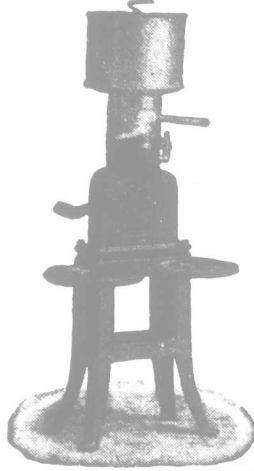
WALTER SHIPLEY.

FAIRVIEW SHROPSHIRE.

J. & D. J. Campbell, Woodville, Ont., have good reason to feel satisfied with their Shropshire flock's condition. Thrift and good bloom are to be seen in every one of their pens. The lambs are strong and plenty, without the over-abundance which, in some seasons, is the Shropshire's fault. Parties wishing to secure show sheep, or strong additions to their flocks, should order early, as usually the top-selection orders are booked ahead sometimes a whole year. See their new advertisement on another page.

Among the importations of Clydesdales from Scotland to Canada the last week in February, were consignments by the following shippers: Anderson & Forsyth, Calgary, Alta.; W. G. Sparrow, Melfort, Sask.; John Semple, Milverton, Ont.; I. Cosser, Gagetown, N. B.; Stewart & Gellie, Virden, Man.; David Hastings, Staffa, Ont.; Thos. Dickson, Seaforth, Ont.; Wm. Meharey, Russell, Ont.; E. B. Armstrong, Grenfell, Sask.; J. W. Watt, Sinaluta, Sask., and James G. & A. Kennedy, Lyleton, Man.

\$15.00 and Upwards



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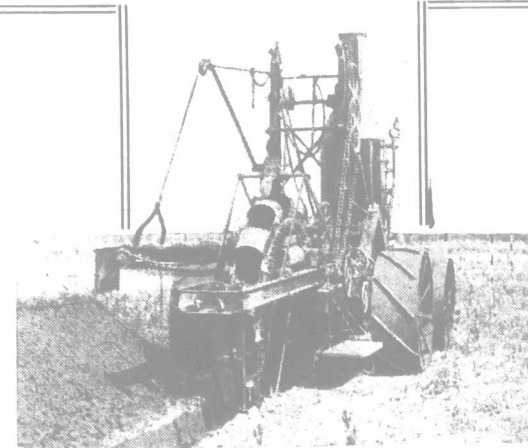
of the DOMO CREAM SEPARATOR, which exceeds any other separator in the world. The DOMO SEPARATORS are of the highest quality, well built and durable. They are close skimmers, turn easy, handsemely finished, and guaranteed. Prices cut in two.

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 "A," which gives full particulars of our machine, trial offer, a few of many testimonials received from users, prices and easy terms of payment. It's FREE.

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THE BEST DITCHING MACHINE

ever manufactured—we make it—could not run itself. It had neither brains nor perpetual motion to be automatic, yet it is a valuable invention of to-day. Nevertheless, there are many unthinking men who can see no advantage in buying a piece of machinery that requires two men to operate it; they lose sight of its time-saving and money-making qualities in looking at its first cost. It is a most expensive mistake.

What the railroads have done for transportation, the telephone

and telegraph for communication, the reaper and thresher for harvesting the crops—the

Buckeye Traction Ditcher

is now doing for that most important of all work, the growing of the crops. The BUCKEYE in its field is as much a time-saver as any of these, and without question is unequalled as a money-making machine.

The BUCKEYE cuts ditches so clean, with a perfect grade, that farmers prefer "BUCKEYE" ditches to any other kind, and pay 10% more for them. They know that it doesn't pay to put in tile unless the grade is right; choked-up drains cut with our DITCHER are unheard of. It enables you to ventilate the roots and give the soil the moisture that it needs—neither too much nor too little.

ANY MAN, whether a landowner, a thresherman, a day-laborer or an office clerk, will find the BUCKEYE a profitable investment. Let us prove it to you NOW, before your neighbor thinks about it. A postal will bring you our new Catalogue "T" promptly.

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and build business selling a line with the above guarantee. If there is no dealer handling Selkirk Fences in your locality you should send for Agent's Prices and Terms. Use the coupon.

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HOW TO BUILD RURAL TELEPHONE LINES

ings, as branch wires can be run from the main line to the buildings and thus save wire and simplify the construction. Reference to Fig. 4, in which c, e, etc., represent the buildings to be connected, mn the main line and a and t the branch wires, will make this point clear.

POLES.

Poles twenty-two or twenty-five feet long of any good stock, cut when green, should be used. Cedar and chestnut are particularly desirable on account of their lasting qualities. The poles should be reasonably straight and well proportioned. The diameter

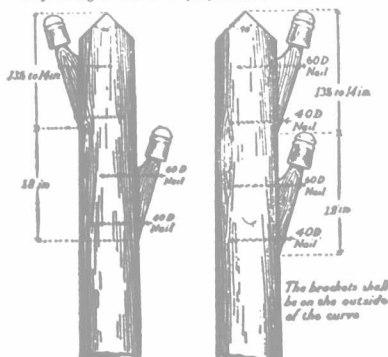


Fig. 3—Location of Brackets on Pole for Straight Lines. Fig. 4—Location of Brackets on Pole at Curves.

THE NORTHERN ELECTRIC & MFG. CO., LTD.

of the top of the pole should be about 5 or 6 inches. In order to prolong the life of the poles and add to their attractiveness, all the bark should be removed, knots trimmed close and the butt cut off square. The top of the poles should be roofed as shown in Fig. 5.

POLE FITTINGS.

Where only one or two line wires are to be mounted on the poles, oak brackets fitted with glass insulators are fastened to the pole as indicated in Fig. 5 for straight lines, or as shown in Fig. 6 at curves. The brackets should be attached to the poles before the poles are raised.



BRACKETS.

Brackets Figs. 7 and 8 are usually made of oak and given two coats of metallic paint and have a thread on the upper end to which is fastened a glass insulator, a type, as used in telephone work, is shown in Fig. 32.

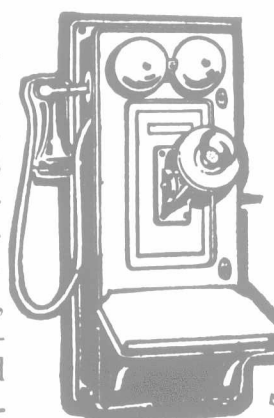
They should be about 18 inches apart. The upper bracket should be 8 inches from the top of the pole

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