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FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE SUCCEED

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

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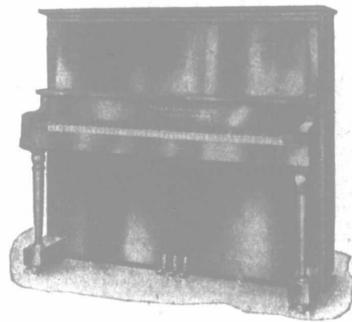
Publications Branch.

The Sherlock-Manning 20th Century Piano is Canada's biggest piano value



STYLE 80

THAT'S no mere advertising claim, but a plain business statement, the truth of which we are prepared to prove. Pianos, you see, are just like high-strung colts—only worth so much to begin with. You know that as well as we do. The actual value of a piano, when ready to leave the manufacturer's shipping room, is solely determined by: 1st. The cost of raw material. 2nd. The cost of production. 3rd. Overhead expenses and selling cost, plus a reasonable profit. Some piano manufacturers charge a hundred dollars over and above all that for their names—names may be worth that amount extra, but we don't think so. Here are the reasons why we consider



STYLE 75

Sherlock-Manning 20th Century Piano

the greatest piano value in all Canada. Consider these reasons, not as they interest us, but as they interest you. Just now you can buy one of our *Easter Specials*—superb instruments in every way at a low figure. There are only a few left, and if you want the extra special Easter discount, best write at once. But consider the reasons why we believe you can save \$100 by buying a **Sherlock-Manning Piano at any time.**

Our factory is big and modern, thoroughly equipped with labor-saving machinery—a 20th Century plant in every respect. We employ skilled artisans only, each an expert in his particular department. We are in a position to buy lumber at the lowest figure for cash, and every inch of it is thoroughly kiln-dried on our own premises.

The quality features of the **Sherlock-Manning** 20th Century Piano include the famous Otto Higel piano action; the best imported Poehlmann wire; an extra strong full iron plate. All combined with expert workmanship and unsurpassed facilities reduces the cost of production to a minimum.

The selling cost of most first class pianos is enormous, because

of antiquated methods. We sell direct to our agents, or to you. Having no big road-force of travelling men to maintain at high salaries and higher expenses we are able to sell the **Sherlock-Manning** at a price that staggers competition. So, when you buy a **Sherlock-Manning** 20th Century Piano you save about \$100, and at the same time you know that your instrument is unrivalled in brilliancy of tone—you know that you have a piano that's built to endure.

The old style, commonly used action flange is made of wood, and is liable to be affected by atmospheric conditions. All **Sherlock-Manning** 20th Century Pianos have the famous Billings Brass Flange—the flange that endures. It cannot be affected by weather conditions.

Write to-day for full particulars and handsome art catalogue. We will prove to your satisfaction the initial economy and lasting value of a **SHERLOCK-MANNING** 20th Century Piano

SHERLOCK-MANNING PIANO & ORGAN COMPANY, LIMITED
LONDON, CANADA
(NO STREET ADDRESS NECESSARY)

"Baker" Wind Engines

Are built for hard, steady work, and keep at it year in and year out.



It is the reputation which "BAKER" Wind Engines have fairly won and steadily held ever since their first appearance on the market, 30 years ago, that should be considered. They are famous for their durability, simplicity of construction and easy running. "BAKER" Wind Engines are so designed that the gears cannot wear out of mesh. The wheel is built on a hub revolved on a long stationary steel spindle, requiring no habbiting. It has a large number of small sails which develop the full power of the wind and enable them to pump in the lightest breezes. Has ball-bearing turn-table and self-regulating device, and all the working parts are covered with a cast shield, protecting same from ice and sleet. The above is only a few of the many features that have placed "BAKER" Mills in the lead. Let the H.-A. Co. agent give you complete information, or write direct for booklet.

We make a full line of Steel Towers, Galvanized Steel Tanks, Pumps, Pneumatic Water Systems, Spray Pumps and Gas and Gasoline Engines.

THE HELLER-ALLER COMPANY
Windsor, Ontario



SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS.

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

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

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price, \$3.00 per acre.

Duties—Must reside upon the homestead or pre-emption six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price, \$3.00 per acre. Duties.—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. CORY,

Deputy of the Minister of the Interior.

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

FARMS FOR SALE

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

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

Buchanan's Swivel Carrier

For unloading Hay and all kinds of Grain. For road track, steel track, rail and cable track. Made entirely of malleable iron; no springs. Lightest and most efficient. 25,000 lbs. capacity. Machines in use, is the best that we build them right. 4 models. Dealers near you who handles Buchanan & Co., Ingersoll, Ont.



What clothing is to man, paint is to property. Unprotected houses and barns, wagons and machinery cannot resist exposure to sun, wind, frost and rain. Rust and decay cost more than paint and varnish—that's why the use of Good Paint is wise economy. There's a merchant in your town who can supply you with reliable and durable finishes for every use.

SHERWIN-WILLIAMS PAINTS & VARNISHES

Around the Farm

Sherwin-Williams Paint—SWP—for the farmhouse. Covers most, looks best, wears longest. Ask for a color card—48 attractive shades.

Sherwin-Williams Barn Red—a rich durable red that spreads easily and covers well over rough lumber.

Sherwin-Williams Wagon and Implement Paint—protects the wood and metal of wagons and farm machinery, implements and tools from rust and decay. For Buggies use Sherwin-Williams Buggy Paint.

Sherwin-Williams Metalastic for windmills, metal roofs, and all metal surfaces. Prevents costly rust and decay.

Inside the House

Sherwin-Williams Brighton-Up Finishes include a paint, varnish, stain or enamel for every household use.

Sherwin-Williams Floorlac, stains and varnishes woodwork, furniture and floors in one operation. Looks like expensive hardwoods.

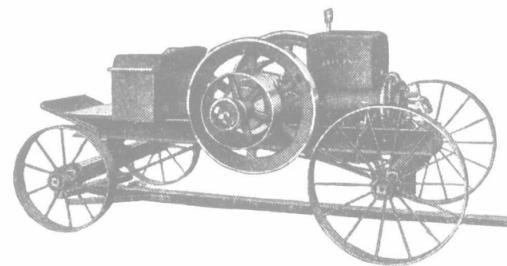
Sherwin-Williams Family Paint, over 25 attractive shades. For cupboards, tables, chairs, etc.

Sherwin-Williams Inside Floor Paint quick-drying and durable. 10 shades.

Sherwin-Williams Buggy Paint—Nine beautiful shades, for porch furniture, boats, flower-pots, swings, garden implements, etc.

THE SHERWIN-WILLIAMS Co. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver

82



8, 12 and 16 H.P. Engines Mounted On All Steel Truck

"Bull Dog" Gasoline Engines

are built especially for agricultural trade. Mounted outfit, shown above, is just the thing for work requiring a portable engine. Built without cast iron sub-base, and all unnecessary weight eliminated. Completely equipped. 8, 12 and 16 H.P. Also 12, 22, 42 and 6 H.P. sizes adapted for stationary, semi-portable or portable mounting. Strong, rugged construction. No complicated working parts. Write our Canadian Agents for descriptive catalog of "Bull Dog" farm engines.

BATES & EDMONDS MOTOR CO., Lansing, Michigan
General Agents for Canada:
A. R. WILLIAMS MACHINERY CO., LTD., Toronto, Ont., St. John, N. B.

RAILS NEW AND SECOND-HAND
Cut to Specification for any Purpose
JOHN J. GARTSHORE, 58 WEST FRONT STREET, TORONTO

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.

BUILD CONCRETE SILOS
Any size with the London Adjustable Silo Curbs. Send for Catalogue. We manufacture a complete line of Concrete Machinery. Tell us your requirements. **LONDON Concrete Machinery Co., Limited, Dept. B, London, Ont.** Largest manufacturers of Concrete Machinery in Canada. 1

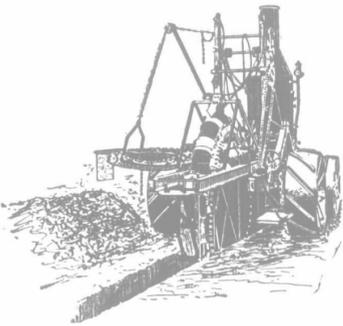
25,000 Rods Wire Fencing for Sale
at 25% cheaper than elsewhere, new, all No. 10 galvanized steel wire, list and prices free. Also netting, piping, etc.
THE IMPERIAL METAL CO'Y
Queen Street, MONTREAL
MENTION "FARMER'S ADVOCATE."

Valuable Book on Barn Building FREE



Write at once for this valuable book. It contains information that every farmer should have regarding the sanitary housing of dairy cows. It explains every fundamental of correct construction and gives proper dimensions and arrangements. It describes lighting, ventilation, stable floors, and their construction, and contains suggestions about silos, site, exposures, appearance, drainage and inside equipment. Besides, you will find in this book a number of practical barn plans and other information that may point the way to your saving many a dollar. We have designed many of the finest and most modern dairy barns in this country and this book is based on our long experience and expert knowledge in dairy barn construction. The book contains in concise, clear and condensed form, information necessary to any farmer who is planning to build or remodel. Understand, we send you this book absolutely free without any obligation on your part—just for answering these few questions: Do you intend to build or remodel? How soon? How many cows have you? Will you want a litter carrier? Will you want a hay fork outfit? Send to-day.

BEATTY BROS. DCX A FERGUS, ONTARIO



We Will Help You to Double Your Income

WE FEEL certain that you can make \$2,000 this year digging ditches for farmers and others with a steam or gasoline BUCKEYE TRACTION DITCHER. That's probably twice as much as you are now making. It's double the average man's income.

Many earn \$15 to \$18 a day

A lot of men are making big money with a BUCKEYE TRACTION DITCHER. Many have more contracts than they can handle.

Farmers want machine-made ditches, because they are of uniform size, perfect to grade, better and cheaper than hand-made trenches.

We'll tell you all about the "BUCKEYE" and what others are making with it if you will write to-day for Catalogue T.

The Buckeye Traction Ditcher Company
FINDLAY, OHIO

\$85 Farm Engine Sensation

F.O.B. Factory



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

INVENTIONS Thoroughly protected in all countries. EGERTON E. CASE, Registered Patent Attorney, DEPT. E, TEMPLE BUILDING, TORONTO. Booklet on Patents and Drawing Sheet on request.



Why not settle the barn question once for all by building one that won't have to be enlarged, repaired, or remodeled for years to come. The difference between a good barn—designed for convenience and built to last—and an ordinary barn, is often the difference between profit and loss on the farm. Investigate the subject of barns—a minute of inquiry now may save you dissatisfaction later. All your barn questions are answered in our new book,

"HOW TO BUILD A BARN"

Not just one feature of barn-building, but everything—size, materials, erection and cost. Architect's plans, drawn so the layman can understand them, and plain descriptions, guide you in every step of the work

Seven varieties of barns are described. You can't fail to find the type that will exactly fit your requirements. Every detail that you need to know is told, simply, plainly and

thoroughly. The book was published to sell for 50 cents, but we will send it to you free if you will give us your name and address at once.

This book is not a Catalogue. A few pages in the back, however, tell a very interesting story about Galt Steel Shingles, and explain their superiority over wood shingles, other kinds of metallic roofing, and felt sheeting.

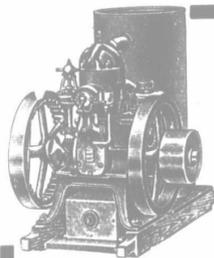
GALT ART METAL CO., LTD.

150 STONE ROAD, GALT, ONT.

BRANCHES—General Contractors Supply Co., Halifax, N.S.; Estey & Co., St. John, N.B.; R. Chestnut & Sons, Fredericton, N.B.; J. L. Lachance, Ltd., 253 St. Paul St., Quebec, Que.; Wm. Gray Sons-Campbell, Ltd., 683 St. Paul St., Montreal, Que.; Montague Sash & Door Factory, Montague, P.E.I.; Five Hardware Co., Fort William, Ont.; Galt Art Metal Co., Ltd., 839 Henry Ave., Winnipeg, Man.; Gorman, Clancey & Grindley, Ltd., Calgary, Alta.; Gorman, Clancey & Grindley, Ltd., Edmonton, Alta.; D. R. Morrison, 714 Richard St., Vancouver, B.C.

SEND ME YOUR BOOK

F.A.



This Engine Runs on Coal Oil

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

The strongest and simplest farm engine made; only three moving parts: nothing to get out of repair. Anyone can run it without experience. Thousands of satisfied customers use these engines to grind feed, fill silos, saw wood, pump, thresh, run cream separators, and do dozens of other jobs. Cheaper than horses or hired men. Fill up the tanks and start it running, and no further attention is necessary; it will run till you stop it.

FREE TRIAL FOR 30 DAYS. You don't have to take our word for it. We'll send an engine anywhere in Canada on Thirty Days' Free Trial. We furnish full instructions for testing on your work. If it does not suit you send it back at our expense. We pay freight and duty to get it to you and we'll pay to get it back if you don't want it.

Absolutely guaranteed for 10 years. Write for free catalog and opinions of satisfied users. Special offer in new territory.

3 to 15 horse power
We Pay Duty and Freight

Ellis Engine Co., 94 Mullett Street
DETROIT, MICH.

FREE STYLE BOOK FOR 1912 OF "Quality Line"



VEHICLES AND HARNESS

EIGHTEENTH YEAR OF SELLING DIRECT TO THE USER.

Our Catalogue will help you to choose just the Vehicle or Harness you require, and SAVE YOU MONEY. It describes and pictures many styles, gives prices, "FREIGHT PREPAID," and fully explains our method of Selling Direct and saving you the Middlemen's Profit. Remember, we pay the freight in Ontario and Eastern Canada. The Catalogue is Free, for the asking. Send for it To-day.

INTERNATIONAL CARRIAGE CO.,
Dept. "A," Brighton, Ontario.

BEST RESULTS ARE OBTAINED FROM ADVOCATE ADVERTISEMENTS.

TOWERS FISH BRAND REFLEX SLICKER

THE SERVICE COAT THAT KEEPS OUT ALL THE RAIN
Even the front of this Slicker is WATERPROOF. See our patent REFLEX EDGES, out of sight when coat is buttoned, that guide every drop down and off. Another proof of FISH BRAND QUALITY SOLD EVERYWHERE SATISFACTION GUARANTEED TOWER CANADIAN LIMITED TORONTO.

TALK TO YOUR NEIGHBORS OVER YOUR OWN LINE
The alert business farmer today must have a good telephone in his house to connect with his town and the outside world. Kellogg phones save time, money, and in trouble and sickness, give longest, reliable service. A neighborhood telephone line is easy to build and operate. Let us send you our bulletins, written by practical telephone men, that tell you how to build a rural line and operate; give by-laws for rural companies and valuable information. Write for these free books today. Please mention this paper. KELLOGG SWITCHBOARD & SUPPLY CO. Largest Independent Telephone Manufacturing Plant in the World CHICAGO

MARRIED MAN wanted—Accustomed to fruit farm; must be good man with horses, and accustomed to all classes of work on fruit farm. Will provide a nice new cottage of seven rooms, large cellar, and water laid on, and land for garden, to right man. No objections to large family, if willing to work. Apply, stating experience, and give testimonials and references from previous employers in Canada. GLEN ATHOL FRUIT RANCH David Smith, Mgr. St. Catharines, Ont



FARMING

has become a specialized
business

It's no longer a "hit-or-miss" occupation, where "any old way" is good enough. Farmers are buying pianos and automobiles as never before. They're *living* as well as *working*.

The farmer has learned that it *pays* to employ progressive methods. That's why he is ever ready to receive helpful suggestions for improving his crops, his land and his home. It's also the reason that more than fifty thousand Canadian farmers are enthusiastic about our handsome book

"What the Farmer Can Do With Concrete"

It isn't a catalogue, nor an argument for you to buy something. It is clearly written, interesting, profusely illustrated. It describes the various uses to which concrete can be put on the farm. Not theories, but facts, based on the *actual experience* of farmers all over the continent. It is the most complete book on the subject ever published, fulfilling the pur-

pose behind it, which is to help the farmer take advantage of concrete's possibilities. The list of subjects covers every conceivable use for concrete on the farm. The book's actual value to you will far exceed the list price of fifty cents, but if you will send us your name and address at once, we'll be glad to

Send it to You Absolutely Free

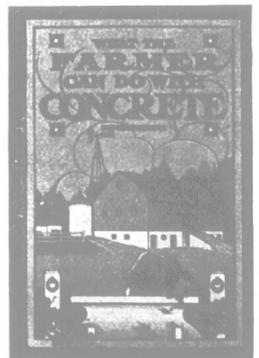
Send a post card for it—do it to-day. The book will be sent by return mail.

Canada Cement Company

LIMITED

National Bank Building

MONTREAL



"It Took Me Fifty Years to Know How to Give You Better Roofs than any other Man"

"I tell you, every farmer in Canada should realize the big share a good roof has in making a good barn. That is my life-work—making roofs. I have been making my roof better and better for more than fifty years. What I have done for farm roofs is one of the biggest things ever done for people who farm."

"You ask me why a barn roof is so important. I will tell you. You build a barn and expect the roof to protect it many years. You put thousands of dollars' worth of produce under that roof while it lasts. Every pound of this produce costs you hard work. If a poor roof lets it get spoiled by wet, you lose money year after year. This lost money is many times the roof cost. Some roofs will last for several years. Some roofs will last if they are kept painted. But a roof is mighty hard to get at. It is not too safe to work on anyhow. Once a roof starts to leak, it is often left as it is. The result is the things you have in your barn spoil. This is lost money, and soon amounts to more than the cost of a good roof."

A Roof for Any Man See What a Good Roof Can Do!

"I have spent my life making a low-cost roof that any man or his tinsmith could lay right. This roof of mine saves the stuff stored under it. It saves the barn framing and beams. It saves the foundation. This roof of mine doesn't need special roof timbering at all."

Good for 100 Years

"The big point about my roof is that it cannot develop leaks after you have had it up a year or two. It is a real roof from the first year it is on your barn to the last year. And do you know when that 'last year' will be? You will use that barn, and your son will use that barn, and your grandson will use that barn before that 'last year' comes. I want to pound the fact home to you that when you get a roof from me, you get a roof that is good for one hundred years. Think of getting a roof that makes your barn good for a hundred years. And that at about the price of an ordinary roof."

"That is why I say, 'I have helped the farmer more than any man ever did.' My roof will protect a good \$100,000 of produce in your barn in 100 years. A roof that will do that

is worth going after a good long ways."

Stands the Arctics

"This roof is so good that the Canadian Government Bernier Arctic Expedition used it for the Arctic regions. Here is immense cold and sweeping winds and ice and poor foundations to stand up under. The North-West Mounted Police use it. The Canadian Government has found no better roof for them. My roof is a good roof for the Arctic Circle. It is a still better roof for milder climates elsewhere."

Stands the Tropics

"But that is not all. My roof is used in the West Indies. Here is a temperature of 135 degrees at Porus, Jamaica. My roof stands it. In Jamaica during rainy season at Montego Bay, rain falls 10 inches in a single day. My roof stands it. In Ontario rain falls 30 inches in a whole year. My roof in Jamaica stands in 24 hours the rainfall it has easily 4 months for in Ontario. Is that a good roof? Is a roof that stands the severe conditions in both Arctics and Tropics good enough for you? You get exactly the same article, made on the same machines."

Used All Over the World

"Not only that, go down to South Africa. Go to the farms there. Go around Port Elizabeth, or Durban, or up in the Transvaal. You'll see my roof there. People will go around the world for my roof, because it is the best roof in the world. It will last 100 years. People use my roof in Japan—an earthquake country. They get it from me. They have searched the world for a roof that would stand earthquake straining. My roof will."

"I am the best friend the farmer has, because I have given him one of the best roofs in the world at a very low cost. I want to send out more of my barn books, because I want to see good barns built. I send a book free to you, if you will ask for it. Write me to-day."



This Took 50 Years

"You are beginning to see something of the big work I have done. I have made a low-cost roof that stands terrific cold and heat, that stands tremendous rains, that stands ice, that stands earthquakes. In fifty years, I have made Pedlar roof better and better by little points added every year. It has world sales to-day, just because it is the best roof in the world at its very moderate price."

get it. I stuck to it just as carefully as I had stuck to bettering my roof. And I got it at last. That's the metal I use to-day."

You Get the Benefit

"My roof is the only roof in the world with this kind of non-rusting iron in it. I am the only man a farmer can come to and say, 'I want a hundred-year roof at about the price I would pay for cedar shingle.' I am the only man that can deliver that kind of goods."

"My roof will not rust to the leaking point within 100 years. It saves the barn and its product from the weather. It saves the barn from thaw-water and lodged ice, because the seams cannot be gouged apart. It saves the barn from fire, because sparks cannot burn it. A burning stick on the roof will not harm it, or harm the barn under it. Lightning cannot burn a barn with my roof on it. My roof is a perfect conductor of electricity. My roof has 'give' in it to defy heat and frost, and protects in winter and summer. It protects even though the rafters sag. Wind cannot blow my roof off a barn. This is because it is a ventilated roof. It keeps your barn ventilated and stands the heaviest winds safely."

Get My Barn Book

"I want to send you my book, 'ROOFING RIGHT.' This lets you dig into more facts about the Pedlar roof. You will see how clean it is. It gives the best cistern water you can gather, as it is self-cleaning. This book shows scores of good barn designs—the best barns in Canada. Every one has my roof on it. You will get big help from my book, and I will send it free for a post-card, because you can plan your barn from it, whether you use my 100-year roof or not."

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The PEDLAR PEOPLE Limited, of Oshawa Established 1861

HALIFAX 16 Prince St. ST. JOHN 42-44 Prince William St. QUEBEC 127 Rue du Pont MONTREAL 421-3 Craig St. OTTAWA 423 Sussex St. TORONTO 111-113 Bay St. LONDON 86 King St. CHATHAM 200 King St. W. VANCOUVER 108 Alexander St. VICTORIA 434 Kingston St. EDMONTON 563 Third St. W. Write for details. Mention this paper

WHEN WRITING ASK FOR PEDLARIZATION BOOK NO. 150.

Bell PIPE TONE Organs

THE
MOST
SATISFACTORY
ORGANS

FOR
HOME
USE

IN BUYING A

Bell Organ

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

The BELL Piano & Organ Co.
GUELPH, (Limited.) ONTARIO
Largest Makers of Pianos, Organs and
Playerpianos in Canada.



Put T-A Wheels on Your Wagons

These Wide-Tire Steel Wheels are so constructed that they roll smoothly over the roughest roads, without tiring your horses. And they are absolutely accident-proof—yet cheaper than ordinary, wooden wheels.

T-A Wide-Tire Steel Wheels & Handy Farm Wagons

Our Handy Farm Wagons are built low—making them easy to load and unload—and are especially designed to meet the requirements of the man who wants a light, strong wagon for all kinds of work on the farm. Let us send you our catalogue. It will give you complete information.



Tudhope-Anderson Co'y, Ltd.
Orillia, Ontario

WIPE YOUR FEET

Mud, snow, dust and dirt will not be tracked over your floors if you use

Grab's Foot Scraper

outside your door. The only device made which cleans bottoms and sides of shoe in one operation. Has ten parallel plates for scraping soles and two stiff bristle brushes which clean sides of shoe. Adjustable to any size. Handsomely enameled. Looks neat. Can be rotated and swept under. Fastens to doorstep or any handy place. Get one and save useless work. Price \$1.00. If your dealer will not supply you, don't take substitute, but send your order direct to us. Illustrated folder FREE.

Onward Mfg. Co., Berlin, Ont.
Agents Wanted Everywhere.

**MERCHANTS
PRODUCE CO.**

Butter Eggs Poultry Honey
Beans Apples Potatoes, etc.

Our constantly growing trade demands large supplies of choice farm produce. We need yours. Write for weekly market letter.

57 Front St. E., Toronto
Established 1899

DE LAVAL CREAM SEPARATORS

ARE THE MOST SANITARY

The up-to-date De Laval Cream Separators excel other separators not only in thoroughness of separation, ease of running, simplicity and durability—but as well in the important feature of being the easiest cleaned of all cream separators and the only cream separator which is thoroughly cleanable under ordinary every-day use conditions.

The modern De Laval Separator Bowl is completely unassembled in cleaning and every part is smooth, visible and easily reachable, without hinge, tube, pocket or crevice anywhere. The whole bowl is washed thoroughly in a couple of minutes.

The frame is smooth and free from recesses, and every part is as accessible and thoroughly cleanable as the bowl itself. The gears and bushings are protected from milk or water reaching them, and there is no slop under or around the machine.

QUALITY OF CREAM AND BUTTER DEPENDENT UPON SEPARATOR CLEANLINESS

An unclean separator bowl or filthy separator frame necessarily means a bacteria infected and inferior quality of cream. Buyers of farm separator cream and buttermaking authorities generally are constantly emphasizing this point.

One of the prizewinning creamery buttermakers at the last National Dairy Show recently wrote us:

"We are sorry for the use of so many 'mail order' and other inferior separators in our territory. It seems to be almost impossible to clean them, even though the farmers do try—and a good many of them don't even try. We wish you could do more missionary work to get these rotten separators out of the country. It is impossible for any buttermaker to make good butter from spoiled or tainted cream."

Any De Laval agent will be glad to take a modern De Laval machine apart for you so that you can see for yourself its simplicity and sanitariness of construction and how much more easily and perfectly it may be cleaned than any other separator.

DE LAVAL DAIRY SUPPLY CO., LIMITED

173 William St., MONTREAL

14 Princess St., WINNIPEG

Standard Wire Fence

Here's the Fence That is all Steel—
Steel wires, steel locks, steel posts. Standard Woven Wire Fence is all No. 9 hard steel wire, well galvanized. "The Tie That Binds" is hard, smooth steel that holds uprights and running wires absolutely secure without injury. Standard Patent Posts are 12 gauge steel, bent at right angles, and so constructed that wires are held without staples. Let us tell you a lot of other things about the Standard Wire Fence and our Metal Gates of Galvanized Tubing. Our locks are full of fence facts. Write for free copies and sample lock.

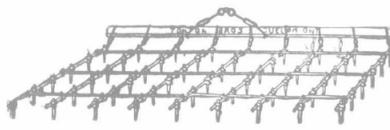
THE STANDARD WIRE FENCE CO. OF WOODSTOCK, LIMITED, Woodstock, Ont. and Brandon, Man. 18

WHEN YOU BUY, BE SURE THAT IT IS A TOLTON HARROW

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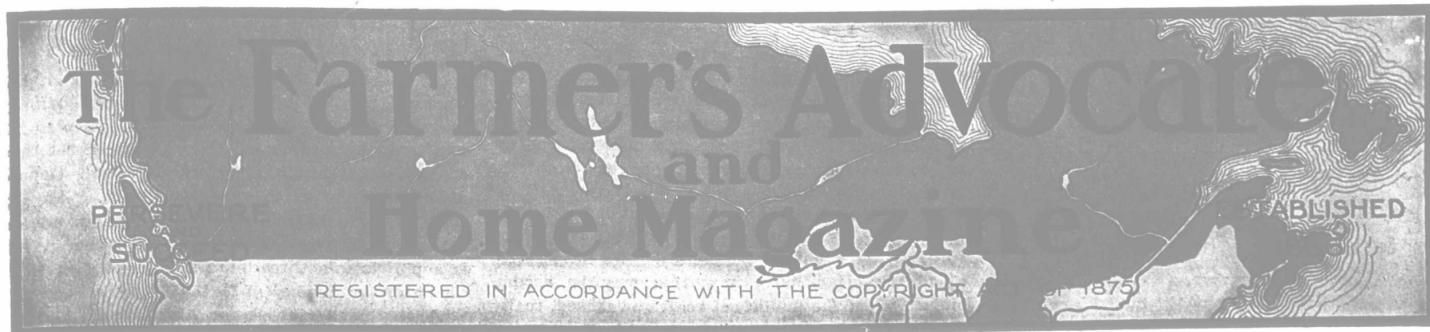
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Vol. XLVII.

LONDON, ONTARIO, APRIL 18, 1912.

No. 1021

EDITORIAL.

If the state of the roads show the degree of civilization in a community, some of us must be not very remote from savagery.

Given health and a sound understanding, very few acres are necessary to give anyone a decent living on the land, but he must not waste things.

One hundred dollars and upwards for grade dairy cows, is something worth pondering. Considering the price of labor, is it not rather more profitable producing cows at \$100 each than milk at 100 cents per hundredweight?

The Ontario Agricultural and Experimental Union is proposing to extend the scope of its experimentation by trying out various systems of weed eradication, with the object of obtaining definite information as to best means of controlling the worst weeds in the Province upon different kinds of soils and with various systems of cropping and rotation. This first year the attack is concentrated upon perennial sow thistle, twitch grass, bladder campion and mustard. Particulars may be obtained on application to J. E. Howitt, Botanical Department, O. A. C., Guelph.

The idea of warming a farm by artificial means would strike most people as a joke, yet that is precisely what may be done by drainage. Land is chilled by the evaporation of surplus water from its surface. When one pound of water disappears from a cubic foot of soil by evaporation, it carries with it, says King, heat enough to leave the temperature of that soil from 28.8 to 32.8 degrees F., depending upon whether the soil is sand or clay loam. The writer spent a day with one of his men early in April, letting surplus water off the land by shovelling ditches through the slushy soil, with a hard frost-pan below as a convenient bottom to walk on while working. We estimate that in this way we drained off from five hundred to a thousand barrels of surplus water. It was probably one of the most effective day's work that will have been accomplished on the farm this year.

A Toronto newspaper editor suggests that the only effective preventive of freshet destructiveness is to hold the water up in numerous small dams on the tributary streams. By a grim coincidence, the issue that conveyed this important contribution to the theory of conservation contained a news-story telling that the Credit had destroyed fourteen dams and several bridges. Bearing in mind that the breaking of one dam doubly endangers the one below it, we fear the cost of constructing these upper tributary dams, so as to make them really a factor of safety would be quite a penny, to say nothing about compensation for inundated land. No doubt such dams would be all right in some cases, but their principal advantage would consist in holding backwater for power purposes. It is really doubtful whether dams are of much use in preventing destruction, for when the water is reaching the rivers it must get away somewhere, and, if pent up, its potentialities for destruction are rather enhanced than reduced. As a means of regulating river-flow, Provincial or municipal reforestation of head-water regions and river banks has much to be said in its favor.

The Highway Problem.

That the public realize the inconvenience and loss to communities and the country generally, because of bad roads, is clear from the contributions in the recent "Farmer's Advocate" competition on this subject. All agree that good roads are desirable and necessary, but there are unsolved problems in "How to Build Them," and still more in how to maintain them. The public are willing that money be spent liberally to secure these objects, but it is not so clear as to how these funds should be provided and handled. Discussions during the late session of Parliament at Ottawa and outside of it show that there is as yet no well-settled Canadian good roads policy. The blocking of the Government Highway Bill by Senate amendments unacceptable to the Commons, caused a hitch, but will not stop the movement for better roads. The proposal was well intentioned, but probably not sufficiently matured. Road-building by the Federal Government direct was questioned, and though it may supplement Provincial resources for that purpose it will likely be found best to leave road-fund administration and road-making with the Provinces and municipalities. The Senate amendment prescribed that the proposed aid for highway improvement be divided among the Provinces, according to population.

The United States Government has at Washington an Office and Director of Public Roads, under whose supervision 52 object-lessons in road-making were executed last year, but at local expense. Road-making proper and road administration is left with the individual States. The Federal Office has also undertaken elaborate work in testing materials for road-making, surfacing, repair and maintenance. In the view of L. W. Page (Director), the problem is to locate roads so as to serve the needs of the most people, and solve it according to local conditions involved. The considerations to be kept in mind are, first, how to use local materials more fully, thus keeping down cost; second, securing more specific information regarding the nature and behavior of materials for construction and maintenance; third, systematic road maintenance; and, fourth, more businesslike road management. All this is very clearly apparent in the information which the Scientific American publishes in regard to what forty-six different States are doing (or not doing) by legislation and otherwise for good roads. Information lately made public by Secretary Wilson, of the United States Department of Agriculture, shows that, of the total 2,200,000 road mileage in the States, only a trifle over 8 per cent. can in any proper sense be described as "improved" for the traffic they are required to bear, thus proving the need of a nation-wide movement. But apathy is at last giving place to effort on the part of many State Legislatures, municipal and voluntary organizations.

The sudden appearance of the automobile on the roads of the country is one of the factors in precipitating road-making activity. Bad roads are destructive of motor cars, tires and comfort, and good roads are destroyed by automobile traffic. So, while their owners agitate for better highways, various States have, in different forms, levied automobile taxes.

What States Are Doing for the Roads.

In the State of Maine, the automobile tax amounts to \$120,000, and a movement is started to create a road fund of \$2,000,000 by capitalizing the revenue so provided. Massachusetts is deriving \$400,000 a year from automobile owners. The State has a Highway Commission, and there are fifteen bills relating to highways before the Legislature. One of the proposals for 1912 is a \$5,000,000 appropriation, to be expended in road construction in five years. There are State highways and local improved roads connecting them. By a yearly \$5-per-capita tax on automobile owners, Texas derives about \$100,000 revenue. In recent years, millions of dollars have been voted in bond issues by the people of the State, and large sums wasted through unscientific methods of road work. This year's legislation contemplates a State Highway Department, a Highway Commission, and a State Highway Engineer to cooperate with county authorities. A State road, to be conducted by convict labor, is planned. The Texas constitution prohibits levying direct road taxes.

In Vermont, the law creating a maintenance fund from automobile license and legislation fees, is said to be responsible for the general improvement in State roads. These funds supplement appropriations under the State Aid Laws, relieving the towns of a portion of the cost of maintenance.

A new law in Minnesota provides for the appointment of State Highway Commissions and the creation of a State Road and Bridge fund, made up in part by a levy of $\frac{1}{4}$ of a mill for each dollar valuation on all taxable property. In accordance with the eternal fitness of things, commercial and auto clubs are actually constructing roads in Nebraska, east and west across the State. The State is creating a Highway Commission, and will put the general supervision of the State's roads under the State Engineer. The New Hampshire legislation makes a percentage of automobile fees available for road repairs. A \$1,000,000 bond issue has helped the road situation. The State has provided money for the construction of three automobile trunk lines, but it is admitted that what the State needs most is a system or cluster of roads leading between the cities and the farms. New Jersey has not built any State roads, but extends help to local bodies, and supervises their work, enforcing certain general plans and specifications, and influencing the location of roads. This is said to have given the State the best system of roads, at low cost. New York has appropriated \$5,000,000 a year for ten years, expended under Commission. The trunk lines are built and maintained by the State; other roads jointly, the State paying 50 per cent., the counties 35 per cent., and the towns (townships) 15 per cent. North Dakota people will vote on a State Aid Law for roads, including automobile and motor-cycle taxes.

Ohio employs a State Highway Department, lays down standards, and shares with local authorities the cost of constructing and maintaining roads. Pennsylvania maintains a Highway Department, and shares with municipalities the cost of road-building and repair under prescribed conditions. The State Board of Public Roads in Rhode Island has been crippled for want of funds, but a bond issue and a \$250,000 appropriation this year is expected to improve the situation. In South Dakota the people have awakened to

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JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"
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the fact that their roads are poor. A new law abolishes the office of Road Overseer and makes the townships responsible. Under a new permanent Highway Law, Washington is to spend \$955,000 this year on hard-surface roads. Wisconsin has a new State Aid Law and Commission, with a fat appropriation, to aid local municipalities in road and bridge building. Wyoming has initiated work on two spectacular "routes" across the State for the special benefit of automobilists. Every man from 21 years to 50 years in South Dakota is assessed \$5 a year for road and poll-tax purposes, and, upon petition of 10 per cent. of the electors, the County Commissioner may order a vote on a special tax levy of more than 5 mills for the next fiscal year, or a term not exceeding three years. To a great extent, California has abandoned the scheme of oiling the roads. In several States effective use has been made of the split-log drag on earth roads. At the Agricultural College, Kansas, the office of State Engineer was established, which furnishes free of cost plans and specifications for road and bridge work, drainage, and irrigation projects. All road taxes are paid in cash, and all roads are classified and maintained according to their importance. Good roads is the most talked of question in the State.

Who Makes Living Dear?

That considerable proportion of our population who are feeling acutely the increasing cost of living will find their questions answered in larger measure by Peter McArthur's current article, "The Innocent Investor," explaining how clever promoters load upon nearly all lines of industry enormous annual charges to make up interest on dividends on millions of dollars of watered stock pumped into reorganized industries, and sold to unsuspecting investors for hard cash, while the promoters take themselves to Europe, receiving their knightships, honors and all sorts of emul-

ments. Then, any attempt to reduce profits of the respective industries to a level that would represent fair interest upon the intrinsic capital is met with howls and complaints about widows and orphans who will be deprived of returns upon the water they innocently bought from the promoters for cash.

What are you going to do about it? asks Mr. McArthur. Sure enough, what? One thing sure, we must get at the causes. We have several pretty clear ideas how this may be accomplished when the public get really awakened, really informed, and really in earnest. The security of these buccaneers of finance is a somnolent public opinion. We hope Mr. McArthur's articles will do something to wake it up.

The Importance of Promptitude.

There is a right and a wrong time for doing everything. Few people seem to realize that a day or two, sometimes even a few hours, makes a great difference in the outcome of many projects. Spring is here again, with its thousand-and-one things to be done in a rush. Every experienced farmer knows how much the success of the crop depends upon the time the seed is consigned to the ground. "The early bird catches the worm," is an adage which applies to seeding operations with all possible force; and in the case of the injudicious sower who goes on his land before the warm spring sun and the gentle breezes have dried the land sufficiently to make it crumble before the tillage implements, is a good example of the reverse, viz., "the early worm gets caught." Seeding is one of the operations in connection with crop-growing which must be done at the proper time, if the best results are to follow. There are few farms on which all the fields or portions of the farm become ready for seeding at the same time. By a little system and management, and by using wide implements, it is possible to get nearly all the seed incorporated in a good seed-bed at a most opportune season. As soon as the land is ready to work, the seed should be sown, as every day that the seeding is deferred means bushels less in the bins next fall, and the past season of feed shortage and high prices should serve to impress upon every stock-feeder and grain farmer the significance of short and full crops. A difference of a bushel or two per acre seems a small consideration on a few acres, but as the acreage increases until it takes in the millions utilized for the growing of cereal crops in our Dominion, its real import is plainly seen.

Seeding is not the only spring operation which must be done promptly. Spraying, the salvation of the fruit-grower, and the guarantee of quality in the harvest, must be attended to just at the time nature has advanced to the proper stage in the growth of foliage or in the preparation for fruiting. Buds do not always burst at the same date, neither do blossoms open or fall by the calendar. They depend upon the progress of the season, and must be kept under a watchful eye. "Shortly before the buds burst," "Just before the blossoms open," "Immediately after the blossoms have fallen and before the calyces close," are quotations which the experienced and wide-awake orchardist understands full well. It does not mean a few days or weeks before or after, but rather at a stated time to the day, almost to the minute. Under favorable conditions, blossoms may open very quickly, and, as was the case last year, they may fall almost in a twinkling. Such cases serve as illustrations of the value of doing things at the appointed time. The codling moth cannot be destroyed once the calyces have closed, and good fruit cannot be produced unless spraying is thoroughly done, and done when it should be.

Let every sower and every fruit grower make it a point to sow every field and spray every tree at the time when it is in the best condition to yield the greatest returns for the labor spent, and the producers of the country would creek under the heaviest weight of golden grain next fall that they ever saw, and the market would be supplied with the choicest class fruit, comprising a 50 per cent. increase in value as has never been known. It has been said that it is never too late to do the right thing, but it is never too late to do it, for the returns are greatly increased if it is done when it should be.

Tariff and Education.

"We are up against a moral feature of labor on the farm that will be hard to solve so long as wages and tastes of wage-earners remain as they are," concludes a thoughtful article in the *Breeders' Gazette*, headed, "Unreliable and Unprofitable Help." "Each year," we read, "the pressure for farm help increases, and wages advance, while the efficiency of the laborer declines. . . . It is a politician's threadbare argument that the increase of the number of factories in a farming district creates a market for his product and adds to the value of his land. He loses sight of the facts burned into farmers' sensibilities that, granting the increased demand for dairy products and garden truck, the factories rob him of the best laborers and increase the prices of wages demanded by the residue of cripples and aged who cannot stand the pressure of factory hours and grind. The nominal increase of values of lands on the tax duplicate increases the sum of the farmer's taxes, which he must meet out of the decreasing crops which the farm produces under the high-priced and less-efficient labor."

Young men and women flock to the factory centers, and very few return to the farm or dairy or kitchen. A few years in the whirl of machinery, dance halls, picture shows and vaudeville unfit all these laborers for the healthful, quiet, country life. They become gregarious in habits and averse to the rational, sensible living of well-ordered farm life, losing any love they may have had for reading sensible, practical books or farm journals. After hours, they seem unable to apply themselves to any rational or sensible work, study or enjoyment. They long only for the crowd they are separated from, as does a sheep shut away from its old flock.

"It is easy for university professors and settlement workers to turn out unworkable yet promising theories of attracting the country lads and lassies with interesting books, papers and plays, so charming that they will not leave the farm for the factory. But as yet facts and practice are against the best-spun theories we have. It is a problem of re-educating, teaching the lover of the vices and dissipation of the factory town to prefer the peace and quiet of the country. It is about as hard to do this as to induce the lover of strong drink to exchange that for buttermilk and water."

The man who penned those words knows what he is talking about. It is a comforting change from the superficial nonsense so often handed out in the name of advice and wisdom.

There are just two points we should like to press home in explanation of the conditions described. One is the effect of tariffs and other discriminatory uneconomic legislation in multiplying the farmer's problems and curtailing agricultural production. Politicians intent upon building up cities and impressive industries have assumed that the agricultural population was a stable community, which would go on producing, even if the cost of labor and living and implements were artificially raised to an indefinite extent. With the steadily rising cost of living, the effect, if not the nature of their mistake, is commencing to dawn upon them. Our second point is the need for a radically reformed rural education, which, by school-gardening and otherwise, will awaken and develop the child's interest in the science and vitality and wholesomeness of rural life and rural pursuits. Some such influence is needed to counteract the gregarious tendency, with its glittering but superficial appeal. The easiest way to keep weeds out of a field is to occupy the ground fully with something else. The way to fortify childish ambition against running amuck in hilarity and glitter and gloss is to direct it sanely and easily and wholesomely—but without suspicion of compulsion—towards something better worth while.

Fairer economic conditions and better-balanced rural education are, then, two cardinal suggestions towards improving farm wages and modifying the taste of wage-earners, to their own welfare and the good of the agricultural industry.

Our country has built three transcontinental railroads and a network of subsidiary lines of roads, and is hardly needing just yet a national trunk highway for the motor-car people; but there is a need in nearly every county for a properly planned road improvement.

The Innocent Investor.

By Peter McArthur.

Did you ever have anyone try to prove to you that black is white? If not, you had better have your wits about you, for I am going to try it now. And I mean to prove it to your entire satisfaction—or, rather, I am going to prove that white is black—which amounts to the same thing. What I am undertaking to prove is that the honest, thrifty citizen, who not only earns his living, but invests something for a rainy day, is a burden to the country. In fact, he promises to become an intolerable burden, unless we take him in hand at once. And yet he is doing only what every man should do. He has no intention of being a burden to any man. On the contrary, he prides himself on the fact that he owes no man anything, and that he pays as he goes. He is our best type of citizen, and at the same time the curse of the country. That sounds as impossible as that black should be white, and yet it is absolutely true. It is not for nothing that our big financiers have been called Wizards of Finance. They can do wonderful things, and the most wonderful they have done so far is to change honest, decent citizens into a public burden. And they didn't do it for their health, either. They did it to protect themselves while making their millions. They have managed things so cleverly that, if you try to punish them for their misdeeds, you will find that the men you will really hit will be the best citizens of the country.

* * *

The cartoonists love to show farmers and laboring men as beasts of burden who are carrying the capitalist and his money bags on their bowed backs. This is all wrong. The capitalist never gets on our backs if he can help it. If by any chance he finds himself there, he scrambles off as quickly as he can. His great trick is to sell the seat on our backs to the Innocent Investor, and get away to a safe place with his money-bags. Then, when we get mad, and try to throw off our burden, we find that the man who is oppressing us is a good citizen, who would not do us any harm if he could possibly help it. He is as much surprised as anyone else to find that he is a burden to the producers and consumers of the country, but still he paid for that seat on our backs, and you can't blame him if he wants to stick to it till he gets his money back. He can't get it back from the capitalist, and we have not yet reached the point where we are willing to pay him to get off, so we go on carrying him, and wondering what we are going to do about it.

I know I should not write in this symbolical way, but that is the way ideas come to me first, and perhaps some others get hold of things in the same way. Now, let us look into the question in a plain, matter-of-fact way.

During the past few years a great many mergers and combines have been put through in this country, and it is notorious that most of them are grossly over-capitalized. In one case that I have in mind, the actual cash invested in the various businesses that were merged into one amounted to only a little over one million dollars; and yet bonds and stock were issued to the extent of five million dollars. Having a monopoly in its particular field, the new concern is paying liberal dividends on the five millions. This could only be done by paying the producers of the raw materials used by the concern less than they should get, and charging the consumers of the finished product more than they should pay. It has become necessary to pay profits on five times as much capital as was invested. This is outrageous, of course, but I should like to know what you are going to do about it. The men who put through the merger sold the bonds and stock to innocent investors who bought their holdings in the open market, and whose rights must be respected. They are good citizens who had saved some hard-earned money that they wished to invest. The stock of this company looked good to them, and they bought it. If you try to make that company pay dividends only on capital that really went into the business, you will be robbing these people. Of course, the men who put through the merger were doing a great wrong to the people of the country, who will have to go on paying dividends on stock that should never have been issued, but there seems to be no way of getting after them. They sold all the stock they got out of the deal and pocketed the money. But what they pocketed was nothing to what the great mass of consumers and producers will have to pay during the years to come. And they will not be paying it back to the slick financiers who put through the mer-

ger, but to the innocent investors who bought the fraudulent stock. The capitalists who managed the steal and profited by it are no longer a burden to us. They got away with their loot as quickly as they could, but the innocent investors are a burden, and will be until we find some way of getting rid of them. Doesn't it look as if white had been made black by the magic of High Finance?

Just how these mergers are put through, and who profits by them, will never be made entirely clear until one of them has been thoroughly investigated. Because the promoters of the Cement Merger fell out when it came to dividing the spoils, we are promised an investigation. If it is sufficiently searching, we may find out something that will guide us in trying to effect a reform. At present, all we know is that men like Sir Max Aitken became millionaires almost overnight by promoting mergers and selling stock to the innocent investors. As suggested above, Sir Max did not continue to be a burden to us himself, but took his millions to England, where he is now a prominent figure in the Imperial Parliament. But the people of Canada must pay dividends on the stock which he created and sold, if the thrifty people who invested their savings in his enterprises are not to lose the money they paid to him. In putting through his mergers, he produced nothing of value to the community, and effected no economies that will benefit the country, for people are now paying more for cement and the commodities he operated with than they were before he undertook to merge the competing businesses into one.

There is one outstanding fact, however, that we may be sure of, even without an investigation. In order to put through mergers, the promoters must have access to large sums of money to enable them to purchase the necessary options and carry the stock until it has been unloaded on the investing public. The only institutions that could provide the necessary money are the Canadian banks. They control practically all the savings of the people, and gather it together through their branch banks, so that it can be used for just such purposes as effecting mergers. That it is used for such purposes is unquestioned. Whether it should be so used, is a question for you to answer. There is a prevailing impression which is entirely justified by our banking laws as they now stand, that banks are private business concerns, that have a right to do whatever they like with the money entrusted to their care. Why this impression should exist, I fail to understand. The banks do business because of certain privileges granted to them by the people, and they do business almost entirely with the people's money, which they receive in the form of deposits. At present, the money of the people deposited in the banks exceeds the capital stock by about eight to one. This means that when a merger is being put through, they use eight dollars of the people's money for the purpose to every one of the shareholder's money. Such being the case, it looks to me as if a bank were almost as much a public institution as any department of the Government. But besides operating with the money of the people, their operations affect all the people—from the lowest to the highest. Does it not

seem reasonable that the people should have something to say about how the money of the country should be used? Yet they have absolutely nothing to say. All they can do at present is to deposit their money and await the result in a resigned spirit. They do not seem to realize that when a merger is put through that hits both producer and consumer alike it is their own money that is used for the purpose.

In several letters I have received from shareholders in banks that have failed, the writers spoke of themselves as "Innocent Investors." I sympathize with them entirely in their misfortunes, and yet I do not regard them as "Innocent Investors" in the sense in which I have used the phrase. If they choose to put their money into institutions over which they cannot very well have control, and which are not open to outside inspection, they are making a mistake of judgment for which they are in a measure to blame themselves. I also find that these men almost invariably believe that the Government is back of the banks and inspects them regularly. The sooner they rid themselves of this delusion, and see to it that the banks are inspected by the Government, the better it will be for them. They should not forget that, during twenty-six years 25 per cent. of our Canadian banks have failed, owing to mistakes in judgment, or, worse, on the part of managers and directors. Government inspection would bring to light the mistaken or reckless work on the part of bank officials, and prevent most of the failures that have been so disastrous to the country in the past. The depositors should also agitate for outside inspection, because it is their money that is being used and their money that will be lost if a failure occurs. But most of all, the whole mass of the people should see to it that the banks are so inspected that the possibility of a failure will be reduced to a minimum, and that the money of the country be not used to give countenance or assistance to schemes that tend to enrich the few and rob the many. Capital has been well called "the life-blood of the nation," and it should be so managed that it will nourish all parts alike.

The Bank Act is to come up for revision during the coming year. Whether you are a shareholder, depositor, or just a private citizen without a bank account, you should see to it that your representative in Parliament does what he can to have the Bank Act revised in such a way as will safeguard the rights of the people. I have had letters from members on both sides of the House, both French and English, saying that they are in favor of a revision that will provide for outside inspection of the banks, and that will limit the power of these institutions to finance schemes that are against public policy. It is not a question of politics as it stands, and, no matter which side your member may be on, you should urge him to act. Canada is a vigorous country, but it is not strong enough to carry the growing burden of Innocent Investors who must have dividends paid on stocks that would never have existed under a proper financial system. Besides, it cannot stand the shock of such bank failures as we have had in the past, and may have in the future, unless the banks are properly inspected.



The Juggler.

Producer to Consumer—I produce these for a living. You spend all you make to pay for them, and this follows pockets the difference. It's a pity we couldn't freeze him out.

A Certain Mindfulness.

A distinguishing characteristic of this and all other Christian lands is man's love of family and home, and his care for their welfare. But does it ever strike you that this praiseworthy solicitude, in its practical outcome, is often marred by a serious limitation?

Does it always go to the length, not only of suitably providing for the needs of those dependent on him down to the time of his decease, but for the trying period immediately following, as well?

For instance, to take your own case, have you made your will? Have you provided that, in the event of your being rendered by sudden illness or accident incapable of attending to business, your life and fire insurance policies will be kept in force by punctual payment of premiums?

These and some other matters in the same connection will surely bear a few minutes' consideration; and if you will permit the hints we venture to give regarding them to really come home to you, it may be that you will think it prudent and possibly even your duty, to act upon them. For it is very possible that, without any consciousness of being remiss in respect of these matters, some of them have escaped your attention.

Your will, for instance: Just one cogent reason, out of many, for making it is that, in the event of your dying without one, your widow, in order to obtain the legal right to administer your property, would have to ask friends to become sureties for her to the Surrogate Judge, or go to the expense of procuring the bond of a guaranty company, or, it may be, incur the expense of having a trust company administer the estate. All this may be avoided by a simple will and the appointment thereby of an executor. And it ought to be attended to now—not left until you become seriously ill. You might not then be able, either mentally or physically, to give it proper consideration. Nor ought it to be delayed in order that your affairs may be got into just the shape you would like to have them in for the purpose. That stage in your experience will possibly—even probably—be never reached. There is a superstition with some that to make one's will is to invite death. A most absurd notion! Logically, it ought rather to prolong life, seeing that it does away with one less cause for mental worry. While you are well, go to your solicitor, and have him prepare the document for you. His fee for an ordinary will should be \$3 to \$5. And it will be money well spent. If circumstances are such that you cannot readily obtain a lawyer's services, then attend to the matter yourself. Put down, in simple language, just as though you were writing or speaking to a friend, just how you wish your property to go and who to be executor. Do not attempt technical words or phrases. Mention in the document that it is your will; date it, and add your usual signature. When signing, have two witnesses present, and, while you are all together, have them sign opposite your signature, telling them, of course, that it is your will they are witnessing. Do not use for witnesses any persons who are intended to be benefited by the will. A will is specially desirable, and in most cases indispensable, where there are children, and where it would not be convenient that estate moneys should be tied up until they respectively attain the age of 21 years, but, on the contrary, could be utilized to much greater advantage for their suitable maintenance and education during their minority.

Reference has been made to life insurance and prevention of lapse of policy. In view of the fact that your executor is legally allowed a year in which to administer the estate and pay legacies, a convenient way of providing ready money for the use of your family is to have at least one policy—even if a small one—made payable direct to your wife, rather than to your executor. More convenient still is a bank deposit in the names of yourself and wife, jointly. While you both live, either could draw checks against it; and, upon the death of either, the survivor could continue to do so. Some such arrangement is important, for even if your widow or some other member of your family be your executor, some time must necessarily elapse before probate can be obtained, and with it the right to use cash or render your bank account available.

There are many matters that a prudent husband and father will attend to, have regard to the situation of his family upon his death, and, in order to their being spared perplexity, and perhaps disappointment.

Your wife, or some other member of your family, or your solicitor, ought to be kept informed—at least, in a general way—of your property, investments and business, and where the books and papers pertaining to same, and to your accounts generally, are to be found.

Destroy from time to time all papers that have ceased to be of use, and so save your executor time and trouble, and perhaps uncertainty, as to the seeming extent of your estate. But

make a point of keeping in an alphabetically-arranged portfolio, or some other orderly manner, your receipts and returned cheques.

Always, you ought to keep an itemized inventory of your furniture and its value, and revise same from time to time, so that you or your family, in the event of fire, may have the necessary information for the insurance adjuster.

The object of this article has been served if we have induced you to think about the subject in a practical way. A little real consideration of your affairs, and the situation your family would be in regarding the same, in case your death should unexpectedly occur—say a week hence—will suggest to you, in addition to the foregoing, other matters that ought reasonably be attended to in the interest of those near and dear to you, and who are depending with fullest confidence upon your having your affairs in reasonably good order for the event that is bound to come some time, and may come any time. C. G. J.

Rural Mail Service.

In expectation of wisely-contemplated developments in the rural-mail delivery system of Canada, "Farmer's Advocate" readers will appreciate information regarding the manner of service that ought in due time to be afforded them. Something has been learned by experience already. We have, fortunately, also available, the results of 15 years' growth of rural delivery in the United States, under conditions very similar to our own, by which to profit. The general jurisdiction of the American service is from the Postal Department at Washington, under P. V. De Graw, Fourth Assistant Postmaster-General (Division of Rural Mails). A similar office, but under another name, is contemplated at Ottawa.

Having begun, the service is bound to grow. There will be no going back in Canada. The States started in 1897 with 82 routes and an expenditure of \$14,840, which grew to 41,656 routes and an expenditure of \$37,126,812 in 1911. Last year the maximum salary of rural carriers was increased from \$900 to \$1,000, graduated according to mileage, six miles and less than eight being \$440, on up to twenty-four miles and more, \$1,000. There was a net increase of 577 routes during the year, the petitions rejected being because of insufficient patronage and bad roads, chiefly. The total routes covered a total mileage of 1,007,772. By careful estimate, the weight of mail last year delivered on rural routes was 296,168,779 pounds, and collected 11,377,819 pounds. Out of the vast army of carriers employed during the year, only 222 were dismissed for cause. Six years' consistent and careful observation has convinced Mr. De Graw that the standard of examinations for rural carriers should be raised, in order to secure a higher class of employees, and that the salaries should be automatically increased 5 per cent. after five years' service, and 10 per cent. after ten years' service. It is also recommended that the yearly vacation period for carriers be extended from 15 to 30 days.

It is further advised, in the last report, a copy of which we have just received, that there be uniformity in boxes on "Rural" and "Star" routes, with accommodation for packages that may be carried by parcel post; suitable automatic arm attachments, posts of uniform size and painted white.

As officially defined, the general purpose of the U. S. rural delivery is to carry and collect mails on a fixed line of travel to and from people who would have to go a mile or more to a post office for their mails. Persons residing within the corporate limits of a city or town having a post office, or living within less than one-quarter of a mile of a post office in localities where no corporate limits exist, cannot be served by rural carrier except by specific order of the Department. An exception is made in case of persons outside of city or town delivery service limits, but living within the corporation. Routes are to be so arranged that the carrier will not be required to retrace or travel over the same road twice per day, and extensions are not made to accommodate patrons living reasonably near the road regularly travelled. Routes are established on petition; for a 24-mile route, six-times-a-week service, signed by 100 heads of families; shorter routes by a proportionate number. More than one family, but not more than five, may use the same box, provided signed written notice of agreement to that effect is filed with the postmaster at the distributing office. The use of locks is encouraged, but are not imperative. If they are used, the carrier must be furnished with keys. Patrons must bear the cost of boxes approved by Department, and placed by the roadside so that the carrier can have easy access without dismounting from his vehicle, and yet without obstructing traffic. When a proper petition is lodged for a delivery, a post-office inspector visits the locality and drives over the proposed route, making a sketch with report to the Fourth Assistant Post-

master-General, who takes action; and, if authorized, the Civil Service Commission establishes a list of persons eligible for the position of carrier. If roads are not kept in passable condition all the year round service may be withdrawn. Wherever practicable, it is desirable to establish the service from post offices located on or near a railroad having a good railway mail service.

Rural carriers are required to deliver to the box of a patron all mail addressed to his family, and collect all mail deposited in the box for despatch. They are not required to collect loose coins placed in the patrons' boxes for payment of postage, but will collect such coins when securely wrapped or placed in a coin-holding receptacle. Registered matter and pension letters, which must be delivered in person to the addressee, and special-delivery letters, the carrier is required to deliver in person at the patron's door, if within one-half mile of the route. Rural carriers are required to carry a sufficient supply of stamps, stamped envelopes, postal cards, and newspaper wrappers. They are empowered to receive matter for registration, giving proper receipt therefor, and to accept money for the purchase of money orders, for which receipts must be given to the patron. Rural carriers may carry packages of merchandise for hire, for and upon request of patrons, provided such matter is not mailable and its handling will not delay or in any manner interfere with the mail service. Carriers are not permitted to leave their routes while on duty to receive or deliver such merchandise. They are not permitted to receive orders or solicit business for any person, firm or corporation. The 1-cent rate on drop letters does not apply when such letters are collected or delivered by rural carriers. Drop letters so collected or delivered must be prepaid at the rate of 2 cents for each ounce or fraction thereof.

The United States rural-delivery system is costly, no doubt, the outlay for 1911 being, as stated, over \$37,000,000, the postage collected amounting to nearly \$7,570,000, the excess of cost being some \$29,500,000, but the great value of the service to the citizens of the nation, chiefly the agricultural classes, is attested on every side. It is not necessary that it should be, directly, a paying branch of the postal service, but its revenues can be greatly increased, and the accommodation of farmers and business men vastly promoted by the establishment of rural parcel delivery, as yet unavailable because of the prohibitive U. S. rate of postage and weight limit on merchandise. That it cannot be very much longer delayed seems a foregone conclusion.

HORSES.

Remember, when breeding your mares this season, that the big type of drafter is the horse in demand. A small draft horse usually brings a correspondingly small price.

Over-exertion should be carefully avoided in the spring work. This is especially true of the newly-broken colt whose muscles are not sufficiently developed to put the same amount of stamina and endurance in him as we look for in the older animals.

Frequent short rests or breathing spells are much more beneficial to the horse during seeding than longer periods at greater intervals. Always allow the horses to face the breeze where possible, and while they rest hold the collar away from their hot shoulders for a few minutes, at the same time rubbing the shoulders with the hand. This cools the parts which come in contact with the collar, and the rubbing cleans away the sweat and gummy matter, going a long way toward preventing scalding and sore shoulders.

Present-day horse prices do not indicate over-production of suitable animals, neither do they point to waning of popularity or utility of this class of stock. Recently, at a sale in Oxford County, Ontario, draft teams sold for as high as \$625. It is said that the United States is short of heavy-drafters, and that prices of from \$200 to \$500 each do not bring out enough animals to supply a growing demand. The Canadian West is ever in need of an increasing number. Carload after carload goes West every spring, until Eastern Canada finds herself none too well supplied with horses to work the land and supply city trade. Such conditions should prove a good incentive for horse-breeders, and every suitable farm mare should be mated with the best type of stallion in the district. It will be found far more profitable to breed the mares than to sell them for work in the cities. As soon as a mare enters upon city dray work, her chances of ever becoming a maternal value to her race are practically nil.

Veterinary Prescriptions for Farm Use.

ABSORBENTS.

Absorbents are medicines or mixtures that increase the activity of the absorbent system and tend to reduce chronic enlargements. Their action is especially marked in cases of enlarged glands, but they usually give good results in most cases of enlargements, as enlarged joints, tendons, and, in some cases, even bone; in bursal enlargements, as hog spavin, thoroughpin, puffs at fetlock or other joints, etc. They are sometimes (especially in cases of enlarged glands) administered internally, and applied locally. The active principle of most, if not all, absorbents is iodine, or some of its compounds. When internal absorbents are given, iodide of potassium is generally used and given in one-dram doses two or three times daily. If this causes a loss of appetite, the dose should be reduced to 40 grains, but most horses can take dram doses without danger of untoward results.

There are many different combinations of drugs used for external application to produce absorption, but all contain a considerable percentage of iodine or its compounds. Any of the under-mentioned mixtures act well:

- Binioidide of mercury—2 drams.
- Iodide of potassium—2 drams.
- Water—8 fluid ounces.

- Tincture of iodine—2 fluid ounces.
- Iodide of Ammonium—1 ounce.
- Alcohol—12 fluid ounces.
- Water to make—1 pint.

- Iodine—4 drams.
- Iodide of Potassium—4 drams.
- Alcohol—4 fluid ounces.
- Glycerine—4 fluid ounces.

A little of whichever prescription is used should be applied with smart friction once daily, and, as the action is slow, the daily application should be continued for a considerable length of time. If a blistering action is produced, the application should be discontinued for a few days, and a little sweet oil applied daily in the meantime, and when the parts again become smooth, the absorbent should be again applied.

ANODYNE LOTION.

An anodyne lotion is used for the purpose of allaying local pain and inflammation. In cases of sprains, bruises, acute inflammation of a joint, etc., there is usually acute tenderness and pain in the early stages. It is usually evident that counter-irritation, more or less severe, by the application of liniments or blisters, will eventually have to be resorted to, but it is not wise to apply a counter-irritant during the acute inflammatory stage, and hot applications and anodyne lotions are usually employed to allay it. There are many lotions of this nature, but probably the following simple one is as good as any:

- Tincture of opium—3 fluid ounces.
- Chloroform—1 fluid ounce.
- Acetate of lead—1 ounce.
- Water to make—16 ounces.

The inflamed and tender parts should be well bathed frequently with hot water, and, after bathing, the lotion should be applied. Any arrangement by which cloths or batten saturated with the lotion can be kept in contact with the parts, without pressure, will give good results. Of course, pressure or friction with the hand must be avoided, as the parts are too tender to stand pressure. For the reduction of local inflammation, bathing with either hot or cold water gives good results. Hot water soothes the irritation and tenderness more quickly than cold, but cold water reduces swelling more quickly. Warm water gives practically negative results; the water should be either hot or cold.

OINTMENTS.

Ointments are for local application, are of the ordinary consistence of butter, and consist of different medicinal ingredients mixed with oils, fat or wax. They are used for dressing wounds, cracked heels, etc., especially in cold weather, when the constant application of the white lotion mentioned in a previous issue causes so much dryness of the parts that there is danger of the skin cracking. In such cases the application of an ointment is either alternated with that of the lotion or used entirely. For purposes of this kind, the oxide of zinc ointment is generally used and gives good results.

- Oxide of Zinc Ointment.
- Oxide of zinc—80 grains.
- Lard or vaseline—1 ounce.

These ingredients are gradually mixed at a heat of about 120 degrees Fahr. The ointment can be purchased from any druggist at a reasonable price, and this is cheaper than it can be made in small quantities, as, unless properly made, it does not give such good results.

An ointment that is used for the same purposes as the above, and is especially valuable for sore teats in any female, cow-pox, etc., is made of

- Boracic acid—4 drams.
- Carbolic Acid—20 drops.
- Lard or vaseline—2 ounces.

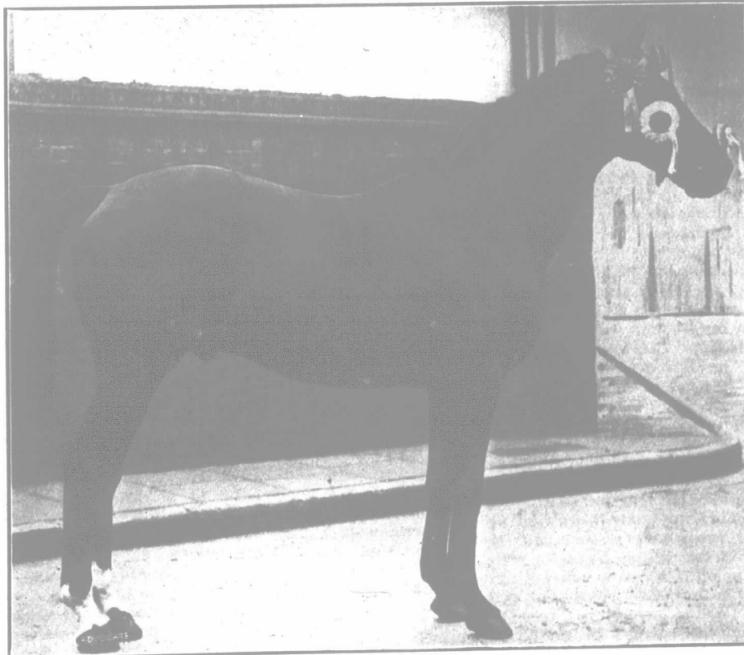
Ointments are applied two or three times daily with the fingers, and have an advantage over lotions in the fact that they are more permanent, do not run off or evaporate so readily, but have the advantage of collecting dust, chaff, etc., and especially in dry, dusty weather, of collecting dust which, in cases where there is much motion (as in case of cracked heels), acts as an irritant.

A mixture often used as a substitute for ointments is 1 part carbolic acid to 24 parts sweet oil or raw linseed oil. This, of course, makes a 4-per-cent. carbolic-acid mixture. It can be made either stronger or weaker, as desired. This mixture, or a water solution of carbolic acid, called "carbolic lotion," is especially serviceable for dressing wounds or sores in which there is danger of fly-blow. In case a wound has become maggoty, the lotion or oil may be used as strong as 10 per cent. carbolic acid. "WHIP."

(To be continued.)

A Few Rules for Horsemen.

Dr. W. J. Fowler, of the Ontario Veterinary College, speaking to teamsters and horse-owners in the Labor Temple, Toronto, among other things, gave the following rules of management: See that your horse has a bed.



King's Courtship.

Thoroughbred stallion. Winner of the King's Champion Challenge Cup, which His Majesty presented at the London Thoroughbred Show, March, 1912.

Watch your horse's teeth, and, if he has any too long, saw them off.

Water your horse before feeding him. Water, hay and oats is the order.

Feed a draft horse 15 pounds of hay a day, or less. The majority of people feed too much hay.

Don't let your horse have much water when he is overheated.

In grooming, curry him every way.

Scrape off all bot-fly eggs with a knife.

Leave him his forelock, mane and tail, but trim them, if necessary.

Dry your horse's feet at night; wash them in the morning.

See that no nails get in his feet.

In harnessing, keep the backband back from the withers.

Shoe your horse regularly, but do not allow the blacksmith to rasp off the outer edge of the hoof, which should act as varnish does on a pine knot.

To prevent the shoulders of a green horse from scalding, raise his collar periodically and thoroughly dry his shoulders.

Percheron Importations.

During 1911, five hundred and forty Percheron horses were imported into Canada. Of this number, 117 stallions and 8 mares came from France, and 192 stallions and 152 mares from the United States. The horses coming from the United States, at a conservative valuation, were worth more than a quarter of a million dollars. The trade is increasing in 1912. Between January 1st and March 25th, 1912, one hundred and sixty-nine Percherons were imported from the United States, and there seems to be every probability that Canada will import from the United States during the present year Percheron horses to the value of upwards of one-half million dollars. Most of these horses are being imported by farmers in the West. Horses are needed in that fast-developing portion of the Dominion, and the horse trade between the two countries is likely to continue to flourish.

LIVE STOCK.

Now is the time to provide forage paddocks for the pigs. A clover plot or a small rape plot on which the pigs can run and feed is a great advantage in summer feeding.

The man who raises his own cattle to feed can usually make better returns from feeding young cattle, while the feeder who buys his cattle gets greater profits from feeding heavier stock, owing to the spread in price working on a greater initial weight.

The value of various grain mixtures for fattening wethers for show-yard competition has been studied for three years by the Animal Husbandry Department of the University of Wisconsin. Each year, four lots of wethers were fed, as follows: Lot 1, five parts oats, four parts corn, one part wheat bran. Lot 2 had peas substituted for the corn; Lot 3, barley in place of corn; Lot 4, five parts oats and five parts barley. Each lot received, in addition, the same quantity of clover, hay, cabbage and roots. On the basis of awards made at the International Live-stock Exposition, where the sheep were shown yearly, Lot 2 was first; 3, second; 4, third, and 1, fourth. Lot 1 showed a tendency to produce a soft, flabby carcass, the fat being deposited largely on the exterior of the body, while Lot 2 showed carcasses in which the fat and lean were well mixed and the flesh was of firm texture and of the desired cherry-red color that meat experts demand. There is a point here for sheep-

fitters: Avoid corn in large quantities in producing a show carcass.

Provide some system of marking the lambs soon after birth. This is necessary with pure-bred sheep, that the pedigrees be kept accurate, and would also prove valuable in case of grades, as the breeding value of every ewe in the flock could be easily estimated. A system of ear-notching is the best plan, followed by substantial ear-tags at weaning-time.

How many brood sows are you discarding this spring because of high prices of grain and comparatively low prices of pork during the past winter? Think before disposing of them. Many useful brood sows will doubtless be slaughtered, and the outcome will be high pork prices next winter. Light runs of stock in the market insure high prices.

Allowing the stock to wander over the meadows in the spring, before there is any pasture, is a practice to be discouraged. They are likely to eat a quantity of old, dry, frozen grass, which

may cause indigestion and bloating, and the tramping over the meadow punches it full of holes, and destroys much of the sod, to say nothing about the setback it gives the grass. Keep the cattle confined in the barnyard until pastures are ready for use.

Crippled and Uncrippled Hogs.

Editor "The Farmer's Advocate":

You ask for experience with crippled pigs, and as we have had considerable experience with both crippled and uncrippled, we give this to your readers.

Our experience of late years has been almost altogether with the bacon hog. We do not breed our own pigs, for various reasons, but prefer to buy them at five or six weeks of age. Having had experience with many breeds, and no breed, we prefer a Berkshire-Yorkshire cross, or a Tamworth-Berkshire cross; if pure-bred parents are used, all the better. To get strong, healthy pigs, not inclined to cripple, we like to get them from farmers who are good feeders, as starved parents, and especially sires, are almost sure to produce pigs which will not stand heavy feeding.

We may say we never saw a crippled pig while we fed our home-grown grains; but whenever we started to feed mill feeds, and especially the ground bran, called shorts, trouble began. Some of the pigs would get crippled—those with the weak constitutions first, next the greediest pigs; then the uncrippled would attack the crippled, and would soon kill them if they were not removed. Many a pig we have carried out of the pen to save its life and cure it (for they can be cured).

Many years ago, in "The Farmer's Advocate," I read a debate on "Which was more profitable, growing corn or roots?" The champion of the roots had one strong point. He said, "Raw potatoes will cure crippled pigs." At that time I had never seen a crippled pig, but I said to myself, "Put that in one corner of your memory; you may need it some day." And so, when I carried out my cripples, I fed them raw potatoes and buttermilk, and they soon recovered. But prevention is a lot better than cure, and I commenced to experiment with different kinds of feed, so that I would have no cripples. A great deal of nonsense has been written on this subject, writers advocating a lot of exercise, condemning cement floors, cold houses in winter, and so on; but the best pig-feeder I ever knew had a little pen, made of one-ply rough lumber, on the north side of his barn. The pen was for one pig, and was about three feet by eight; and when the pig could not turn around in the pen he knew it was big enough to kill. His secret was he always warmed the feed.

We have now twenty pigs in a pen 22 by 14, with cement floor sloped to the center and also to one end, with an oak plank eight inches wide by two inches thick placed on edge to make a box to hold the straw for a bed in the highest corner; and a healthier lot you never saw, the fat fellows picking the coolest places of the cement on which to lie. Their trough is also cement, 22 feet long, placed outside the pen in the feed passage, so that the feed can be mixed in the trough, and in this way twenty pigs can be fed in less time than two the old way of mixing in pail or barrel. The trough is six inches high, and the partition, 18 inches above this, is hinged so that it swings up to let the pigs to their feed, and is fastened in place by two short boards fitting across the trough. In this way, a man with a white shirt on can feed his pigs, or a boy five years old can feed them, as feed and water are close to the trough, and the next feed can always be mixed as soon as the pigs are fed. This is an invention of which we are very proud, and it is not patented. This device is handier than a set of scales, also, as we know they are about two hundred pounds each when the twenty fill the trough.

Now, to go back to our system of feeding. When we get the little pigs home, we give them milk fresh from the cow, in which is mixed a little barley meal for a few days, so that they do not receive a check at weaning-time; then change to skim milk or buttermilk, if we have it, if not, water, continuing the barley meal, as much as they will eat, till they go to the packer, at about six months old. They are also fed a large chaff-basket of clover leaves daily, which drop off the hay; also, if we have them, about two pounds each small potatoes, raw, as we think the raw potatoes kill the large white worms which sometimes cripple pigs. We use to give the drink first and then dry meal, but get better results by mixing the meal with the drink. We like winter feeding better than summer, as our pig-house is warm, and pork prices are higher and feed cheaper. We have never had a crippled pig when fed barley alone, but this year we could not get barley enough, and three crippled. We put the three in a little pen 5 x 10, with cement floor, stopped the shorts and fed ground oats and potato peelings and waste from the kitchen, when they soon recovered.

A word about the market for bacon hogs. The

packers do not care anything about cost of production. They are like a Montreal butcher with a drover, who was offered less than cost for his cattle, and, protesting, the butcher said: "We do not care what you paid; we do not care if you stole them." The only thing that moves the packer is when supplies are so small that butchers need the most of them. Now, most farmers are not business men, and so do not know what their produce costs; but what good would knowledge do them? They are the only manufacturers who have no say about the price of their goods. They should have cost and a fair profit, or let the middleman produce the goods. As to the cost of the bacon hog, with feed a dollar a hundred, little pigs a dollar and a half each, and live hogs five and a half cents, we had two dollars a hog for labor, skim milk, potatoes, etc. This year we have sold at eight cents, and only come out about even, as feed has been so dear. Next fall will see dear pork, as farmers won't buy expensive feed this summer, and the city man who likes breakfast bacon had better buy a little pig now and feed it for himself in the cellar, and then he will cease railing at the farmer about the high cost of living.

J. W. ROSE.

Baby Beef Feeding.

In the Montreal market reports, during the week of Easter trade, we noticed that some calves sold as high as eleven cents per pound. These calves were fed by McDonald Bros., of Ontario County, Ontario, so we wrote to them to give us a short outline of their feeding methods, and received the following letter:

"In reply to your inquiry for information in regard to the calves bred and fed by us, and which sold on the Montreal market for 11 cents per pound, we would say that they were bred



Broadhooks Cardinal.

Shorthorn bull; born February, 1911. Second in class at Birmingham Spring Show, March, 1912, bred by Lord Lovat, sold at auction for \$4,400, to D. MacLennan.

from good milking grade Shorthorn cows, and sired by a thick-fleshed, early-ripening Shorthorn bull. They were calved the last of May and the first of June. They received no hothouse treatment, but were run in pasture with their mothers. About the middle of August they were turned into rape, which furnished an abundance of feed until it froze up. On stabling, the calves were run together in a stall loose. They were fed twice a day, the six calves getting about sixty pounds of roots and 18 pounds barley and corn meal, with all the hay they would eat up clean at each feed. They were turned out each day to suckle their mothers, and were allowed to remain out for from one to three hours, according to the weather. These calves made an average of 725 pounds at the shipping point, and, while this is not a heavy weight for the age, they were of that sappy, extra-fleshy kind which is demanded in this particular kind of stuff.

"NEIL McDONALD."

It will be seen that these calves were only about ten months of age, and at the weight and price given would bring the dealer \$79.75 each, which is more than many three-year-old cattle will sell for. We note, also, that these calves were from milking Shorthorn cows, which proves again that, with the right class of bull, the beef type can to a very considerable extent be combined with milking qualities. This is a good illustration of the fact that it pays to produce the best, and also, that there is still profit in beef properly fattened.

Feeding Cattle in Brant County.

Commenting on the cattle-feeding situation during the past winter, Robert Cochrane, of Brant County, Ontario, placed the number of cattle fed on the farms in his section of country at four for every hundred acres. These cattle, as the small numbers would imply, were nearly all raised on the farms. The few that were bought cost from 4½ to 5 cents per pound when placed in the stables last fall. A large proportion of the cattle were very light, weighing only from 600 to 700 pounds, and of very poor quality. A few lots of export cattle were fed, but were turned off in a half-finished condition at from 5½ to 6 cents per pound. Most of the lighter cattle were for local trade, and were sold before being finished at from 5½ to 6 cents per pound. One stable of export cattle which were bought last fall for about 5 cents per pound, were sold for spring delivery at 7 cents per pound, leaving a 2-cent spread. Ordinarily, Mr. Cochrane considered 1½ cents per pound a fair spread, but, to make a satisfactory profit, with feed as high in price as it has been this season, he believes 2½ cents margin is necessary. From his own experience, he thought that greater gains could be made with young cattle, citing a case of two pure-bred calves eight months old, which he bought and fed 4½ months, along with one of his own raising, during which time they made an average gain of three hundred pounds. They were then turned on grass and received no feed until corn was fit for fodder, when they were again stall-fed. The meal fed was two-thirds barley and one-third wheat. Each calf got a gallon at a feed, together with one-half gallon of bran. As soon as mangels were ready to feed, each calf received a scoop-shovel full of these at a feed. At the end of twelve months their weights were 1,290 pounds, 1,330 pounds, and 1,380 pounds, respectively. Nine cents per pound was refused for these cattle for last Christmas trade, as they were kept for a short course in stock-judging. The calves made the best gains the first winter, according to meal fed. The cattle were sold in March at 8 cents per pound, two of them weighing 3,000 pounds.

Very little oilcake or cottonseed meal is fed in this district. These calves did not receive any. Good ventilation he believes necessary. He has a pipe arranged on the outside of the basement wall, starting within a foot of the ground, and extending up over the wall into the stable, the end covered with cheesecloth to prevent draft. Outlets were constructed up through the roof.

We wonder if all the cattle-raising districts of Canada marketed four beef cattle per 100 acres during the past season? Even if they did—and we have every reason to believe that such was not the case—it seems a very small number to be turning off. Nine steers were fed off "The Farmer's Advocate" farm of 112 acres this winter, besides some veals and the maintenance of a herd of twelve to fifteen dairy cows. Such results as Mr. Cochrane obtained with his young feeders can be duplicated on thousands upon thousands of farms in Canada, and, where such prime quality is produced, beef pays.

Rations from Single Plants.

In experimenting on young heifers in feeding chemically-balanced rations from single plant sources, the Agricultural Chemistry and Animal Husbandry Departments of Wisconsin University, found that animals so fed reached physiological maturity and underwent the strain of reproduction, but mothers fed solely with wheat nutrients produced weak, undersized calves and maintained a low milk production; while those receiving rations made from corn produced large, vigorous calves and maintained a high milk flow. Rations from oats did not prove so effective in maintaining the vigor of the young as those from corn, but were more satisfactory than those from wheat. A mixture of all three types of nutrients gave results nearer those obtained with wheat, contrary to the popular opinion that a varied ration produces best results. It was proven impossible to change an animal matured

on the exclusive corn ration to the wheat ration, without death ultimately occurring. On the other hand, a mature wheat-fed animal could be changed to the corn ration, with marked improvement. The results make it apparent that physiological efficiency in feed is far from uniform, and so far as cattle are concerned, leave no doubt as to the disastrous effect of exclusive wheat rations.

THE FARM.

Knots, Splices and Ties.

Editor "The Farmer's Advocate":

Scarcely a week passes when some of these splices, hitches or knots could not be used to advantage. There are occasions when, to know how to make a splice would save both time and money. The hay-rope breaks when it is most needed, and if the directions here given are carefully studied, anyone will be able to mend it himself, saving a trip to a neighbor's or to town.

The following knots and splices are most practical, and after a person learns to make them, a number of different uses can be made of these knots and splices, enabling the farmer to make halters and slings for throwing animals, and other similar, useful articles.

The Bowline Knot.—This knot is most useful and important, as it will not slip and is easily untied. In learning to tie it, a ring (r) should be at hand, through which the rope is passed. First, make a loop (b) in the standing part of the rope two feet from the end (a). Pass (a) through the loop (b), and around the standing part (c), as shown in figs. 2 and 3. Then bring the end back through the loop (b), as in Fig. 5. Draw the knot down by holding (c) in one hand and (a) and (e) in the other, and giving a slight pull. Fig. 4 is the reverse of Fig. 5.

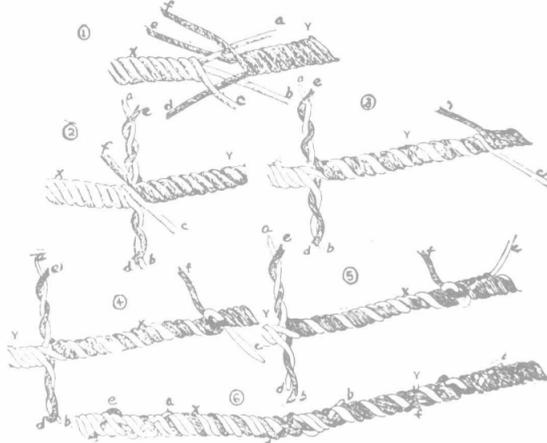
The Eye Splice.—This is used in making an eye or loop in the end of a rope. It is useful in making halters. To make the eye splice, untwist the rope about six inches at one end, then double it to the size of the eye desired. Arrange the strands as (a), (b) and (c) on the main rope (x) Fig. 1. Let the middle strand (a) lie on (x); now, holding the loop in the left hand, raise one of the strands on (x) on the side nearest (a). Push (a) through under the raised strand (see Fig. 2). Now put strand (b) under the next strand beyond the one (a) is under (Fig. 2). Next, turn the rope back, raise the third strand in (x). Bring (c) down past this strand and then up under the strand in the direction taken by (a) and (b). Each loose strand should be under one strand of the main rope. No two should be under the same strand or come out between the same two strands. Now splice the three strands in the same manner.

The Long Splice.—This is by far the smoothest splice, and will run through a pulley as easily as the remainder of the rope. It is the least known and the most important of all splices for splicing hay ropes. To make this splice, the strands are unwound about two feet. The ends are placed together, with each strand passing between two strands of the other rope. One strand from each rope is used. The others are twisted together (Fig. 2). Then, one strand (f) in rope (y) is unwound, and the corresponding strand of the other rope (c) wound in its place. Do not unwind too far before (c) is started. Then continue unwinding (f) and winding (c) in its place, keeping (c) tightly twisted until within three inches of the end of (c). Then draw (c) and (f) together as in Fig. 3. Now tie (c) and (f) with a simple overhand knot (Fig. 4), drawing the knot down firmly into the groove which (f) occupied. Next, splice (c) into (f). This is done to securely fasten the ends. Now turn the rope around, taking the rope (y) in the left hand, untwist (a) and (c), and unwind and fasten them the same as with (c) and (f), unwinding (a). After (a) and (c) are fastened, untwist (f) and (d); fasten right where they are by crossing, tying and short splic-

ing, the same as was done with (c) and (f) and (a) and (c). After (b) and (d) are fastened, cut off all the ends. If no mistake has been made, a smooth splice is obtained.

The Half Hitch.—This is used for fastening the end of a rope to a post. By referring to the illustration of the half-hitch, it will be seen that it is tied so that the pull on the end of the rope is against the end next to the log; thus, the harder the pull, the tighter the hitch becomes. In using the half-hitch, several should be made, one above the other, making it impossible for the rope to slip in case the tension is relaxed.

Illustrations reproduced from I. H. C. Almanac. DANIEL CLARK. Kent Co., Ont.



The Long Splice.

Dry Farming in the East.

Editor "The Farmer's Advocate":

Farmers in Ontario, on reading accounts of great "Dry Farming" conventions, at which reports are given of the remarkable yields obtained by adopting this system, almost wish they were out West, where crops can be grown, as some suppose, without rain. This is particularly the case after a summer like that of 1911, when many of our field crops suffered severely from a scarcity of moisture. Burbank, the great scientist, is endeavoring to obtain a spineless cactus capable of growing and supplying fodder in arid regions, but as yet his efforts have not been crowned with success. However, such a plant may come, but until then we must do with those we have. The epithet, "dry farming," is a misnomer, and the idea that moisture is not required is a very erroneous one, for "dry farming" really means "wet farming," as we shall see later. Dry farming is practiced most extensively in Alberta and some of the Western States, but the principles can be profitably applied in Ontario.

In the southern part of Alberta the rainfall is 12 to 15 inches annually, with the heaviest rains occurring in May and June. In Ontario, the average precipitation is 13 inches for the five growing months, April, May, June, July and August, and then we average over 13 inches for the other months; whereas, in Alberta, they have very little snow or rain during this period. Surely we never should have crops suffering for want of rain here.

With the doctrine of Campbell, the apostle of the dry-farming movement in practice, every possible method of conserving the moisture in the soil is put into use, so that, when the rainy season is over, the surface of the ground is not allowed to remain packed, thus facilitating the evaporation of the moisture the soil contains. Where steps are taken to secure and retain the rain, the supply of water is usually sufficient for an abundant crop.

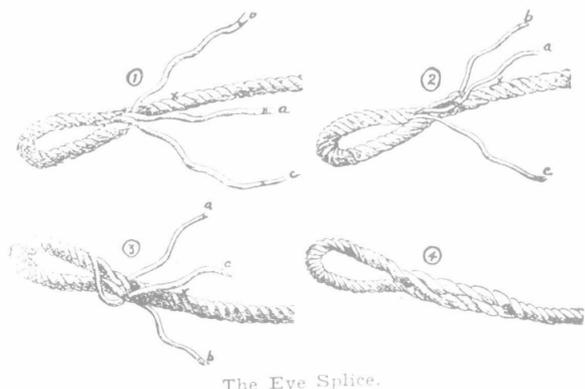
The first step in applying this dry-farming theory in Eastern Canada is to underdrain well. To say that one must drain off the surplus water if more moisture is desired, may seem paradoxical, but it is true. Soil that is loosened up, especially a clay or clay loam, will hold a larger percentage of water when underdrained than when it is not. This is because the excess of water in the soil, above that amount which it will hold without appearing muddy, would cause it to run together, thus expelling part of this absorbed water. In the West, with their smaller rainfall and soil of different texture and porosity, underdrainage is not necessary, but in Ontario it is essential, and more and more are being convinced of this every year.

Law No. II. for Ontario, or No. I. for Alberta, is to plow deeply. In Ontario, this would be done in the fall. In case the fertility of the subsoil is doubted, the depth of plowing should be increased gradually from year to year. The idea in deep plowing is to loosen up a large amount of soil, to act as an easily-filled reservoir when rain or snow water does come, and also to keep it there or let it gradually soak into the subsoil. The space for the roots is also increased, and they obtain more plant food, first, because they go more deeply into the soil, and, second, the oxygen of the air has freer access to the soil, thus aiding the soil bacteria in liberating plant food, in preventing the destruction of the nitrates, which are very valuable foods, and in carrying away the impurities given off by the roots.

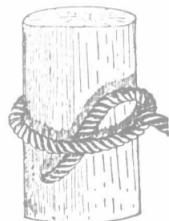
The grain crops are sown here in April and May. Nearly 5 inches of rain falls in these two months. If the grain were sown and the ground not touched gain, the first heavy rain would put a crust on the surface, and it is obvious that much of that and the subsequent showers would be lost. To prevent this, use a light harrow or weeder as soon as possible after the shower. Many are afraid to harrow grain after it is up, for fear of pulling up a few plants. It may pull up a few, but there will be enough left, and, anyway, the good accomplished by restoring a mulch of loose earth far exceeds the damage done by destroying a few plants. When once the grain reaches four or five inches in height, the shade of the vegetation prevents excessive evaporation. The benefits of maintaining a mulch can be seen by the following experiment: It was found that the evaporation from untilled soil amounts to nearly 16½ inches per annum, while that from cultivated soil only slightly exceeds 8 inches. A saving of over 8 inches per year, or about as much water as falls here in May, June and July, the most important growing months. After the harvest is removed, the ground is again exposed to the wind and sun, and evaporation takes place very rapidly unless the land is gang-plowed or disked, and the surface mulch restored for the fall months. This surface cultivation does other good besides conserving moisture. It is a very successful means of getting rid of weeds, especially annuals. The destruction of weeds, the addition of organic matter, in the form of manure, or vegetable matter plowed down, which readily holds plant food and moisture, and the growing of corn or cultivated crops and clover every few years, also aid in conserving moisture, either directly or by improving the mechanical condition of the land.

The practice of summer-fallowing, with a view to conserving moisture, should not be encouraged. However, when manual labor is as scarce as it is at present, summer-fallowing affords a very good way of destroying troublesome weeds and in improving the mechanical condition of the soil, thus in both cases tending to make conditions more favorable for the retention of moisture.

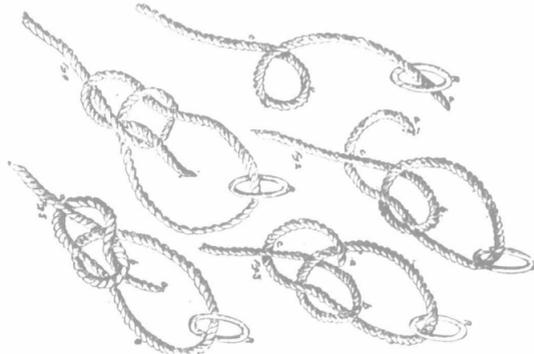
The principles of dry-farming, applied in Alberta, have proven successful. If applied in On-



The Eye Splice.



The Half Hitch.



The Bowline Knot.

tario, even in a less intensive way, the advantages would be manifold.
C. W. S.

Estimating the Value of Fertilizers.

Extracts from addresses by B. Leslie Emslie, C. D. A., F. C. S., before various branches of the Farmers' Institutes in Kent County, Ont., specially condensed for "The Farmer's Advocate."

PURCHASE OF FERTILIZERS.

Fertilizers may be purchased either in the form of the separate materials for home-mixing, or in ready-mixed brands. Now, I do not wish to condemn the use of the ready-mixed goods, but it is most important that you should know exactly what you are purchasing and how much you are paying for each pound of nitrogen, phosphoric acid and potash. Too often, the farmer, in essaying the use of fertilizers, looks only at the price per ton, and disregards the analysis, which the new Fertilizer Act of Canada requires to be stencilled on each sack, or printed on a tag attached to the same. A fertilizer agent may offer a farmer a fairly high-grade fertilizer at, say, \$40 per ton, but the farmer intimates that he would prefer a lower-priced brand. The agent, anxious at all times to accommodate his customers, says he has a brand at \$25 per ton, which he can highly recommend, and the farmer may be delighted to save (?) \$15 per ton, because he is ignorant of the fact that the \$25 per ton fertilizer contains half a ton of the \$40 brand, together with half a ton of sand or other worthless "filler." In this way the farmer pays \$5 more for the plant food, pays freight on the "filler," besides being burdened with the handling of a double bulk of material.

IGNORANCE OF SOME FERTILIZER AGENTS.

Fertilizer manufacturers are not altogether to be blamed for the marketing of these low-grade brands, containing large amounts of "filler." Their reason for doing so is that they may get the business of those farmers who examine the price only.

It is a regrettable fact that many agents of ready-mixed fertilizers, who try to sell you their goods, with more or less success on their part, know little or nothing of the nature and adaptations of the materials they are offering, and many of them have no other interest than just to sell the goods and obtain their commission.

The other day two fertilizer agents met and compared the analyses of their respective brands, when one remarked to the other that his own goods were superior, since they contained ammonia, in addition to nitrogen!

Now, ammonia is only another way of expressing nitrogen. In ammonia, nitrogen has some hydrogen attached, so that ammonia is heavier than nitrogen in the proportion of about 5 to 4. I shall later on explain the reasons for stating the analyses in such ambiguous terms. Now, those amongst you who are bean-growers ought to know that beans belong to the legume family, and obtain their nitrogen from the atmosphere, by means of the minute organisms which live and work in the nodules on their roots; and that, therefore, a fertilizer for this crop should contain phosphoric acid and potash, but no nitrogen. It would obviously be folly for you to purchase a ready-mixed fertilizer, containing nitrogen, for your bean crop, and remember, also, that nitrogen is the most expensive of the three essential

plant foods contained in fertilizers. It, therefore, behooves you to study the principles of fertilizing, so that you may be able to judge the approximate requirements of your crops and soils, and to estimate the value of any fertilizer from its analysis.

HOW TO VALUE A FERTILIZER.

Now, the valuation of a fertilizer soon becomes a very simple process. Supposing we take the value of nitrogen at 18c. per pound, available phosphoric acid at 6c. per pound, and potash at 5c. per pound, these being the prices at which you can, in this locality, obtain the three plant foods, in the forms of nitrate of soda, acid phosphate, and muriate of potash, respectively. The figure for potash is probably rather high; in the form of muriate of potash it would be nearer 4½ cents per pound, but in the form of sulphate a little over 5c. Now, I have here the catalogue of a fertilizer firm, and shall take one or two examples from it. The analysis of one of their brands, said to be suitable for all crops, is stated as follows:

	Per cent.
Nitrogen	2.46 to 4.10
Equal to ammonia	3. to 5.
Available Phosphoric Acid	8. to 10.
Total Phosphoric Acid	10. to 12.
Potash (K ₂ O)	6. to 8.
Equal to Sulphate of Potash	11.10 to 14.80

Now, in commencing our examination, we draw a line through "Ammonia," "Total Phosphoric Acid" and "Sulphate of Potash," since we need only deal with the Nitrogen, Available Phosphoric Acid, and Potash. The object of the manufacturer in stating the equivalents of these in other forms is to make the percentages appear higher. This is often very misleading to the uninitiated. You will note that potash is quoted as "equal to sulphate of potash," but it does not necessarily follow that the potash is present in that form. In fact, it is a pretty safe bet that potash is present as muriate of potash, the latter being cheaper than sulphate. For most crops it might not make much difference whether the potash were in the form of sulphate or muriate, but for such crops as potatoes and tobacco, which require their potash in the form of sulphate, in order to insure highest quality, you can see that it is most important that you should know what you are buying.

Let us now proceed to estimate the value of our fertilizer by applying to the percentages the aforementioned prices per pound of the three plant foods.

The percentages, you will note, are stated as minimum and maximum; e.g., potash is stated as 6 to 8 per cent. Now, do not be so optimistic as to hope that the full 8 per cent. is there. No, it is the object of the manufacturer to figure as closely as possible to the minimum guarantee without falling below it. In this he is not always successful, for many samples fall below the minimum guarantee in one or more of the ingredients. We, therefore, take the minimum guarantee in working out our calculation.

Now, we find 2.46 per cent. nitrogen; i.e., 2.46 pounds of nitrogen in every 100 pounds of the fertilizer, and there being twenty hundred pounds in a ton, we multiply 2.46 pounds by 20 to get the number of pounds of nitrogen in one ton of the fertilizer. This gives 49.20 pounds of nitrogen. We took the value of nitrogen per

pounds as 18c., so that multiplying 49.20 by 18 we get \$8.85, the total value of the nitrogen per ton of the fertilizer. The same process of calculation follows with the other ingredients:

	Per cent.	Hundreds.	Total lbs. in ton.	Value per lb.	Total value.
Nitrogen	2.46	20	49.20	18c.	\$8.85
Avail. Phos. Acid.	8.	20	160.	6c.	9.60
Potash	6.	20	120.	5c.	6.00
Value per ton					\$24.45

In this way we find the fertilizer under consideration to be worth \$24.45 per ton, and I know that the price at which it is offered to you by the manufacturer is much in excess of this.

Let us now take the total amounts of nitrogen, available phosphoric acid and potash, and find what quantities of nitrate of soda, acid phosphate and muriate of potash, respectively, would supply them:

Nitrogen—49.20 pounds would be contained in 328 pounds nitrate of soda (15 per cent. nitrogen).	
Available Phos. Acid.—160 pounds would be contained in 1,067 pounds acid phosphate (15 per cent. available phosphoric acid).	
Potash.—120 pounds would be contained in 240 pounds muriate of potash (50 per cent. actual potash).	
Total.....	1,635 pounds.
Filler.....	365 pounds.
<hr/>	
2,000 pounds.	

We thus find that 1,635 pounds of the separate materials supply the amounts of plant food contained in 2,000 pounds of the ready-mixed fertilizer referred to, so that, in order to make up one ton, it would be necessary to add 365 pounds of sand or other "make-weight." As already explained, the filler is valueless, and only increases the cost of freight and handling.

Now, from the same catalogue we shall take another brand, which is said to be a "Bean Fertilizer." Here, again, we find, besides the nitrogen, available phosphoric acid and potash, also the equivalents of these in terms of ammonia, total phosphoric acid and sulphate of potash, and likewise, the percentages stated as minimum and maximum.

According to our method, employed with the other fertilizer, we shall now determine the value of this one, ignoring everything in the analysis, except the nitrogen, available phosphoric acid and potash, and taking the minimum percentages of them.

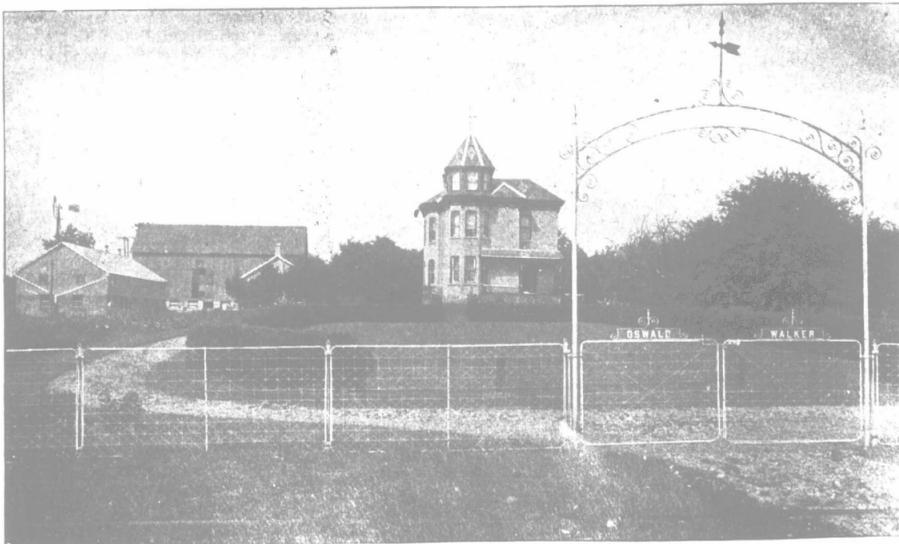
	Per cent.	Hundreds.	Total lbs. in ton.	Value per lb.	Total value.
Nitrogen	1.65	20	33.	18c.	\$5.94
Avail. Phos. Acid.	8.	20	160.	6c.	9.60
Potash	3.	20	60.	5c.	3.00
Total value					\$18.54

The total value of this fertilizer is \$18.54, but I am going to show you that it is not worth more than \$13 to you as a fertilizer for beans. As I stated already, beans have the power of assimilating the nitrogen of the atmosphere, and therefore, as a rule, require no nitrogen in the fertilizer. I say "as a rule," since there are instances, probably on very poor soils, where a little nitrogen may help to give the plants a start. With your system of rotation, however, which, I understand, is a three-year rotation, comprising wheat, clover, beans, you certainly require no nitrogen in your fertilizers. Two crops out of the three in the rotation are nitrogen-gatherers, and then, you apply barnyard manure to the bean land, as well. I am inclined to think, from what I learn of your conditions, that you have often an excess of nitrogen in your soils. This would account for the rank growth of stem and foliage and slow tilling of the pods.

This alleged bean fertilizer is, then, only valuable to you on account of its content of available phosphoric acid and potash; you don't need the nitrogen.

You will note, also, that the potash percentage in this fertilizer is very low, and this is a mistake, since, for beans, the percentage of potash should be at least as high as that of the phosphoric acid.

Now, suppose we again determine the amounts of nitrate of soda, acid phosphate and muriate of potash necessary to supply the nitrogen, phosphoric acid and potash of this bean fertilizer:



Home of Oswald Walker, Perth Co., Ont.
Over \$6,000 worth of farm buildings, including a fine residence, a real barn, and all other outbuildings, silo and workshop.

Nitrogen.—33 pounds would be contained in 220 pounds nitrate of soda (15 per cent. nitrogen). Available Phosphoric Acid.—160 pounds would be contained in 1,067 pounds acid phosphate (15 per cent. available acid phosphate). Potash.—60 pounds would be contained in 120 pounds muriate of potash (50 per cent. actual potash).

Total	1,407 pounds.
Filler	593 pounds.
	2,000 pounds.

The total plant food contained in one ton of this fertilizer is supplied by 1,407 pounds nitrate of soda, acid phosphate and muriate of potash. To produce the ton would require the addition of 593 pounds of useless "filler."

I think the mixture which some of you gentlemen generally employ for beans, viz., 300 pounds acid phosphate and 100 pounds muriate of potash, per acre, a very suitable one, and you have proved its value. In this mixture of 400 pounds you have 11.25 per cent. available phosphoric acid, and 12.5 per cent. actual potash, whereas, in the "bean fertilizer" examined, the proportion of potash to phosphoric acid is as 3 to 8.

We have seen, then, how the value of a fertilizer may be estimated, but have also observed that the value is relative, depending on the adaptability of that fertilizer for your special purpose.

This explains one of the chief advantages of home mixing. We might liken crop-demands for the three plant-food substances to our demands for clothes. While usually, a fertilizer should be compounded of certain proportions of nitrogen, phosphoric acid and potash, according to the nature of crop, soil and other conditions, yet there are special cases, as in that of the bean crop, where one ingredient may be entirely dispensed with in the fertilizer. To proceed with the analogy, one usually purchases a suit of clothes consisting of coat, vest and trousers made to fit one's particular build; but under certain conditions, such as those which prevailed last July, a two-piece suit, consisting of coat and trousers only, would have satisfied the clothing requirements of most of us. To push the semblance still further, we find, amongst Highlandmen, many who have no use for trousers at all, and it would be folly on the part of any tailor to attempt to sell, ready-made-up, three-piece suits to these people, who know their requirements, and would never part with money to purchase what they did not need.

Alfalfa in Nova Scotia.

Editor "The Farmer's Advocate":

I read with interest the address, "Hardy Strains of Alfalfa for Ontario," published in your number of Jan. 4th, 1912.

We are thinking of sowing a small piece of land with alfalfa in the spring. Could you tell us what kind of land is most suitable for it? Must the land be well drained? Would a side hill be a good place? About what time do you sow it, and how many pounds to the acre?

Very little alfalfa is grown in Nova Scotia, but I cannot see why it would not do as well here as in Ontario or Minnesota. May I ask the question, can alfalfa be successfully grown in Nova Scotia? I know it has been experimented with, but, as I did not take much interest in it until lately, and as I intend to start farming in the spring, I would like to get as much information as I can on the subject.

I misunderstood you when you asked me to reply to enclosed letter from C. M. Dunn, dated from Yarmouth on January 10th, and I sent the reply directly to him. The following is a copy: "Alfalfa is still in the experimental stage in Nova Scotia. Fully 500 farmers have experimented with it, but, up to the present time, only a small percentage have been reasonably successful. However, there are many reasons which lead us to believe that it is well worth while continuing the experiment, and I would, therefore, advise you to try an experiment for yourself on a small piece of ground—not more than one-quarter of an acre. Select a naturally well-drained piece of land, where red clover does well, and which has preferably been in hoed crop the previous year. Give the land extra good tillage and sow the alfalfa, preferably without a nurse crop, at the rate of about 20 pounds per acre.

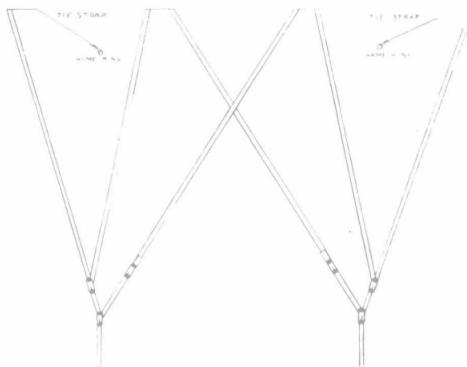
The most frequent causes of failure have been the heaving out by frost in the spring, in order to avoid which you will, of course, select a piece of land that is either naturally or artificially well underdrained. Another frequent source of failure is the fact that the bacteria essential to the best growth of alfalfa are not usually present in the land which is being seeded to the crop for the first time. On this account, inoculation of the soil with the necessary bacteria is strongly recommended. This can either be accomplished by spreading soil from a field in which alfalfa has been successfully grown, or it can be brought about by artificial inoculation with culture, which can

be secured at the Agricultural College, Truro, at the nominal price of 25 cents for a bottle containing sufficient bacteria to inoculate 60 pounds of seed. We know of several instances in Nova Scotia where farmers who had previously been unsuccessful with alfalfa, achieved success through this artificial inoculation."

M. CUMMING.

Lines for Three and Four Horses.

Every spring season brings a grist of inquiries for lines and evens adapted to work three and four horses abreast. There are various designs for such lines, but some of them give very imperfect control of one or two of the horses. In working three horses abreast, for instance, some merely tie in the third horse to the hame-ring of the center one; others put the usual two-horse lines on the outer horses, running the cross lines to the middle horse and tying the outer horses to the hames of the center one. Neither of these methods is safe or wholly satisfactory. The accompanying cut shows a convenient arrangement which will give complete control of three horses, and fairly good control of four. We have used it on a snappy team the past season, as depicted, with considerable satisfaction, but are thinking of adding a third cross-check to each main line, so as to secure perfect control of the two outside bits. The lines are "rigged up" as follows: Taking an ordinary pair of lines, punch a few holes from three to five inches back of the usual cross-line buckles. Get your harnessmaker to make a pair of short checks about ten inches long, each with a buckle on one end. Slip the long end of the main line through this buckle. To the other end attach an extra cross-line 7 ft.



Four-horse Lines.

4 in. long, with the usual buckle on the rear end. Slip the strap end of the short check through this buckle, and adjust length to suit the team. The object of having the extra cross-line in two pieces is for the sake of convenience when changing from a three-horse or four-horse to a two-horse team, and back again. The short piece may be left on the main line, and is but little in the way. Your lines are now ready to use on two, three or four horses. With three horses, the extra check goes to the inside bit-ring of the outside horse; with four horses, it goes to the inside bit-ring of the second horse from the outside in each case. The total length of the extra cross-check, as we use it, is about 8 feet, or a little less, but one requires enough holes in the main line and on the short piece of the check to allow considerable room for adjustment.

How to Grow Alfalfa.

The findings of Purdue University in experimenting with alfalfa, as recorded in Circular No. 36, show that alfalfa may be successfully raised on almost any type of soil, provided it is well drained, sweet, free of weeds, and well supplied with organic matter and mineral plant food.

Good drainage must be provided.

The ground must be free of weed seeds.

If the soil is sour, it must be limed before alfalfa can do well. Soils lacking in fertility should be well manured, as alfalfa requires large amounts of plant food.

Inoculation of the soil will generally be necessary, and must not be neglected. Soil from a good alfalfa field, or from a place where sweet clover is growing should be used for inoculating.

The best land on the farm should be used for the first trial of alfalfa.

If successful, it will pay better than any other crop.

Alfalfa is an excellent feed for all kinds of live stock.

It is rich in flesh-forming and milk-producing nutrients.

It is more digestible than red clover, and is not far behind such materials as wheat bran in feeding value.

Alfalfa will yield from three to six tons of hay per acre per season, according to the fertility of the soil.

The Tragedy of the Big Farm House.

This is not a story of fiction, nor yet is it the description of any one house. We say this on the start, that the reader may not say to himself, "this means me." If the reader will but think, these remarks will apply to a great many, unfortunately.

It is often said that the farmer has now many luxuries, such as telephones, large houses, etc. These things have all to be paid for, and a large house is in too many cases not a luxury, but a great burden; and it might be worth while for some who are not yet in the mire as yet to look at the other side of the question.

In travelling through the country, one sees that each year the houses built are larger and finer. The size of the house built bears no proportion to the size of the family, and not generally to the size of the finances. The main object would seem to be to outshine the neighbor. It would be altogether too strong to say the house is "conceived in sin," but the real motive is simply to outclass someone else, shows neither strength of mind nor a commendable disposition. And a life-long repentance follows, but it is not "repentance that is good for the soul," but repentance that brings gray hairs. Of course, there are many exceptions; exceptions, they say, prove the rule. Sometimes a man does not need to count the cost and has a large family of girls willing and able to care for the big house. These cases are very few, and the man with the big wad doesn't generally put it into a big house in the country, as he knows he might about as well put it in the stove, if he looks at it from the point of an investment, because the big house in the country will never bring half of what it cost to build, and one does not live forever. If the place is turned over to the boy, instead of being sold, and the house is valued at what it cost, then the boy who gets the homestead is often worse off than others who get the cash.

Farmers, in building, generally have the building put up by piece or day labor, finding everything, thinking they can do much of the work themselves and "it will not cost them anything."

The result is that, by the time the house is finished they find they have to pay \$1,000 or \$2,000 more than they figured on, and often this has to be borrowed, or, worse still, stock is disposed of and so reduced that the earning power of the farm is much diminished, and he must work hard, save and scrape, lay awake at night worrying about this "loss," for so it seems—and a loss it really is; that much money lying dead and idle. But the tragedy does not stop here, rather just begins.

The goodwife may for a time take pleasure in her fine house and enjoy the envy of her neighbors (if she does not know that her goodman had to borrow the money that he "didn't figure on" in his estimate of cost), but after a while even she finds it is not all pleasure; she has to be on the go all day long trying to keep the house in order.

The house being large, to save fuel, it is kept shut up tight; no fresh air can enter. And, what between poor air, work and worry, no time to visit neighbors for change and recreation, what wonder the health suffers. The woman, instead of being the mistress of the house, becomes its slave. The house is the real mistress, making incessant demand, claiming all her waking time to look after it. There is no time to visit, consequently, no visitors to receive. Thoughtful friends don't like to call, because, forsooth, has she not enough to do looking after the house, without being bothered with visitors? What is the big house for, anyway? Oh, the tragedy of it all! Where will it end? Worn out whilst still young, death is a welcome release. The parlor is thrown open to receive visitors then. The mistress is no longer the slave; death has given her her release.

But to return to the finish of the house: In order that things may have some agreement, there should be a lawn, shrubs and flowers around the house. These things all take some work to care for, but add greatly to the appearance of the house. Too often too much ground is laid out or left for lawn. It takes too much of the busy farmer's time to look after it, and is generally left to look after itself. It is always better to have the lawn small enough so it can be kept neat and trim. And how much better to have a tidy, comfortable-looking house, just big enough for the actual needs of the family and visitors, surrounded by well-kept grounds? Such a place is a real house, a real pleasure, and also a credit to the owner's taste and common sense. In the town, servants can be more easily secured; the incomes of some people are larger than the farmer's, and they can afford to pay for it; also, help can be secured by the day to do much of the work in the house. As to the larger grounds, a man is kept all the time to keep them in order. Smaller grounds are kept in order by a man who looks after several lawns, and the town man has shorter hours and more time to do it himself. A few do it, but

most people prefer sport for exercise, and let some-one work with the lawn mower.

The lady in the country is just as much entitled to some of the good things of life as her sister in the town. But the big houses never prove a good thing for her. In fact, big houses are becoming a burden in towns, as well, owing to the scarcity of help. Girls prefer factories and office, rather than house-work. And there are tragedies in the big houses in the city, also, if you get behind the scene. I met with one case that illustrates this. With some mutual friends, I called upon a couple in a distant town. They had a very large, fine house—just the two of them. The man was then over 70—not much prospect of a large family, unless "hope springs eternal in the human breast." I asked my friends whatever did they build so large a house for. They said they did not know, unless it was to secure his young wife. In equations, this would read: One old man, plus one big, fine house, equals young wife.

There is comedy, as well as tragedy, in this big house business, but where is the common sense of it all?? The comedy, though, happened in town. Later on, Mr. Winter and Mrs. Spring we find living at a boarding-house in the same town where the big house is—the big house shut up and empty. Health poor; been travelling; too hard to secure necessary help; more real freedom and pleasure in the boarding-house, and not very much there. A boarding-house to live in, a big house shut up, no real home anywhere. What starts in comedy ends in tragedy. GEO. RICE.

Oxford Co., Ont.

Home-made Corn Tester Best.

"A 30-cent homemade corn-tester will give just as good results as a \$30 one," said an instructor at the Ohio College of Agriculture the other day, when asked about the advisability of farmers buying high-priced testers. "There are a good many different kinds of testers on the market, selling at prices varying from \$5 to \$30, but experiments have shown that the farmer can make one himself out of an old box or odd pieces of boards that will be just as satisfactory," continued the instructor. "The farmer who wishes to test his seed corn to see if it will grow need only make a square box about three or four inches deep and fill it with moist sand. Of course, the larger the box, the more corn can be tested at one time. Over the sand spread a piece of cheese-cloth, and mark the surface into two-inch squares, either by stretching strings across each way or by marking the cloth. Each square in the tester is to contain the kernels from one ear of corn that is being tested. After the kernels are properly placed, they should be covered with another piece of cheese-cloth, and about an inch of moist sand placed on top of this, and the whole thing set where it will have the proper temperature. The idea is to approximate field conditions as nearly as possible. And it doesn't require high-priced equipment to do this."

Does Your Seed Corn Germinate Well.

One of the most important questions to be answered by everyone who is going to plant corn this spring is whether or not his seed corn germinates well. As a result of a dry summer and a wet fall, corn did not mature normally over a large part of the corn belt, and much of the seed does not germinate well. In reply to a request sent to representative farmers, under the direction of Secretary Wilson, of the United States Department of Agriculture, 1,708 samples of corn intended for seed this spring have been tested by the Seed Laboratory of the Department, and they show an average germination of 81 per cent.

State.	No. of Samples.	Lowest germination %	Average germination %
Virginia	113	5	90.3
Kentucky	69	26	89.8
Missouri	151	2	88.7
Maryland	41	30	87.1
Iowa	141	20	85.4
Pennsylvania	144	0	84.2
West Virginia	55	8	82.5
Kansas	66	0	82.0
Ohio	189	10	80.7
Illinois	175	0	79.8
Indiana	108	0	79.0
Minnesota	106	0	76.1
Michigan	86	1	75.0
Wisconsin	84	0	73.9
Nebraska	169	20	73.1
South Dakota	47	1	61.3
North Dakota	45	0	56.8

The low average germination of the larger corn States shows that, in general, the condition is, many of them, not very good. The worthlessness for seed purposes is, however, single-ear germination, the average is 81 per cent.

all cases where ear corn is to be used for seed. When it is necessary to use shelled corn, of which single-ear tests have not previously been made, the corn should be carefully mixed and tested for germination. Not less than twice one hundred kernels should be used for the test to insure having a representative sample. The rate of planting should then be regulated on the basis of the germination test, so there will be a sufficient number of live kernels planted to give a full stand.

Plant the best seeds you can get. Selected corn on the cob, each ear of which has been tested for germination, and all of the poor ears discarded, is the best.

If you have to use shelled corn, test it for germination and plant enough, depending upon the percentage of germination to insure a good stand.

A Seed Corn Test.

A correspondent of "The Farmer's Advocate" informs us that he has just concluded a corn test which surprised him greatly. No doubt, many other readers will be surprised when they test their corn, or, if they do not test it, disappointed later. Thirty ears were tested by this correspondent, and these ears were an exceptionally fine lot—long, even, well filled, and apparently well matured. Six kernels were taken from each ear, three from each side, one from the center, and one from near each end. In all, one hundred and eighty kernels were tested. Contrary to expectations, thirteen of these kernels did not germinate. This is a little over seven per cent. But this is not the most significant feature of the test. One ear did not give a vital kernel, and another gave only one, while only two kernels from all the other ears did not germinate. This shows the importance of buying seed on the cob and of testing individual ears. The two bad ears were especially fine ears, with plump, well glazed, hard and apparently vital seed. Yet they proved useless for seed. Had these ears been planted, several blank hills would have resulted. The only absolutely safe method is to test the seed. Where individual ear tests cannot be made, mix the shelled seed thoroughly and test it. Appearances cannot be relied upon with seed corn.

THE DAIRY.

Pasteurizing the Cream.

Having seen requests at different times in regard to difficult churning, I thought I would send in my experience. It would only do for a limited quantity of milk. As soon as the milk is strained (through strainer and cheese-cloth), I put the pan or pans on back part of range and let them heat gradually till almost scalding, and then put them on the table till cooled, or partly so, before putting them down cellar, or where they are to be left for cream to rise; and when a three-gallon crock is about half full of cream, I put in about a quart of buttermilk from the last churning, and keep stirring it frequently, and bring it upstairs to a warmer place the day before churning to let it ripen, and then churn at about 60 degrees, but no higher. Butter comes in ten minutes, and is sweet and delicious. A few drops of color put in the cream will improve the color of the butter. JEMIMA.

Durham Co., Ont.

[Note.—As noted in a recent article, this method proves a decided help under certain conditions, but the vessel containing the cream should not be set directly on the stove. Place it in a larger one containing water, and then set this latter on the stove. So far as churnability is concerned, we see no reason why as good results could not be secured, and labor saved, by pasteurizing the cream altogether a few hours before churning, heating to, say, 140 degrees Fahr. for twenty minutes, then cooling down to churning temperature, and holding there a few hours to allow fat to solidify.—Editor.]

Ontario Dairy Cows Go West.

Not satisfied with taking nearly all the available men from the East, and also purchasing all our surplus horses, the West is coming at us once more, and this time it is the dairy cow that is the subject of the quest. Dairying is fast becoming one of the strong branches of agriculture in the Canadian West. Towns and cities are finding it difficult to get a sufficient supply of milk, and it is being shipped for upwards of 100 miles to some of the larger centers. Dairying is now one of the most remunerative branches of Ontario agriculture, and the dairy cow is profitable in the East, yet she must leave her home, and like the other, horses westward, to fill the thousands of empty and put vessels with that white and indispensable in the human diet; and, while she is doing this, swelling her owner's

pocketbook or bank account, as the case may be. Ontario owners are getting high prices for good cows. Recently, in Oxford County, grade dairy cows sold as high as \$104 each, and many brought \$90, while \$85 was quite common, one large sale being made which average just a trifle less than this amount, and calves three weeks old brought between \$15 and \$20 each. The significant feature of these sales was that two Western buyers were present, one taking a carload to Moose Jaw, and the other to Regina, Saskatchewan. These seem to be record prices for grade stock, and, counting cost of transportation, the cattle will be rather expensive by the time they land at their destination. However, it speaks well for the dairy industry that people are able to pay such prices and still make profits. We sincerely hope that our Eastern dairymen will not be led by the glitter of gold to dispose of their best cows, and thus retard the progress of their breeding business. The good cows are the cows to keep, and they are just as valuable to one man, under proper care and treatment, as to another. Don't let large prices lure you to selling all the promising young heifers. The East needs them, as well as the West.

Summer Silage vs. Soilage for Dairy Cows.

During the past two summers, the Animal Husbandry Department, Wisconsin University, has compared the value of soiling crops and corn silage as a means of supplying summer feed to the dairy herd. Soiling crops sown from April to June furnished a continuous supply of green forage during the dry season, from July to September. In 1910, green clover, a mixture of peas and oats, sweet corn, sorghum and field corn were used, but in 1911 green clover and sorghum were discontinued.

Half of the dairy herd was fed corn silage, and half soiling crops, each lot being kept on scant pasture and receiving equal amounts of concentrates. Silage was greatly preferred to the early soiling crops, such as green clover, sorghum, and peas and oats, and the silage-fed animals produced a greater amount of milk. Larger yields of corn than of soiling crops were secured. Another important factor is that the soilage system required much more time daily, and that, too, during the busiest season of the year.

A consideration of all the factors involved indicates that the farmer can well afford to have corn silage available for summer feed up to the time the corn crop reaches the milk stage, when he can perhaps better afford to feed green corn than to continue feeding silage.

Any who may have silage left over from the winter feeding may profitably use it during the coming summer. These results would indicate that on large dairy farms a summer silo would be a paying investment.

POULTRY.

Marketing Eggs.

Editor "The Farmer's Advocate":

There has been a good deal of discussion regarding winter eggs, and I feel at a loss to understand those who do not get all the winter eggs they can. Hens all moult about the same time, and the pullet that first begins to lay will lay the most eggs before moulting. But I wish to refer more particularly to the marketing of eggs. In marketing eggs, the first requisite is to have the eggs to market, and the next to have them in the best marketable condition. Anyone looking at the market reports from different towns, and comparing these with the prices in Toronto or Montreal, must be struck with the difference in price, seeing the freight is so small a consideration; it costs me just 3 cents per dozen to send eggs from here to Toronto. To obtain the Toronto price, without having to pay a commission house for handling them, one must be able to ship at least weekly in 30-dozen crates, and more than one crate at a time makes the freight less. Now, I know that many farmers are not able to do this, but can see no reason why one cannot do the shipping for a number of his neighbors for a small consideration. I am doing this now, and shipping twice a week ten crates in all, or 300 dozen per week. I have never sold a crate through a commission house, and have been able to net those shipping through me more than local prices. I do not believe I could do this if I had not eggs to ship the year round—not always the same quantity; in fact, no grocer sells as many when the price is 50 cents per dozen as when it is 25 cents, but still every grocer appreciates getting them when they are scarce, and will deal with the man who can supply them in winter, as well as summer.

These eggs must be all new-laid; they must be gathered twice daily, if soiled, should be cleaned with a damp rag when gathered; should be kept in a cool place till ready to ship, and all

small ones left out. It is the taking of eggs to the nearest general store, and the delay that takes place before they reach the consumer that causes a great deal of the complaint regarding the quality of eggs.

I know that in some districts co-operative egg circles have been formed, but these are generally in connection with some commission house. The same co-operation in gathering will bring better results if a sale is made direct to the retail grocer, just as I am doing. The price of eggs was brought down by those larger dealers importing American eggs. Let us also look after our own interests, as they do, and get the best price going for what we have to sell.

Lincoln Co., Ont. PETER BERTRAM.

A Good Egg Record.

Editor "The Farmer's Advocate":

The Hospital for the Insane, Brockville, made a beginning in raising poultry in 1911. The eggs were hatched by an incubator, and the chickens came out part on June 20th, and others about July 1st. They were principally Buff Orpingtons and White Wyandottes, with a few others mixed with them. We had about two hundred and twenty chickens, and succeeded in raising about one hundred and fifty, of which fully half were cockerels. The pullets began to lay about the latter part of November, and from December 1st to March 31st, they produced two hundred and thirty-nine dozen eggs, laying steadily during all the cold weather. During that time we killed sixty-four cockerels, many of them dressing considerably over six pounds. The total weight of those killed was three hundred and seventy and a half pounds. The chickens were housed in a poultry building, constructed after the latest design, secured from the Ontario Agricultural College. During the very extreme weather in the winter, when the temperature dropped down to about 30 degrees below, some of our cockerels suffered from the frost; the combs of a few of the pullets were somewhat touched, but not very much.

We do not know how this showing compares with others who are raising poultry, but the Institution has been extremely pleased at having been constantly supplied with fresh eggs from these chickens during the winter. J. C. M.

GARDEN ORCHARD.

Canning Combine's Selling Contract.

A pyrotechnic display on the floor of the Ottawa House the other day, in which Hon. Frank Oliver, D. Marshall, M. P., and F. R. Lalor, M. P., were central figures, brought into the strong light some of the skeletons which haunt the closets of the Canners' Combine. However, to those who are familiar with the financial meanderings of the Dominion Canners, Limited, a corporation in which there is some money and much water, the discussion, while interesting, was not of a sort that brought much enlightenment with it.

If the Hon. Frank Oliver had, for instance, dwelt upon the selling contract of the Dominion Canners, Ltd., and asked some explanation respecting this document from Messrs. Marshall, M. P., and Lalor, M. P., the first the president, and the second a director of this corporation, Hansard might possibly have had some records that would be really worth while.

For instance, when Mr. Marshall, M. P., disclaimed on behalf of the Dominion Canners, Ltd., all responsibility for the enhanced prices of their products, after they left the hands of the wholesalers, someone might have very suitably inquired how this could be, in face of the selling contract in force between Dominion Canners, Ltd., and the wholesaler. For instance, here is clause 6 of the selling contract, issued by Dominion Canners, Ltd., and presumably duly signed and witnessed by all and sundry who handle these goods in a wholesale way:

"The wholesaler hereby agrees not to sell or allow anyone in their employ to sell, directly or indirectly, to any person, either wholesaler or retailer, by agent or otherwise, any of the products of the company, whether now in stock or owned by them prior to the signing of this contract, of the goods of the 1910 or 1911 pack, at less than the stipulated selling prices, or on better terms than the prices and terms as set forth from time to time in the new price lists issued by the company for 1911 pack, except as provided for in clause 20. A copy of the current price list of the company to be mailed or otherwise advised to the wholesaler as soon as issued.

"Clause 20.—All orders accepted prior to June 1st, 1911, will be invoiced at 2½ cents per dozen under opening retail price list prices for 1911, and the wholesaler undertakes that, prior to June 1st, 1911, he will not sell at less than 2½ cents per dozen under the company's opening

retail list prices, and on and after that date at the company's current retail list prices."

If clause 6 means anything, and if words such as "less than stipulated prices," or "on better terms than," have any meaning whatsoever, then it is evident that the Dominion Canners, Ltd., absolutely controls the selling prices of its products after they reach the hands of the wholesaler. However, this is not all, for, in order to force these provisions and make the wholesaler sit up and take notice of the "ifs" and "whereases" of the contract, Dominion Canners, Ltd., inserts the following rebate clause in its contract:

"Clause 13.—In consideration of the wholesaler purchasing exclusively from the company, as hereinbefore set forth, and complying with all the terms of this contract, the company agrees to pay and allow unto the wholesaler a discount of 10 per cent. on canned vegetables, and 12½ per cent. on canned fruits so purchased, such discounts to be paid half-yearly."

Get the point? If you would dare sell your goods cheaper than Dominion Canners, Ltd., in its good judgment, demands, off go your profits for the half year; and still Mr. Marshall, M. P., says, according to press reports, that Dominion Canners, Ltd., is as innocent of the charge of controlling the wholesaler as is an unborn babe.

Taken all in all, this contract of the Dominion Canners, Ltd., is one of the most interesting documents that has come my way in many months, and not the least interesting feature of it is that I am informed, and reliably informed, I believe, that the Wholesale Grocers' Guild is not only privy to the entire document, but that it was primarily evolved as much to meet the requirements of the aforementioned Guild as it was the Dominion Canners combine.

In justice to Dominion Canners, Ltd., I do not from my own knowledge of the situation think that the Hon. Mr. Oliver's charges that this corporation enhanced prices during the past season to be well justified, by reason of the unquestioned shortage of tomatoes and other vegetables in Canada during the summer of 1911. However, this does not absolve them from the charge of their attempting, in conjunction with the Wholesale Grocers' Guild, of doing all in their power to "can the public."

If prices are held down to any extent in Canada, it is by reason of the fact that the import duties on these goods are not as excessive as they might be, or as high as the canning people would like to have them. As a matter of fact, Canada was, during the year 1911, and so far during this year, liberal purchasers of American-grown vegetables, packed in American factories, these goods being purchased for just the plain reason that they could be bought cheaper abroad than they could at home.

To members of Parliament interested in contracts, legal and illegal, and to those interested in a certain Act, entitled, "An Act to provide for the investigation of combines, monopolies, trusts and mergers," I would submit the Dominion Canners' agreement as about the most interesting document ever evolved in this country.—[Toronto Saturday Night.

A new and dangerous fruit pest has appeared in New York State. This is the pear thrip, one of the most dreaded enemies of this fruit and others in California, where the thrip first became noticeable. The outbreak of the insect in New York is one of the mysteries of entomology, since California and New York are about as widely separated as two States in the Union can be, yet the thrip appears in both, and not, so far as known, in the intervening territory.

Its ravages in New York are largely confined to a small area in the Hudson River district, but it is known to be present in several other localities, and may be more widely distributed than is realized. Its work is of a peculiar nature, often mistaken for frost injury or blight, and the insect itself is too small to attract attention unless present in large numbers. Its attack, however, is upon the blossom buds, so that, where abundant, the prospects for a crop rapidly disappear.

Only prompt, thorough spraying with a contact insecticide, like the nicotine preparations, will prevent damage; since the pest soon gets into the centers of the buds, where it cannot be reached effectively.

A bulletin (No. 313) will be sent, on application to the New York Experiment Station, at Geneva, without expense.

In some experiments made at Cornell University, to test the comparative yield from the stem and seed end of the potatoes, it was found that, as an average of 22 varieties for two years, the seed end gave a yield of 180 bushels per acre, while the corresponding yield from the stem end was 151 bushels per acre. It would seem, from this, that it would be good farming to feed the stem ends to the hogs, and plant only the seed ends.

Topical Fruit Notes.

It is difficult to consider anything as topical in the fruit industry these days, for everything is out of time, owing to a backward spring. Like Peter McArthur, with his pencil sharpened, awaiting an opportune moment to write an ode to spring, the fruit-grower, with everything ready for spring work, has been waiting to welcome the budding time with a more prosaic service. Probably before this is seen in print both will be wishing for respite, for, with spraying, cultivating, planting, and general cleaning up, the few weeks following the first drying of the ground are busy ones for the fruit-grower. I have known the first (dormant) spraying with lime-sulphur to be all finished by the middle of April. This season, most growers will not have started by that time. Those, however, who wish to be on the safe side with the leaf-curl of peaches, should have started to spray by the middle of April, at the latest. One large grower in this district started on the 5th of this month, despite mud and hard-going.

Pruning is pretty well all done, and, I believe, generally well done, as the growers are coming gradually, but surely, to see that pruning pays. It may seem strange that everyone in the Niagara district were not converted years ago to proper methods of pruning. Perhaps they were, but, then, all do not practice their faith. With many, a "slap-dash" method is still prevalent. Peaches have been pruned lightly, as it is generally conceded that the crop at best will be only medium, in which case every peach one can produce this coming season will mean money.

In fact, judging by contract prices prevailing at present, all kinds of tender fruits will fetch a good price. The following figures are being offered: Strawberries, \$1.50, and packages supplied; raspberries, \$2.40; black currants, 10c. per pound; red currants, 5 to 6 cents per pound. There is no need of telling anyone who knows that these are mighty good prices, and that the fruit-grower is reaping his share of the good times. The canning factories are finding it hard to get fruit-growers, at least (and general farmers, too, I think) to contract tomatoes at 80c. per bushel; and I don't blame the growers, either. There is not enough money in tomatoes, at 80c. per bushel, as prices of other commodities are ranging at present; and, as the canners are perfectly able to look after themselves (not being Grits or Tories, but canners), it behooves the grower to keep on waking up, as they have lately given evidence of doing. I would like to draw attention to a very interesting leader on the sales methods of Dominion Canners, Ltd., which appeared on the front page of Toronto Saturday Night for March 30th. It might be illuminating to the growers to see one example of what they are up against, as well as refreshing to the consumer to know what he is paying for.

Wentworth Co., Ont.

W. R. D.

Success with Brussels Sprouts.

Editor "The Farmer's Advocate":

I noticed an article on "Brussels Sprouts" in your issue of April 4th. This is a vegetable, for some reason, very little grown in Ontario, and it may interest some of your readers to hear of my success with them.

I was told they would not grow in Ontario, but, having imported some seed from England, I decided to try them. I planted the seed in the open about June, in sandy soil, and when about three inches high transplanted them, setting them about two feet apart. I lost a few from the cutworm, but the greater number grew well and very rapidly. I then discovered they were being attacked with the green fly aphid, and I sprayed with a weak solution of lime-sulphur, but they were badly smothered, until I sprayed again with the same solution, made stronger. When the sprouts began to show, I cut off the tops of the plants, and was rewarded with as fine a crop of sprouts as any I have seen in the Old Country. I intend planting out quite a number this year, and would be interested to know what one could expect to get on the market for, say, a six-quart basket, as I have never seen Brussels Sprouts for sale at any of the local markets, or elsewhere.

Lincoln Co., Ont.

M. TEESDALE.

Some Canadian Puff-Ball.

Editor "The Farmer's Advocate":

You do not need to go to the Western States or to New Zealand to see mammoth puff-balls. For the last six years we have had them growing in ground that was for a number of years a pen behind the hog-house. If I remember rightly, there was only one the first year, but last year there were ten, spread over a period of about three weeks. The largest one last year was oblong in shape, and measured 49½ inches the longest way around.

Oxford Co., Ont.

A. W. DE LONG.

Tomato Seed Selection.

Will you, through your valuable paper, give me your advice as to which you consider the best method of saving tomato seed. I used to buy my seed, and sometimes was disappointed. Instead of getting what I asked for, I got a different kind altogether. I usually raise two or three kinds. Some kinds come up fine; another kind in the same hotbed, only half the seed would come up, so I decided to select my own seed. I tried this, with good success; my own seed came up in shorter time, and thicker than any seed I ever bought. When there are about twenty bushels of ripe tomatoes to the acre I generally take half a day and go over a three or four-acre field and select ten bushels tomatoes from the stronger and healthier plants, and take my seed from these tomatoes. I would like to know whether I am on the right track, or not, if I can keep on selecting my seed from the same tomatoes, with good success? My idea is this: When I select my own seed, I take the best fruit I got; when I buy the seed, I think they take the fruit just as it comes, good and poor, because I never bought seed without having false plants in it. This is my twelve years' experience, with about 15 acres a year.

I. F.

Ans.—The matter of selecting tomato seed is dealt with in Bulletin 196 of the Ontario Department of Agriculture, entitled, "Tomatoes," by A. G. Turney. Most of the commercial seed used in Canada is imported from the United States. With regard to individuals selecting their own seed, Mr. Turney says:

The advisability of the grower selecting his own seed is perhaps questionable. A. W. Livingstone and W. J. Green are decidedly against this practice, their chief reason being that, while the grower may be able to select as good seed as the professional seed-grower, yet the amount of seed which he uses is so small that the expense he would incur in producing it himself would be much greater than if he were to buy the very best selected seed from reputed seed firms. Notwithstanding this opinion, I believe that more of the seed used in this country should be grown here, and that a standard and well-carried-out system of straight seed selection among farmers is highly desirable, and would materially increase the average yield and profit. The seed selection which is at present carried on to some extent is, with very few exceptions, far from what it should be. Some few growers will drive up to the canning factory and select for seed purposes individual tomatoes from the crates standing on the platform, without ever seeing the plants they were grown on. Others will select the smoothest, most uniform, and best ripened fruits in their fields, without regard to the plants they grow on. Some go a step further and take the plant, its vitality, amount and uniformity of yield into consideration. But not one grower have I met who has reserved a piece of ground exclusively for seed breeding and attempted to conduct rigid, straight seed selection. The best seed selected one year is lost track of the next year. While considerable improvement in the yield, uniformity of size and smoothness of the fruits may be confidently looked forward to from proper selection, yet the greatest return which we may look for is a decided gain in early maturity, a very important factor, in view of the shortness of the season. Some growers have already hastened the maturity of their crop some ten days in four or five years by a system of seed selection still open to improvement. Below will be found an outline of a system of seed selection aiming at improving the qualities spoken of, and which should be applicable in the case of the ordinary grower.

From the standpoints of soil, climate and market, ascertain the type of plant and fruit best suited to your requirements, and keep the type clearly and constantly before you. Presuming that you have a field of tomatoes the seed of which is true to variety and reliable, go through the field and select one or more plants which in every respect approach nearest to the ideal in your mind. Mark these by staking them. Select healthy, productive vines of which the fruit is most uniformly of the desired type, for it must be remembered that the character of the seed is determined by the plant, and not by the individual fruit. Thus, the selection of an almost perfect tomato from a plant varying considerably in size and perfection is not advisable. The fruits selected should be large, but not abnormally so, the earliest to mature, smooth and well shaped. When the fruit is thoroughly ripe, but not till then, it should be picked, and the seed extracted as follows:

Cut the tomatoes in two, crosswise; slip out the seed pulp into a pail or tub; let the pulp stand twenty-four hours; then put in plenty of clean water; stir and break up the sour pulp until all the good seed will settle to the bottom when left to stand a minute; pour off the top, then put in more water, going through the same operation again and again until the seeds settle in nearly clean water. Now drain off all the wa-

ter you can; place the seed in a towel and press out the surplus water; they are then ready to spread out in the sun or some warm place to dry. Stir them up occasionally until they are thoroughly dried. In putting them away, see that they are in a safe place from mice. Label the seed plainly, recording the day of the month and the year when it was saved, and, moreover, keep the seed from each plant entirely separate.

Supposing that five plants were selected. The following spring, the young plants raised from the seed thus saved should be set out on a well-prepared piece of ground, kept entirely separate from the main crop, taking care to keep the progeny of each plant separate and to set it in separate blocks. Label these blocks plainly, and as the plants grow compare them with the original plant from which they come, and with the type in view. Select that block in which all the plants come nearest to the desired type, and which show the least variation. From that block the best plants are selected, discarding for further selection purposes all the other plants in the whole breeding patch. Such a course of selection should not be hard to carry out, and, if judiciously and carefully done, should in from three to five years result in strains of seed greatly superior and better adapted to one's own conditions than any which it is possible to purchase. The seed from the discarded plants may be used for the main crop, as it will be of a superior nature to that purchased.

How to Grow Good Strawberries.

Editor "The Farmer's Advocate":

In "The Farmer's Advocate" of April 4th, L. M. inquired about strawberry culture. The editor gave some good advice on the subject, but perhaps a little more from one who has had considerable experience in growing this crop would not come amiss.

In preparing for a strawberry patch, try to arrange to have them on nice, loamy ground, as free from weeds as possible. A plot on which potatoes have been cultivated is an ideal spot, for the frequent cultivating required to raise a good crop of potatoes will have worked the ground into a fine tilth—one of the main factors in growing a good crop of strawberries. It should have been top-dressed heavily with good stable manure in the fall for best results, but if this has not already been done, do it now, and disk it well into the ground, then harrow well. You cannot cultivate nor fertilize a strawberry patch too much, and no crop gives better returns for the amount of labor spent on it.

Get good strong plants for the first setting, and get them as near hand as possible. Plants sent by express from a long distance seldom do well. I tried getting them from a distance twice, planted them under ideal conditions, and lost the most of them. I finally got them from a nearby nursery, and did not lose a plant, and now have more than I need. After I had thoroughly pulverized the soil, I took stakes and placed them about three and a half feet apart, leaving enough room between the rows for the cultivator to run. From each stake I ran a line to the one at the opposite end of the row, and at intervals of every two feet along the rows I formed with my hands little mounds, having the top of the mound, which should be about four inches in diameter at the base, just below the level of the surrounding ground. I then took the plants and carefully placed the roots all around down the sides of the mounds, having the crowns of the plants on the middle of the top. I then sifted the soil in carefully, without too much pressure, and taking care that no soil lodged on the crown of the plant. This method of planting is somewhat tedious at first, but it pays in the end. Growth will commence almost immediately if the weather is favorable.

No matter how the planting is done, the ground should be kept loose and finely pulverized near the plants and all the way between the rows, too, if they are expected to flourish. Capillarity works horizontally, as well as perpendicularly, and soil that is hard and dry will draw moisture from that which is loose. Therefore, if the spaces between the rows of plants are allowed to become hard, they will detract greatly from the benefits of good tillage near the plants. The whole surface of the soil must be kept as fine as possible, that the moisture may be retained below. The best tools for tilling the surface soil of a berry patch are those that scratch and pulverize most thoroughly. A fork hoe or hand cultivator is excellent to use on a small plot, unless the ground has become caked by prolonged rains, or other circumstances. In cases of this kind, a heavy plow is almost indispensable; or, if you have a cotton a good start. Tillage should be continuous, and soil-pod big weeds, rather than a heavy system. It is almost impossible to have the best time in tilling a berry patch. The best time for cultivation is as soon as the plants are old enough for them to stand alone, and to be around their roots. It is a mistake

to take often made to wait until the ground is hard and the weeds well started. How often to hoe or cultivate the ground will have to be determined by the conditions, as there can be no fixed rule. I cultivate part of mine with the hoe at least once a week, and every time the potatoes are cultivated the horse cultivator is run through the berry patch, as well. The application of the principle of keeping the soil loose on top and moist below, is the best guide. The same applies largely to the time to stop in late summer or fall.

The success of the whole effort to grow berries depends on prompt and faithful work during the growing season. Next year's berry crop will be largely in proportion to the work done this year. It may seem to be a simple thing to cultivate a berry patch, and so it is if one has the right idea of what is good tillage and is willing to do the work thoroughly; but, unfortunately, there are many who lack in these two principles.

I think, on the whole, the matted-row system is the best, and the first year's plants should have the runners and blossoms all clipped off until late in the summer, when runners may be allowed to grow to form plants for next year's setting. I set plants every spring, and have three plots. In the first are the young plants, then the year-old ones, and finally the two-year-old ones. At the end of the second year's fruiting for each patch, I have that patch plowed up and prepared for the next lot of young plants. By following this method, I have a continuous crop of berries.

Immediately after the fruiting season I have the mower run over the patch, and all the old leaves and any stray weeds cut off. These I rake off and burn. Why this cutting off of the old leaves should be done is more than I know, but I do know that, since adopting the practice, which I learned from a friend who is an adept at strawberry culture, I have had my strawberry crop nearly doubled on the same amount of land.

After the cultivator has run over the patch for the last time, I have a small quantity of straw strewn between rows. This conserves the moisture, and helps in a degree to check weed growth. In the second year's fruiting patch I very often let this straw remain and take the place of cultivation; but, for the young plants and first-year fruit-bearers nothing is equivalent to cultivation. In the fall, after the first snow, I have straw scattered lightly over the plants to prevent exposure to heavy frost. This is removed as early as possible in the spring, and usually burned.

With regard to the kind to plant, the editor mentioned several excellent varieties. I myself have Bederwood and Family Favorite, both of which are first-class fruiters, the last named ripening in advance, and having the advantage over those plants which do not bear perfect flowers. Splendid and Williams, both mentioned by the editor, are both perfect, and can be planted by themselves. Quite a large number of others sent out by nurseries are not perfect, and require to be planted along with another variety. I would advise L. M. to write or go to his nearest nursery, describe location, kind of soil, and the use for which he wants berries—that is, home or market gardening—and let the nurseryman decide for him, as to which kind of plants would be most suitable for his location and ground.

C. C. S.

Cutworms.

Tomatoes, cabbage, sweet potatoes and other vegetables and garden plants, and especially those which are started under glass and transplanted, are subject to serious injury by cutworms. They appear sometimes in great numbers in spring and early summer, and frequently do severe injury before their ravages are noticed. The method of attack is to cut off the young plants at about the surface of the ground, and as these insects are of large size and voracious feeders, they are capable of destroying many plants in a single night, frequently more than they can devour. During the past two years, these insects, working generally throughout the United States, destroyed hundreds of thousands of dollars' worth of crops. By the timely application of remedies, however, it was demonstrated by the Department of Agriculture, through field agents and others of the Bureau of Entomology engaged in the investigation of insects injurious to truck crops and sugar beets in some of the principal trucking regions, notably in Tidewater Virginia, in Southern Texas, in the vicinity of Rocky Ford, Colo.; in Southern California; in the vicinity of Sacramento, Cal.; in Stark County, Ind., and in some other regions that these insects can be readily controlled, large areas being successfully treated. The usual method of control is by the use of poisoned baits.

Take a bushel of dry bran, add 1 pound of arsenic or Paris green, and mix it thoroughly into a mash with 8 gallons of water, in which has been stirred half a gallon of sorghum or other cheap molasses. After the mash has stood several hours, scatter it in lumps of about the size of

a marble over the fields where injury is beginning to appear, and about the bases of the plants set out. Apply late in the day, so as to place the poison about the plants over night, which is the time when the cutworms are active. Apply a second time, if necessary.

When cutworms occur in unusual abundance, which happens locally, and sometimes generally, in some seasons, they exhaust their food supply, and are driven to migrate to other fields. This they do, literally in armies, assuming what is called the army-worm habit. At such times it is necessary to treat them as we do army worms. While the methods which have been advised are valuable in such cases, these remedies may be too slow to destroy all the cutworms, and we, therefore, have to employ other methods. These include trenching, ditching, the plowing of deep furrows in advance of the travelling cutworms to trap them, and the dragging of logs or brush through the furrows. If the trenches can be filled with water, the addition of a small quantity of kerosene, so as to form a thin scum on the surface, will prove fatal. In extreme cases, barriers of fence-boards are erected, and the tops smeared with tar or other sticky substances to stop the cutworms as they attempt to crawl over.

Clean cultural methods and rotation of crops are advisable, as also fall plowing and disking. Many cutworms can be destroyed where it is possible to overflow the fields. This is particularly applicable where irrigation is practiced.

A Potato Growing Contest.

A scheme to promote the interest of farm boys in their vocation has been inaugurated in Carleton County, through the generosity of R. B. Whyte, of Ottawa, who has offered six prizes, aggregating \$55, for a potato-growing contest, competitors to be farm boys between the ages of 12 and 18 years. The boys must operate a one-tenth-acre potato plot, do all the work in connection therewith themselves, keep a detailed, accurate account of all cost, and a record of dates of planting, and other work in connection with the plot. One bushel of the potatoes, properly labelled, and representing average quality, smoothness and size, is to be exhibited at the county fall fair, and the score awarded by a judge to be considered in the final awarding of the prizes, along with the report of the inspector, a certified report of yield, and the written report of the competitor. This is a very commendable example, which might be followed up on a large scale by Agricultural Societies and by wealthy persons desiring to further the cause of agriculture. The class of crop worked with makes very little difference, and the large number of farm crops leaves ample room for good work in every locality. Besides giving the boys an interest in the particular crop worked with, the system would instil in them a love for their work, and would also be an opportune beginning in the keeping of accounts—a much-neglected phase of agriculture on the average farm. Agricultural Societies the country over can well afford to give this matter due consideration.

THE FARM BULLETIN

Agriculture at the Universities.

In reference to a published report that the Universities of Toronto, McMaster and Queen's had decided to establish B. Sc. courses in agriculture, the heads of these three institutions, replying to an inquiry from "The Farmer's Advocate," as to the purpose and scope of the proposed departure, give the following particulars:

TORONTO UNIVERSITY.

It is correct that the University of Toronto is about to establish a degree of Bachelor of Science in Agriculture. This degree is being instituted particularly in order to supply for the High Schools of the Province teachers who will be able to give instruction both in the scientific subjects and in agriculture. It is felt by the Department of Education that more must be done for agriculture in the schools, and we are co-operating with the Department of Agriculture in instituting this degree, in order to provide, if possible, a supply of properly-equipped teachers for this purpose. The first two years of the course will be taken in the University of Toronto, and the subjects covered will be those of the sciences in the honor courses, and the other subjects required for the B. A. in those two years. The third and fourth years the students will spend at Guelph, where their chief attention will be devoted to agricultural subjects and applied sciences. They will also receive instruction in English, Rural Economics and History. The examination on all

these subjects will be conducted by the University, so that the standard of the examinations in the third and fourth years will be our University standard, and the degree will be conferred by the University at the end of the fourth year. We hope that this move will do something to provide for what seems to be a great want at present in the Province.

ROBT. A. FALCONER.

QUEEN'S.

We are taking this action at the request of the Provincial Department of Education, and the course is intended for specialist teachers in our secondary schools, who shall have the double qualification of a Specialist in Science and Agriculture. The first two years will be spent at Queen's University, the next two at the Ontario Agricultural College at Guelph, and it is expected that those taking it will acquire such academic and practical qualifications as will enable them to give instruction in High Schools and Continuation Schools that will be of special value to those intending to be farmers. Queen's University is

Frosted Western Oats as Seed.

Editor "The Farmer's Advocate":

A large number of farmers are buying Western oats for seed. Judging from past experience and knowledge of Western conditions, I feel sure there will be heavy loss and disappointment from this practice. Even at the best, these oats do not do so well in Ontario as home-grown seed. I tried them one year, and found that they shelled badly at the top, not ripening evenly on the straw. But there is a far more important reason than this. The great bulk of oats in the West this year have been frosted, and frosted oats are no good for seed. Frozen wheat may grow and produce some kind of a crop, but not so with oats. I remember, one year, out West, sowing some frozen oats on a fireguard. They looked plump and nice, just like many of the Western oats we are now getting, but hardly one of them grew. Now, carloads of these oats are being sold in the East, and many farmers are attracted by their

fine appearance, but, if sown, the farmer may not only lose the price of his seeds, but, after waiting two or three weeks, will have to prepare his land again and sow other oats, too late for best results. Anyone who thinks of sowing these Western oats, or any others, for that matter, should make a simple test for germination. Take a small box, fill it an inch or two deep with sand or loam, moisten it, and place in here a hundred representative grains. Cover with earth, keep moist, and in a week's time examine to see what percentage has germinated. This simple test will probably convince him, and save many dollars' worth of time and seed. T. E. H. Bruce Co., Ont.



Lulu Keys.

Holstein cow; born February, 1908. Milk record, 19,250 lbs. in a year as a senior two-year-old, consigned by E. B. Mallory to Belleville Spring Sale. Sold for \$1,500, to D. B. Tracey, Cobourg, Ont.

most anxious to assist, as far as possible, in extending the benefits of literary and scientific education to the great farming class of our community, and we would be glad if the present movement on the part of the Department of Education would prove to be only the beginning of an extensive development in this direction. We expect to be prepared to receive students for this course at the opening of the next session.

DANIEL M. GORDON.

McMASTER.

We are thinking of recommending to our Senate the establishment of a course for the degree of B. Sc. (Agr.). If the Senate should decide to do so, this course will demand two years of general Science and Arts work at McMaster, and two years of practical work at the O. A. C., together with work in English and History. The English and History will be under our examination. The Superintendent of Education would grant specialist standing to those graduating in this course, and this would qualify them for specialist positions in our High Schools and Collegiate Institutions. The matter will be decided the first week in May.

A. L. McCRIMMON.

The Crop Reporting Board of the Bureau of Statistics, United States Department of Agriculture, estimates, from the reports of correspondents and agents of the Bureau, that the average condition of winter wheat on April 1st was 80.6 per cent. of a normal, as against 83.3 on April 1, 1911, 80.8 on April 1st, 1910, and 86.1 the average condition for the past ten years on April 1st. There was a decline in condition from December 1st, 1911, to April, 1912, of 6.0 points, as compared with an average decline in the past ten years of 3.3 points between these dates. The average condition of rye on April 1st was 87.9 per cent. of a normal, against 89.3 on April 1st, 1911; 92.3 on April 1st, 1910, and 89.8 the average condition for the past ten years on April 1st.

Dr. Robt. McGill, Professor of Economics in Dalhousie University, has been appointed chairman of the Grain Commission, constituted at the recent session of Parliament. The other members of the Commission are Frank M. Gibb, of Fort William, Chief Grain Inspector, and C. C. Cassels, Warehouse Commissioner.

The Belleville Holstein Sale.

The annual consignment sale of Holstein-Friesian cattle, held at Belleville, Ont., April 3rd and 4th, under the auspices of the Belleville District Holstein Breeders' Club, was perhaps the most decided success of any sale of the breed ever held in Canada. The animals, contributed by twenty breeders, were a superior offering, of fine type and breeding, and brought out in excellent condition. The sale attracted a very large attendance from long distances. The bidding was brisk, and the prices obtained should be considered satisfactory by the sellers, while buyers received good bargains. The highest price realized was \$1,500 for the charming four-year-old cow, Lulu Keyes, No. 93 in the catalogue, with a record of 19,250 pounds milk in one year as a senior two-year-old, consigned by E. B. Mallory, Frankford, Ont., and purchased by D. B. Tracey, of Cobourg, Ont. The top price for a bull was \$700, for the richly-bred, seven-year-old Pontiac Hermes, No. 104 in catalogue, consigned by G. A. Brethen, Norwood, Ont., and purchased jointly by A. D. Foster, Bloomfield, and E. B. Mallory, Frankford, Ont. The catalogue was capably prepared, the sale admirably managed by Secretary F. R. Mallory, and the selling efficiently conducted by the notable auctioneer, Col. Kelly, of Syracuse, N. Y. Following is a list of the sales of \$100 and upward:

FEMALES.

Lulu Keyes, No. 10353, 4 yrs., born 1908;	
D. B. Tracey, Cobourg	\$1,500
Edith Prescott Albino Korndyke, 1907; D. B. Tracey	520
Pearl Pietertje Queen 2nd's May; G. H. Wilmot	245
Starlight Plus Posch, 1911; J. C. Drewery, Cowley, Alberta	125
Sally Keyes, 1910; Wm. Payne, Port Granby	145
Hengerveld Echo De Kol 2nd, 1910; W. R. Shield, Mt. Pleasant	155
Bonny Belle Deene, 1909; S. E. Lane, Belleville	145
Bridal Rose Mercena, 1910; G. F. Murton, Portsmouth	185
Mechthilde Calamity, 1910; H. Smith, Winnipeg, Man.	140
Mercena Hengerveld Meria, 1910; G. F. Murton	160

Duchess Hengerveld Burkeyje, 1910; S. E. Lane	150	Meho Pauline Mercena, 1910; H. Smith	175	Evergreen Mollie, 1910; R. S. Dennis, Fellows	125
Duchess Burkeyje Hengerveld, 1909; R. M. Holtby, Manchester	135	Korn Inka Mercena, 1910; G. H. Wilmot, Eric	150	Princess Dixie Heng, 1910; Jos. R. Anderson, Mountain View	180
Rosie Violet 3rd, 1907; H. Smith	140	Mollie Keyes Countess, 1906; H. Smith	160	Edler Triumph, 1908; G. H. Wilmot	230
Irene Lassie, 1907; N. H. Fellows, Fellows	175	Ruby Beauty, 1907; Joseph Kilgour	175	Evergreens Velstra, 1910; R. M. Holtby	130
Ottie Hengerveld, 1908; Joseph Kilgour, Eglinton	230	Duchess Johanna Hengerveld, 1908; H. Smith	175	Keyes of Gold, 1905; A. M. Parrot, Odessa	125
Bibby Keyes, 1906; Edward Nelson, Wooler	265	Lady Princess Mercena, 1907; H. Smith	200	Velstra Triumph Edler, 1906; J. J. Wilmot	155
Mary Keyes Hengerveld, 1908; H. Smith	310	Ituby Doralice Posch, 1910; Jos. Kilgour	175	Lassie Mercedes of Thurlow, 1910; N. H. Fellows	140
Pietertje Bos, 1910; F. Wallbridge, Rossmore	145	Butter Boy Heng. Girl; D. B. Tracey	350	Violet Mercena, 1910; M. G. Hutchison	140
Isabella De Kol, 1909; H. Smith	130	Pontiac Bos, 1910; H. Smith	105	Daisy Verbelle Heng, 1911; H. S. Logan	150
Pontiac View, 1907; R. M. Holtby	125	J. M. De Kol, 1905; Joseph Kilgour	145	Una Korndyke De Kol, 1909; W. A. Paterson, Agincourt	170
Rhoda Butter Girl, 1909; H. Smith	205	Detta Bella De Kol; J. J. Wilmot	150	Pontiac Hartog Abbekerk, 1910; J. C. Drewery	155
May Countess Blossom, 1909; B. Osburne, Rossmore	170	Queen Triumph, 1907; H. Smith	200	Segis Una Korndyke, 1910; J. C. Drewery	175
Clintonia Hartog De Kol 3rd, 1906; A. D. Foster, Bloomfield	350	Una Verbelle; Andrew Little, Trenton	215	Gladys Heng De Kol, 1907; R. M. Holtby	115
Dolly Inka De Kol, 1901; Jos. Kilgour	125	Lilly Butter Girl, 1911; J. C. Drewery	160	Maud Artis De Kol, 1911; H. S. Logan	125
Flora Verbelle, 1910; J. J. Wilmot, Eric	200	Ruby Butter Girl Keyes, 1909; H. S. Logan	130	Buelah Bos, 1909; H. Dennis	115
Pearl Pietertje Caroline; G. F. Murton	155	Queen Pietertje, 1909; John H. Scott, Havelock	120	Audry Spot; H. S. Logan	125
Daisy Pietertje Korndyke, 1909; Archibald Parks Napanee	235	Miss Altra Wayne, 1910; Chas. Barr, Invermay	205	Gem Oakland Maida; H. S. Logan	130
Queen Artis Korndyke, 1910; H. Smith	200	Lady Mary Burkeyje; H. S. Logan	185	Gretqui Hengerveld, 1910; F. Zufelt, Conseccon	150
Sadie Korndyke Rooker, 1906; Jos. Kilgour	240	Selma De Kol Posch, 1911; G. F. Murton	165	Riverview Gretqui, 1910; H. S. Logan	160
Susan Mechthilde, 1908; Lewis Little, Trenton	230	Ethel Dixon, 1906; J. B. Dennison	125	Ernestine Star, 1906; W. E. Redman	145
Duchess Johanna Aggie, 1909; J. J. Wilmot	190	Saddie Queen, 1902; H. Smith	175	Hillcrest Pontiac Daisy, 1911; H. S. Logan	115
Irene Maid De Kol, 1904; H. Smith	200	Quidee De Kol 2nd, 1905; Jos. Fitzpatrick, Holloway	160	Belle Mailing De Kol 2nd, 1911; H. S. Logan	105
Molly Keyes, 1906; S. Wallbridge, Belleville	170	Princess Lillian of Harlaam, 1905; Jos. Kilgour	165	Daisy Pauline Piet, 1906; Arch. Parks	470
Rosie Pietertje De Kol, 1901; Jos. Kilgour	125	Princess Beta of Harlaam, 1907; Joseph Kilgour	235	Minna Von Banhelm, 1909; M. G. Hutchison	145
De Dikkert Cornucopia, 1907; H. Smith	170	Orange Spoffard, 1907; Selden, Ketcheson, Sidney Crossing	115	Miss Lily's Butter Girl, 1906; T. W. Solmes	155
Jesse Inka De Kol Princess; W. H. Colton, Colborne	130	Maud Burkeyje; H. S. Logan	165	Pearl Pietertje Queen 2nd's May, 1909; G. H. Wilmot	245
Quidee Plus Burke, 1911; J. C. Drewery	140	Lady Abbekerk Korndyke, 1911; H. S. Logan	200	Pearl Burke Pietertje 5th; Jas. A. Stewart	155
Korndyke Queen Sadie, 1911; Ed. Nelson	180	Lottie A. De Kol; H. S. Logan	150	Foekje Piet Belle 4th; H. S. Logan	150
Rosa Omega, 1901; H. Smith	200	Hillcrest Princess De Kol, 1910; Jas. S. Stewart, Menie	155	Molly Keyes 3rd, 1910; H. S. Logan	155
Sylvia Trenton of Glensprings, 1909; G. F. Murton	165	De Kol Mutual Pauline, 1909; H. S. Logan	245	Pearl Pietertje Julia; Chas. Barr	175
Pauline Agness De Kol Pietertje, 1910; G. F. Murton	160	Hillcrest Butter Girl Jessie, 1909; H. S. Logan	180	Pearl Piet Rose 3rd, 1910; H. S. Logan	125
Sunnyvale Queen, 1909; J. A. Caskey, Madoc	235	Anna Belle Marie, 1908; Jos. Kilgour	170	Coral De Kol Frontier; Jos. Kilgour	180
Molly Keyes 3rd, 1910; H. S. Logan, New Westminster, B. C.	155	Jessie 2nd's Inka Wayne; H. S. Logan	190	Otilla Butter Girl, 1911; H. S. Logan	100
Victoria Johanna Burke, 1910; J. B. Dennison, Napanee	160	Princess Gretchen, 1911; H. S. Logan	125	Pietje Pet Korndyke; G. A. Gilroy, Glen Buel	200
Orange Wayne Spafford, 1910; W. E. Redman, Kinsale	145	Bessie Corby, 1910; S. M. Reid, Odessa	135	Maud Artis De Kol, 1911; H. S. Logan	125
Bridal Inka Mercena, 1910; H. Smith	180	Grace Joice Burke De Kol, 1910; J. C. Drewery	160		
Velstra Mollie, 1909; W. N. Cranston, Bay Centre	160	Carol De Kol Pietertje Pet; H. S. Logan	140		
Lulu Inka Mercena, 1910; R. M. Holtby	170	Starlight Mercedes Posch, 1909; M. G. Hutchison, Cavan	175		

BULLS.

Pontiac Hermes, 1905; A. D. Foster & E. B. Mallory	\$ 700
May Echo's Prince, 1910; Jas. Seymour, Bobcaygeon	290
Canary Hengerveld, 1909; A. J. Thompson, Frankford	115

Ontario Agricultural Legislation and Appropriations.

The importance of the development of Ontario's agricultural possibilities has been realized and recognized more fully this year than ever before, not by the Government only, but by the people themselves. The very large demands for literature, and especially for that class dealing with intensive farming, is a fair indication of the trend of the public's attitude toward the work of development. The increased numbers attending meetings and demonstrations of various kinds encourage greatly those having the work in charge. Several new bulletins have been issued in conjunction with some reprints, and more are in the printer's hands.

The great demand for information re land is overloading our Colonization Department, because it already had a busy season ahead in endeavoring to supply farm laborers. Investors are very anxious to become acquainted with our fruit lands. Every indication is pointing toward great development.

Increased grants have been made to carry on the various lines of work, and are summed up as follows:

	1911	1912.
Civil Government	\$ 41,850.00	\$ 44,867.00
Ont. Agr. College	259,041.00	274,966.00
Ont. Vet. College	32,488.00	33,670.00
Agr. Soc. Branch	125,505.00	154,250.00
Live Stock	44,720.00	41,500.00
Farmers' Institutes	39,583.00	40,709.00
Dairy Branch	62,750.00	63,950.00
Fruit Branch	50,020.00	54,250.00
Statistics Branch	5,500.00	5,500.00
District Reps.	27,600.00	35,600.00
Farm Forestry	10,000.00	10,000.00
Immigration	100,600.00	107,728.55
Demonstration Farm	8,000.00	11,000.00
Miscellaneous	30,250.00	32,750.00
	\$737,907.00	\$910,731.55
Capital Account	70,732.00	96,000.00
	\$808,639.00	\$1,006,731.55

ONTARIO AGRICULTURAL COLLEGE.

During recent years the number of students at the College has been gradually increasing, until the question of expansion has arisen. Not only are those in charge of instructional work

having some difficulty, but those in charge of the dormitory and dining-room have long labored under very serious drawbacks. The kitchen was very inconvenient, old, and too near the engine-room. A vote of \$75,000 will enable the authorities to build a separate building, with every convenience, large enough to accommodate 500 students. It will be erected as near as convenient to the residence, and will add materially to the present accommodations.

For years it has been conceded that the dairy stable was inadequate for the carrying out of experiments which should be handled with a great deal of care. It was difficult to apply modern ideas and principles in an old-fashioned stable. \$15,000 will build a stable equal to every requirement, and it will also be one for which the authorities at a public institution need not offer any apologies.

Room for experimental work upon field and orchard crops was also a difficulty. With the influx of students, more stock is necessary for class work, and if enough food is not raised, then it must be bought. It is absolutely necessary to maintain herds of cattle, flocks of sheep, and large numbers of swine. The great impetus which the fruit industry received also demanded experimental work. More land had to be acquired to allow for the expansion of the various departments. One hundred acres, known as the Hamilton property, have been bought for \$16,500. This will be taken over by the College authorities immediately.

The appropriation of \$10,000 for an electrical plant will equip the buildings with every necessary appliance.

Regular salary increases have been made, as usual. The great amount of extension work throughout the Province has necessitated some new men being appointed to the staff.

ONTARIO VETERINARY COLLEGE.

The College, at present located on Temperance Street, is becoming inadequate to meet the requirements, and a new building will be erected in the near future. Last year a vote of \$50,000 was passed, and supplemented by another \$50,000 this year. This new building will be the largest and most complete ever erected.

AGRICULTURAL SOCIETIES.

The increased interest taken in the standing field competitions necessitates further grants for judging and other work. An additional \$2,500 has been added to the prize-list, and \$8,000 for expenses of judging. Judges are supplied for agricultural exhibitions where required, and \$3,500 additional has been supplied for wages and expenses.

The Dominion Government, through the Seed Division, has granted \$10,000 for the encouragement of a seed-improvement campaign; this money has to be supplemented by one-third from some other source. Competitions will be arranged by the various agricultural societies; these are limited to 170, and the present indications are that this will not include all that wish to compete. The expenses and wages of the judges in the competitions, provided for by the Dominion grant, will be sustained by the Provincial Department.

Larger prizes will be offered for grain and seeds at the Canadian National, Guelph and Ottawa Shows.

The Vegetable-growers will receive some extra grants for the carrying on of their work attached to the Society. Considerable interest has been aroused, due to the opening of New Ontario; excellent vegetables and potatoes can be raised. The Society is taking steps to ascertain the value of the products from that district.

The Ontario Plowman's Association receives an additional \$250. Their work is strictly educational, in so far as it encourages better workmanship upon the farms.

The fund formerly voted and used as an insurance against rainy weather by the agricultural societies at the time of the annual exhibitions was found very small, especially during a term such as 1911. An additional vote of \$10,000 has been made to further carry out this scheme.

LIVE-STOCK BRANCH.

The exhibiting of pure-bred and fat stock at all our exhibitions, but more especially at the Winter Fairs, indicates development. The demand for space at Guelph and Ottawa has been much greater than was anticipated. The building at Ottawa, though new, is already too small; the building at Guelph has long been a problem. In

addition to the grant of \$9,500 to the fairs, an additional sum of \$5,000 has been added. The stockmen are using every opportunity to further their interests.

Encouragement is given to the holding of sales of pure-bred stock by the voting of \$800, to be used for advertising and other necessary expenses.

The passing of the Act respecting the Enrollment and Inspection of Stallions is a very great stride toward the gradual elimination of the inferior stallions now in use in some parts of the Province. Last year it was not allowed to reach the House, but passed this year without any serious difficulty. A Stallion Enrollment Board will be formed, consisting of five men. The Board will issue certificates upon the receipt of sufficient evidence of breeding and ownership, and upon the payment of the necessary fee. Competent persons will be appointed by the Minister to make inspections, under the direction of the Board; three such inspectors will form a committee. No person will be allowed to 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 granted. These certificates must be renewed annually. All stallions must be inspected every two years, except those which had reached the age of eight years at the time of the first inspection. The fees accompanying this Act are—For enrollment, \$2.00; for inspection, \$5.00; for renewal of enrollment, \$1.00; for transfer certificate, \$1.00. It will come into force on August 1st, 1912.

FARMER'S INSTITUTES.

The Short course work is rapidly becoming heavier yearly, due principally to the activity of the District Representatives. The Women's Institutes are growing very fast; there are 700 in the Province up to date. Farmers' Clubs are becoming very popular. An additional \$1,300 was voted for increased expenses and to aid in running the "Better-farming Special." The C. P. R. furnished a train, and the Agricultural Department, through the Institute Branch and O. A. College furnished the material for exhibition and arranged for speakers. The territory from Windsor to Montreal, and from Toronto to Goderich and Owen Sound, was covered.

DAIRY.

The granting of \$63,950 toward dairy instruction and inspection work throughout Ontario every year, with moderate increases, is an indication of the extent and importance of the industry. Greater care is being exercised in the appointment of competent men as inspectors for cheese and butter factories. Experimental work is being carried on, and exhibits, especially of an educational nature, are being held at every opportunity.

FRUIT BRANCH.

Ontario's fruit industry is growing by leaps and bounds. The fruit-growers are entitled to all the support that can be given for investigation and extension work. An additional \$3,000 will be used for instruction and inspection connected with proper spraying of orchards. Instruction is given in pruning wherever necessary. Packing demonstrations are becoming very popular. Orchard competitions will be held. Demonstration orchards are now being managed in many more sections than formerly. This year, Elgin, Huron, Grey, Simcoe, Dufferin, York, Ontario, Northumberland, Durham, Hastings, Dundas and Glengarry will all have orchards under supervision.

The November Apple Show will be enlarged, allowing for the exhibition of apples in large lots, for which prizes will be arranged. More space for the regular exhibits will be offered.

The Jordan Harbor Farm will be made more complete by a fruit-storage building costing \$3,000. The present barn will be completed.

The apiary inspection work will be extended under similar methods of those of last year. The need for close inspection is great, and \$1,000 extra will greatly facilitate matters.

DISTRICT REPRESENTATIVES.

Up to date, there are twenty-one District Representatives of the Department throughout Ontario. An increased grant of \$8,000, making a total of \$36,500, has been made for defraying expenses only; their salaries are provided by the Education Department. These men aid greatly in the extension work carried on by the Fruit Branch, and also engage in the Institute work. There will be new offices opened up during this year, but their location has not yet been decided upon. Since last June, the offices at Sault Ste. Marie and Fort William have been made permanent, and the office at New Liskeard opened. The scale of salaries has been changed: the minimum is \$1,200, with an increase of \$100 per year, to a maximum of \$1,500 per year.

COLONIZATION.

The regular work of bringing out settlers, farm laborers and domestics has been carried on as

usual by the bonus and assisted-passage schemes. The question of extensive advertising is a serious one at the present time.

With the development of New Ontario, the Demonstration Farm at Monteith requires more attention. A new barn has been erected. Further experiments with seeds will be carried on under the direction of C. A. Galbraith, the District Representative at New Liskeard. The grant of \$11,000 will cover building, clearing, wages, equipment and miscellaneous expenses.

ACT TO AID PUBLICITY.

The great possibilities of Ontario have become apparent to many, and the bringing of this fact before intending investors and present owners requires a local publicity campaign in nearly all cases. So far this work has been carried on by local grants entirely, but in the future, every county entering upon such work will receive from the department one dollar for every two they expend, with a limit of \$1,000 for total expenditure. A vote of \$3,000 has been made, which will give aid to nine counties, if the maximum is reached.

ACT RESPECTING FEDERAL GRANTS FOR AGRICULTURAL PURPOSES.

The Dominion Government, realizing that the contention held by some that they should each year vote a subsidy to the Provincial Department of Agriculture, was justifiable, have this year granted \$500,000 for this purpose, of which \$175,733.32 comes to Ontario. This money will be spent according to the agreement entered upon between the Provincial and Dominion Departments. As yet, no hard-and-fast rules have been made, and no doubt the fund will be divided among the various departments, District Representatives and the Ontario Agricultural College. Nothing definite can be said, except that the money will be spent where greatest returns can be had.

Several Acts have been amended during the session. The protection of sheep against dogs has been made more perfect; the protection of bees during the period of full bloom of the fruit trees is also provided for. It is useless, harmful and wasteful to spray when the blossoms are advanced and the bees can work; spraying should be done earlier and later. The amending of the Noxious Weeds Act and the Fruit Pest Act will aid in keeping weeds and diseases in check, by more forcibly bringing the matter before farmers; \$1,000 has been voted for the enforcement of the Fruit Pests Act. Special investigation will be made by Mr. Caesar upon Yellow and Little Peach. Under his direction, further work will be carried on concerning the railroad worm and apple maggot.

The granting of \$5,000,000 for the development of New Ontario will have a very great bearing upon Ontario's agriculture. Part of this money will be used for agricultural purposes. New and larger markets will be opened for Older Ontario; proper marketing of surplus crops from the Clay Belt will no doubt be arranged. Many new districts will be opened for settlement. The possibilities of that country will become known not in other countries only, but in our own Province, as well.

W. R. R.

The Ontario Teachers' Convention

The annual meeting of the Ontario Association of Teachers, Inspectors and School Trustees was held this year, as usual, in Toronto, during Easter week. The attendance was up to former records; the Secretary reported on the second day the issue of over 700 membership tickets. The general meetings are held in the evenings; this year they were not well attended. The real work of the convention is carried on during the day sessions, in the seventeen sections into which the Association is divided.

Looking over the nineteen pages of topics and titles making up the year's collective programme, one does not find so much as usual bearing directly on rural and agricultural education. The words "curriculum," "examinations," "regulations," appear over and over again—indeed, the Strathcona Trust is more in evidence than agriculture. Speaking on that topic, Principal Auden, of Upper Canada College, combated the arguments against cadet drill in schools; while Principal Hutton, of University College, who had charge of the "Strathcona Trust" in the Public School section, argued that, because this is a peaceful time, there is the more need to have military training in our schools. He pleaded that Greece's decay began with the decline of militarism, and that Canadians should heed the warning of history. There was no trouble in

getting the teachers to endorse physical training; they went so far as to accept military exercises, but they balked against approving of rifle-shooting in the schools.

Bi-lingualism figures in several sections. The Public and High School Trustees' Department went so far as to appoint a committee to promote the amendment of the Act to make it impossible to have any other language than English dominant in any Ontario school.

The insufficiency and inefficiency of the teacher-supply was debated in several rooms. Inspector Froats had calculated that fourteen hundred teachers are now needed to catch up with the shortage and supply the ordinary depletion from the marrying of lady teachers and other causes. To meet this need, only about 800 trained recruits are forthcoming. Principal McIntyre, of Winnipeg, testified that the continuous single Normal School term had not proved a success in Manitoba. They are now, except for graduates, dividing the term into two periods—a short one, of about the duration of our former Model School term, with an intervening year of actual teaching; and then a longer period at the Normal School, of about six months. The proposition of a divided term was favored by speakers in several departments.

The stay-in-the-Province plodge, which it is proposed to require, was scored rather hardly. Inspector Campbell was applauded for saying that, instead of blaming teachers for going to the Canadian West, he would bid them God-speed! Canada needs teachers with Ontario ideals to take charge of the youth of the unformed West.

In the trustees' section, Inspector Putman, of the City of Ottawa, grappled with what was called the rural-school-teacher problem. He argued that the present system, which was a good one in Dr. Ryerson's day, is totally unsuited to this 20th century. Capable young men and women are not now, as they were formerly, attracted to the teaching profession. He instanced a township of ten schools that at one time within the past two years had not a single teacher holding a certificate of even the lowest grade. The remedy he proposed is Consolidation. Build fine, big schools, he said, in central locations, with teacher's residence attached, and even dormitories for the children who have to come long distances. Mr. McDougall, of North Bay Normal School, supported the plea for Consolidated Schools. He related the good results in one of the new townships, where three teams—one of them belonging to the school board—were employed to haul the children back and forth. When asked about the winter roads, he replied, that near North Bay the deep snow is rolled, and becomes hard enough to carry a wagon. He was sure that, were the consolidated school once introduced into Old Ontario, the preference for it would soon become general.

Agriculture came in for some attention as incidental to manual training and vocational education. Prof. S. B. McCready stated that, up to the present there are only 33 schools in the Province with teachers in agriculture, a circumstance probably due to the fact that neither the people nor the teachers understand the regulations on the subject. He will shortly send out charts, outlining lessons on a particular grain, and he entertains hope of much benefit from the distribution of seed packets and the circulation of Circular No. 13. A New Zealand teacher, R. H. Ferguson, stated that agriculture and dairying are optional subjects of instruction in the schools of that island. The teachers teaching these subjects receive an additional grant.

A Whiff of Country Life.

I have much pleasure in enclosing herewith bank cheque for \$4.50. This will cover my arrears and subscription for current year towards "The Farmer's Advocate."

I appreciate very much your generosity in forwarding the paper so regularly. It is the most welcomed paper we have, and brings a whiff of wholesome country life to our home every week that helps us to forget the cares and worries of artificial town life, by keeping us in touch with nature.

I sincerely believe that if more townspeople read your paper the whole world would benefit. In many of our towns and cities there are virgin fields for an active subscription campaign.

Missisquoi Co., Que.

CHAS. E. HERD.

The tide of interest must be rising. The April 4th number of "The Farmer's Advocate" contained specific answers to one hundred and five questions, asked by subscribers, while many other answers had to be held over, as usual, for want of space.

THE CANADIAN BANK OF COMMERCE

ESTABLISHED 1867

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

Rest, \$9,000,000.

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

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

MARKETS.

Toronto.

At West Toronto, on Monday, April 15th, receipts of live stock numbered 105 cars, comprising 2,106 cattle, 606 hogs, 287 sheep, 170 calves; quality of cattle good; export cattle not sold; butchers' active, at firm prices. Butchers', choice, 1,000 to 1,150 lbs., \$6.75 to \$7; good, \$6.50 to \$6.75; medium to good, \$6 to \$6.40; common, \$5.50 to \$5.90; inferior, \$5 to \$5.25; cows, \$3 to \$6; milkers, \$30 to \$55; calves, \$4 to \$8. Sheep, \$5 to \$5.50; yearling lambs, \$8.50 to \$9; spring lambs, \$5 to \$8 each. Hogs, lower, at \$8.50 fed and watered, and \$8.15 f. o. b. cars.

REVIEW OF LAST WEEK'S MARKETS

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

	City.	Union.	Total.
Cars	114	123	237
Cattle	1,494	1,602	3,096
Hogs	2,853	2,818	5,671
Sheep	804	58	862
Calves	765	137	902
Horses	3	141	144

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

	City.	Union.	Total.
Cars	181	142	323
Cattle	2,205	2,435	4,640
Hogs	4,940	1,016	5,956
Sheep	932	1,384	2,316
Calves	885	160	1,045
Horses	17	64	81

The combined receipts of live stock at the two yards for the past week show a decrease of 86 carloads, 1,544 cattle, 285 hogs, 1,445 sheep, and 143 calves; but an increase of 63 horses, in comparison with the corresponding week of 1911.

Deliveries of all kinds of live stock, excepting veal calves, last week, were exceedingly light. Trade, on that account, was active at both markets during the week. Prices were firm, and for some classes of cattle, 10c. to 15c. higher, especially the medium to good butchers' cattle. The export and heavy butchers' cattle did not exceed the prices paid for the previous week.

Exporters.—The top price realized for one extra choice load of exporters was \$7.40, the same as was paid for the best load the week previous, and was bought by the Harris Abattoir Company, who had an order for some 600 cattle for the Italian Government. Mr. Howard buyer for the Swift Company, of Chicago, bought 36 steers for the Liverpool market, weighing 1,200 lbs. each, at an average of \$6.95.

Butchers'.—Heavy steers during the week were bought for local killing at \$7 to \$7.25; steers, 1,000 to 1,100 lbs. each, at \$6.75 to \$7; good, at \$6.40 to \$6.65; medium, \$5.90 to \$6.20; common, \$5 to \$5.75; cows, \$3 to \$6, and a few of extra weight and quality, at \$6.75; bulls, \$4 to \$5.75.

Milkers and Springers.—There was a moderate supply of milkers and springers, which sold at about steady prices, ranging from \$40 to \$65 each. One firm sold 11 milkers and springers on Tuesday, at an average of \$62 each, and there was one cow of extra quality sold at \$80.

Veal Calves.—Receipts of calves of all kinds were large, the quality of which was generally common to medium. "Bobs" sold at \$2.75 to \$3 each; medium to good calves, at \$4 to \$7 per cwt., and new-milk-fed veals, at \$8.50 to \$9 per cwt.

Sheep and Lambs.—Receipts of sheep and lambs were light. Ewes sold at \$5 to \$6, and selects, \$6.50 to \$7 per cwt.; rams, \$4 to \$5; yearling lambs, \$7 to \$9; spring lambs sold at \$4 to \$8 each.

Hogs.—The run of hogs was not equal to the demand for the home market, and price kept advancing each market day until, on Thursday, selects fed and watered at the market, sold at \$8.60, and in one or two instances \$8.75 was paid, and \$8.25 f. o. b. cars at country points.

BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, 96c. to 97c., outside points. Manitoba No. 1 northern, \$1.13½; No. 2 northern, \$1.10½; No. 3 northern, \$1.06½, track, lake ports. Oats—Canadian Western oats, extra No. 1 feed, 52c.; No. 1 feed, 51c., all rail, Toronto; Ontario, No. 2, 47c. to 48c.; No. 3, 45c., outside points; No. 2, 50c. to 51c., track, Toronto. Rye—No. 2, \$1 per bushel, outside. Peas—No. 2, \$1.15 to \$1.25, outside. Buckwheat—72c. to 73c. per bushel, outside. Barley—For malting, 90c. to 92c. (47-lb. test); for feed, 60c. to 70c. Corn—American No. 3 yellow, all rail from Chicago, 84c., track, Toronto. Flour—Ninety-per-cent. winter-wheat patents, \$3.80, seaboard. Manitoba flour—Prices at Toronto: First patents, \$5.60; second patents, \$5.10; strong bakers', \$4.90 in jute; in cotton, 10c. more.

HAY AND MILFEED.

Hay.—Baled, in car lots, per ton, No. 1, \$16 to \$16.50; No. 2, \$14 to \$15, track, Toronto.

Straw.—Car lots, baled, \$9 to \$10 per ton.

Bran.—Manitoba bran, \$25 per ton; shorts, \$27; Ontario bran, \$25 in bags; shorts, \$27, car lots, track, Toronto.

COUNTRY PRODUCE.

Butter.—Receipts moderate. Prices unchanged. Creamery pound rolls, 87c. to 88c.; creamery solids, 35c.; separator dairy, 34c. to 35c.; store lots, 31c. to 33c.

Eggs.—Receipts were large, prices easier, at 23c. to 24c.

Cheese.—Large, 16½c.; twins, 17c., and good demand.

Honey.—Extracted, per lb., 13c.; combs, per dozen, \$2.50 to \$3.

Potatoes.—Ontarios, \$1.60 to \$1.70; New Brunswick Delawares, \$1.80 to \$1.90; English, Irish and Scotch potatoes, \$1.50 to \$1.60, car lots, track, Toronto.

Beans.—Market continues firm. Broken lots sold at \$2.45 to \$2.55 for primes, and \$2.60 to \$2.70 for hand-picked.

Poultry.—Receipts were light. Fresh-killed chickens sold at 20c. to 22c. per lb.; hens, 15c. to 16c.; turkeys, 23c. to 25c. per lb.; spring chickens (broilers), 50c. per lb.

TORONTO SEED MARKET.

Following are the prices at which cleaned seeds are being sold to the trade: Alsike No. 1, per bushel, \$15 to \$15.50; alsike No. 2, \$13 to \$14; red clover No. 1, per bushel, \$15 to \$15.50; red clover No. 2, per bushel, \$13.50 to \$14.50; timothy No. 1, per cwt., \$18 to \$19; timothy No. 2, \$16 to \$17 per cwt.; alfalfa No. 1, per bushel, \$11 to \$12; No. 2, \$9.50 to \$10.50 per bushel.

HIDES AND SKINS.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 12½c.; No. 2 inspected steers and cows, 11½c.; No. 3 inspected steers, cows and bulls, 10½c.; country hides, cured, 11c. to 11½c.; green, 10c. to 10½c.; calf skins, 12c. to 15c.; sheep skins, \$1 to \$1.40; horse hides, No. 1, \$3.25; horse hair, per lb., 33c. to 35c.; tallow, No. 1, per lb., 5½c. to 6½c.

FRUITS AND VEGETABLES.

Apples.—Spies, \$4 to \$5 per barrel; Baldwins, \$3 to \$4.50; Ben Davis, \$3 to \$3.50; Russets, \$2.50 to \$3.50; Canada Reds, \$3. Onions, Canadian, \$2.50 to \$3 per bag, and very scarce; Egyptian onions, sack, \$4; parsnips, per bag, \$1.35 to \$1.50; turnips, per bag, 40c. to 50c.; carrots, per bag, \$1.15 to \$1.25; cabbage, per case, \$5; beets, per bag, 75c. to \$1.

Montreal.

Live Stock.—Supplies of cattle offered on the local market were very light early in the week following Easter. Generally butchers' have sufficient beef left over to supply demands until later in the week, and supplies of cattle are held back until the following week. Of course, none of the fancy-priced stock was offering. Prices, however, showed little or no decline, quality for quality. Some choice steers sold at 7c. to 7½c. per lb., and choice cows brought around 6c. Good butchers' cattle sold at 6½c. per lb., medium at 6c., and down to 5½c., while common ranged all the way down to 4c., and canners' down to 3c. per lb. Milkers still brought \$65 to \$70 for choice, down to \$30. Calves ranged from \$2 to \$3 each, while sheep were 5c. to 5½c. per lb. for ewes, and 4½c. to 4½c. for bucks and culls. Lambs sold at 7½c. to 7½c. per lb. Hogs ranged from 9c. to 9½c. per lb. for selects, weighed off cars.

Horses.—Supplies are not so plentiful, and prices are firm, as follows: Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$350 each; light draft, 1,400 to 1,500 lbs., \$225 to \$300; light horses, weighing from 1,000 to 1,100 lbs., \$125 to \$200, and broken-down animals, \$50 to \$100. Fine saddle and carriage horses are \$350 to \$500.

Dressed Hogs.—The feeling in the market for dressed hogs is firm, and prices are 12½c. to 12½c. per lb. for fresh-killed, abattoir hogs, selects.

Potatoes.—There is increased firmness in the market for potatoes, and the market has advanced slightly. Green Mountains are selling at \$1.70, on track, carloads, per 90 lbs., while in a jobbing way, \$2 per bag is received for them.

Syrup and Honey.—The market for maple syrup is fairly active just now, owing to the arrivals of the new make on the market. The weather during the past few days has been very good for sap-running purposes, and dealers are looking for a fairly large crop. Prices are 75c. per tin, and 7c. to 7½c. per lb. in wood. Sugar is quoted at 8c. to 9c. per lb., but not much is yet offering. White clover comb honey is 10½c. to 11½c. per lb., and extracted is 8c. to 10c. Dark comb is 7c. to 8c., and extracted is 7½c. to 8c.

Eggs.—The production is now fairly large, and dealers will be packing shortly if prices only decline somewhat. Meantime, round lots continue to sell here at 25c. to 26c., and single cases at 27c. per dozen. Dealers look for lower prices, but the cold weather restricts production.

Butter.—It is thought that within a very short time now the market will feel the influence of the increased make in the country. Over 35c. was paid recently in Cowansville for fancy new butter, but the market is declining, and is now 31½c. to 31½c. in the country, and 32c. to 32½c. here.

Cheese.—Podder cheese is quoted at 14½c. to 14½c. here, but quality is poor, and the market uncertain.

Grain.—The market for oats holds very steady. No. 2 Canadian Western oats sell at 52½c. to 53c. per bushel; No. 1 feed, at 51c.; No. 3 Canadian Western, at 50c.; No. 2 feed oats, at 49c. to 49½c.; No. 2 local, at 50c.; No. 3 local, at 49c., and No. 4, at 48c.

Flour.—Manitoba spring-wheat first-patent flour is selling at \$6 per barrel, in wood; seconds, \$5.50, and strong bakers', \$5.30. Flour in bags is 30c. per barrel less. Ontario patents are \$5.10 to \$5.35 in wood, and straight rollers are \$4.65 to \$4.75.

Millfeed.—The market is steady but firm, being \$25 to \$26 per ton for bran, in bags, and \$27 to \$28 for shorts. Middlings are \$29 per ton, while pure grain mouille is \$31 to \$33, and mixed mouille is \$28 to \$32.

Hay.—Demand for hay moderate. No. 1 hay, \$15.50 to \$16 per ton; No. 2 extra, \$14.50 to \$15; No. 3 northern, \$13.50 to \$14 per ton, and No. 2, \$11.50 to \$12. Clover mixture, \$10.50 to \$11 per ton.

Seed.—The cool weather still prevents activity, but buying is freer than a week ago, and prices are as firm as ever. Red clover is still 23c. to 27c. per lb. f. o. b. Montreal; alsike, 22c. to 26c., and timothy, 16½c. to 20c.

Hides.—The market for hides is a few cents up on calf skins, these being now 17c. per lb. Beef hides are still 11c.

12c. and 13c. per lb., and spring lamb skins are 10c. each, and sheep skins, \$1.10. Horse hides are \$1.75 and \$2.50 each, and tallow is 1½c. to 2c. per lb. for rough, and 6c. to 6½c. for rendered.

Chicago.

Cattle.—Beeves, \$5.50 to \$8.70; Texas steers, \$4.60 to \$6.20; Western steers, \$5.50 to \$7; stockers and feeders, \$4.20 to \$6.60; cows and heifers, \$2.60 to \$6.90; calves, \$5.50 to \$8.25.

Hogs.—Light, \$7.45 to \$7.97½; mixed, \$7.55 to \$7.95; heavy, \$7.55 to \$7.95; rough, \$7.55 to \$7.70; pigs, \$5 to \$7.20.

Sheep and Lambs.—Native, \$4.25 to \$6.30; Western, \$4.40 to \$6.90; yearlings, \$5.90 to \$7; lambs, native, \$5.50 to \$7.75; Western, \$4 to \$8.

Buffalo.

Cattle.—Prime steers, \$7.75 to \$8.25; butcher grades, \$3.50 to \$7.25.

Calves.—Cull to choice, \$5.75 to \$9.25.

Sheep and Lambs.—Choice lambs, \$8.15 to \$8.35; cull to fair, \$7 to \$8; yearlings, \$6.75 to \$7.25; sheep, \$2 to \$6.50.

Hogs.—Yorkers, \$7.90 to \$8.05; pigs, \$6.75; mixed, \$8 to \$8.10; heavy, \$8 to \$8.10; roughs, \$6.75 to \$7.15; stags, \$5.50 to \$6.

British Cattle Market.

John Rogers & Company cable States and Canadian steers from 14½c. to 15½c. per pound.

GOSSIP.

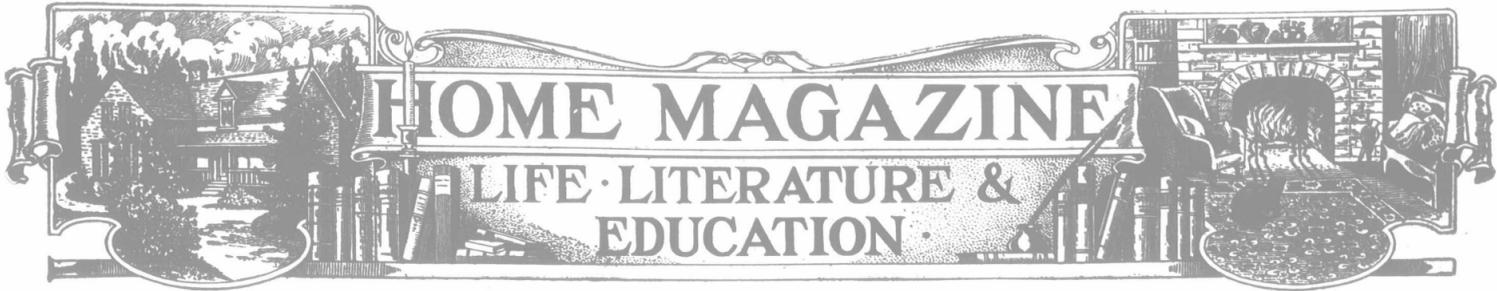
Pure-bred Shorthorn cows and heifers are advertised for sale by W. St. Marie, Lucasville, Ont., who is selling his farm in Sarnia Township, Lambton County.

Shire horses brought good prices at the Peterborough, England, sales the last week in March. The highest price for a stallion was \$1,730, for the Duke of Sutherland's four-year-old gray, Locking Forest King, purchased by Mr. Truman, J. Rowell's brown, Wyton Bar, by Rock's Golden Bar, sold for \$1,650. The highest price realized for a mare was \$1,205, for S. Brown's nine-year-old, Slipton Grace, by Royal Bendigo.

At the Royal Ulster, Ireland, spring sale of pure-bred cattle the last week in March, 284 Shorthorn bulls were sold for an average of \$118, and 25 Aberdeen-Angus bulls sold for an average of \$130. The highest price realized was \$755, for the first-prize yearling Shorthorn bull, Muckrim Sirdar 3rd, of the Orphan strain, shown by S. M. McBride, and purchased by James Burgess, Dungillick, Monaghan.

The American Shropshire Registry Association has published a list of special prizes amounting to over \$2,000, to be offered for Shropshires at principal 1912 shows, in a number of States, and the International at Chicago; also the Toronto Industrial and the Ontario Provincial Winter Fair at Guelph. The specials for the International amount to \$531; for Toronto \$100, and for Guelph \$80. For particulars as to rules of entry, write the Secretary, Miss J. M. Wade, Lafayette, Indiana.

The auction sale of Shorthorns by Thos. Stanton and G. J. Sayer, at Chicago, April 4th and 5th, attracted buyers from Canada and from many States. The top price, \$1,700, was realized for the roan four-year-old bull, Selection, grand champion 1909 International, sired by the champion, Avondale. The purchaser was W. C. Thompson, President of the Independent Harvester Company, Plano, Ill. The second highest price for a bull was \$730, for the white Village Sultan, by Glenbrook Sultan, purchased by W. W. Brown, of Dakota. The highest price for a female was \$1,385, the bid of James Yule, manager for H. L. Emmert, East Selkirk, Manitoba, for the roan four-year-old champion, Countless Selma 2nd, with a good bull calf at foot, by Selection. Several others were selected by the same buyer at handsome prices. James A. Watt, of Salem, Ont., secured, for \$560, the white two-year-old heifer, Orange Lady 2nd. One hundred and thirty-eight head sold for an average of \$238.



Agriculture in Ontario Schools.

THE EDUCATION DEPARTMENT'S PLANS FOR ITS INTRODUCTION.

Teachers, trustees and others concerned in the advancement of our schools, will be interested in Circulars 13, 13a and 13b, just issued by the Ontario Department of Education; in them the intentions and plans of the Department regarding the teaching of agriculture are fully set forth. It is hoped that everybody in Ontario who is interested in any way in the work of the schools may become acquainted with the scheme and that a strong public sentiment may favor the general adoption of the work.

Circular 13 gives the revised regulations governing the distribution of grants. School boards are encouraged by liberal grants to undertake the work. Where the work is carried out under a teacher holding a certificate in agriculture, an initial grant of \$50.00 and subsequent annual grants of \$30.00 can be earned; but no board will receive more than it expends on the work. Where the work is carried out under an uncertificated teacher, the grant is \$12.00 when practical work in the school grounds is made part of the course, and \$8.00 when the practical work by the children is carried on in home gardens. The special grants to teachers range from \$8.00 to \$30.00.

The plan is to have one hour a week throughout the year given to the study, which shall be of a practical character and related closely to local interests. A small garden on the school grounds will be used for simple experiments as well as vegetable and flower plots. The growing of shrubs, vines, window boxes and hanging baskets to beautify the school and its surroundings will be considered part of the work also.

A survey of the work done in Ontario during 1911 is included in the circular. This shows that school gardens for which grants were given increased from fifteen in 1910 to thirty-three in 1911, and that \$2,320.00 was paid out in special grants. Besides there were over sixty other schools reporting work in school gardening. A very large increase is already assured for this year.

Circular 13a shows how the Agricultural College lends itself as a teacher-training school in this cause. The work of the ten weeks' spring term and the four weeks' summer school in July are fully outlined. No fees are charged for instruction in these courses which lead to a certificate in agriculture. The attendance last July reached two hundred. A larger attendance is expected this year and preference is given to successful teachers of experience. Applications should be made early.

Circular 13b is issued as a practical guide to pupils in gardening. The intention is to have it used as a supplementary school reader. Pupils carrying on the work will add to its pages with accounts of their own experiences. Schools will be furnished free with a sufficient number of copies for the use of their classes.

Other publications are under preparation for the schools. In the course of a few weeks the Department will send out to all the schools the first two of a series of agricultural lesson charts; one dealing with alfalfa and the other with the advantages of early seeding. Accompanying these there will be pupils' circulars supplementing the information given on the wall chart. Moreover, supplies of seed will be furnished the schools free for small practical studies to be carried out in conjunction with the chart in small plots in the school grounds. All schools may thus readily engage in the work. It is hoped that teachers may

be encouraged by trustees and parents to take it up.

Other charts, bulletins and supplies will be forthcoming from time to time. It will be easily possible for every rural school in Ontario to give its pupils valuable instruction in the principles of agriculture. The support of every one having the welfare of our schools at heart is solicited.

Copies of the circulars are sent to all the schools for the use of teachers. Other persons desiring copies of these publications or particulars regarding the distribution of seeds to the schools, may apply to the Director of Elementary Agricultural Education, Ontario Agricultural College, Guelph, Canada.

The Roundabout Club

Literary Society Study No. IV.

(Continued.)

To-day we give you two of the best essays upon the poetical selections which appeared in our issue of February 22nd.

We were much pleased with the general tone of the work upon these selections. Almost invariably our students evinced a keen sense of the beauty, the music, the "poetry" of the finer among these fragments. The stanzas from Browning (III.) proved to be favorites, also the inspiring challenge from Dante Gabriel Rossetti (No. IX.). We were glad to see that one at least was impressed with the charm of that beautiful little poem beginning, "Blows the wind to-day" (No. V.), the point of which may be better understood when it is known that Robert Louis Stevenson wrote the stanzas when ill in Hawaii, in reply to a dedication of a book to him by a fellow writer amid the "hills of home," Scotland.

A number those No. VII., possibly because of previous familiarity with this poem, but we were surprised to find that all passed over the other fine fragment from Wordsworth, No. II.

Perhaps without realizing why they did so, several followed, at least in part, the plan which we had in mind when setting the selections, viz., that they be taken in pairs for contrast, I. and II., III. and IV., V. and VI., VII. and VIII., IX. and X.

The bit of doggerel (No. VIII.) was, without exception, either passed over with the contempt that it deserved, or made the butt of a caustic observation. May we "fess up"? We were wicked enough to slip the extract in with the express purpose of seeing if any of our students would be lacking enough in poetic perception to consider it seriously. It was a great satisfaction to find that they all rang true, that not a single one was caught by the mean little bait.

NOTES ON SELECTIONS III., IX., X., VIII.

Impressionistic work allures because, built into the bulwarks of its simplicity are the gates of suggestiveness, each opening into avenues of endearing variety. It is this power of affording scope for the personality of each and every individual which constitutes the charm of all such work; for into it each can weave his own fancies, his own peculiar whims and longings, with full and satisfied belief in the suitability of the ensuing pattern. Of this type of work no better examples could be found than Browning's companion picture-poems: Meeting at Night and Parting at Morning.

In the opening lines note the simple

sketched outlines: the gray sea, the long black land, the yellow half-moon. Presto. With but three movements of his pencil he has depicted a whole scene; yet what one of us does not see that sea in every detail, with the effect of the moon on the waves and the infinite variety of the night land forms, each expressed in terms of our own personality? Further note that these lines give the decisive effect of a viewpoint: hence, an observer. Note also where that observer is, and how fast he travels, the impression of the speed being gathered from the swiftly-changed viewpoint. One moment and he sees the long, black land—an effect only to be obtained from a distance—and the next he quenches "its speed" the slushy sand.

Questions at once arise: Why this swift motion? Will it be continued in the succeeding stanza? What other means are used to emphasize the swift movement besides the general impressionistic effect and the moving viewpoint?

Answering the last query first, it is evident that the sharp, quick march of the metre in "And the startled little waves that leap in fiery ringlets from their sleep," produces the effect of rapid motion in contrast with the meditative movement of the first lines. This slow swing is also noticeable toward the last of the verse, and the last throb of movement as the boat runs up on the beach is shown by the quick run of the words: "And quench its speed"; the sudden break as the boat's nose strikes the beach by the break in the metre after "speed." In the words "pushing" and "slushy" the sound of the boat on the sandy beach is imitated.

The metre of the second stanza gives the same effect of swift motion, but here the motion becomes subsidiary to the more evident eagerness: "Then a mile . . . three fields . . ." and we see the wanderer, measuring the distance just as you and I in our eagerness have measured it.

But what is the special purpose of this swift movement? What did the poet seek to express by those bold outlines of grey sea and long, black land seen by the half-moon? What is the motive of this brief yet effective and comprehensive sketch? Here is the sea-line, the skyline, the moon-path, the night-enshrouded form, the eager tap, the lighted candle, the meeting half seen—half suggested through the glimmer? Is not the whole story told from the standpoint that, as in leisure, the mind becomes photographic so with purpose it becomes impressionistic and the more tense and appealing the purpose, the more do the details blur as the great outlines slip by. Applying this idea, we may assume that in the mind of the wayfarer there exists an intensity of purpose.

It is true that the time is night and the blurring the natural consequence. That, however, seems no sufficient explanation for this bold outline treatment, for if it were, why did Browning use the same effect in the departure in morning's full blaze:

"Round the cape of a sudden came the sea,
The sun looked over the mountain's rim,
And straight was a path of gold for him
And the need of a world of men for me."

Therefore, it is safe to say that in combination with the evident picturesqueness of such a setting, there was in the author's mind a purpose, none the less potent if undefined,—that purpose was to convey to us the eagerness which impelled the traveller.

Herein is the genius of Browning, the

genius of every true artist, the power of which the old Roman poet spoke; so that, though each of us is stirred by the effect, the means, the art is veiled.

These two verses are also excellent examples of Browning's dramatic genius. Here, in place of his usual dramatic monologue in words, we have a dramatic monologue in events, and the whole effect of the poem is that of a swift, sure and telling sketch, perfect because it says so little and suggests so much.

It was, also, characteristic of the cheering, human outlook of Browning's nature that he brought his actor home at night, with the day's work behind him, and sent him forth in the morning on a given mission. He might have pictured him as speeding out, ever out and out to the grey sea, "unto the furthest flood-brim," but what would that have signified to us? What sense of unfulfilled longing and of annulment of kin would such a setting bring to us? But if instead we see the long, black land, what does that signify? What cheering element at once arises from the poet's characterization to challenge our senses? So does Browning ever give expression to his own heartfelt outlook. His was no half-lit genius which sent one with naked soul through the staring night; his, the spirit of the morning departure toward "the need of a world of men."

Contrast with what might be termed the incomplete completeness of this vivid tone-sketch, the complete incompleteness of: "And though thy soul sail leagues and leagues beyond, still leagues beyond those leagues there is more sea." In the former the force of emotion is depicted; in the latter, the power of thought, and as the first is effective because it adequately embodies the emotion, so is the latter effective because it adequately embodies the thought. The appeal of the first is through simplicity of physical background; the appeal of the latter through simplicity of intellectual background.

If Selection IX. be a thought effectively expressed, wherein does that effectiveness lie?

Oftentimes if the thought be simple the explanation may, without beclouding the thought, tend to bulkiness; but the more subtle the thought the more simple must the explanation be. Here, therefore, we have a most subtle thought expressed in terms intelligible to a young mind. Therein is its charm, its effectiveness and merit.

But not only must the explanation be simple, but its simplicity must depend either upon its brevity and the use of simple words, or, more generally, upon some outstanding, dominating similarity between the idea presented and the figure by which it is presented. Here the figure of the boundless ocean beautifully expresses the boundless extent of human progress under God's plan. Though only the figure is presented, yet it throws into the limelight the thought which it embodies; that is, while the comparison, the figure of the boundless sea is given and the application to the thought omitted, yet by the omission the thought is made all the clearer.

The selection is a rebuke for the complacency of the self-satisfied soul—complacency arising from lack of perspective, and this mind-perspective is supplied by comparison with natural perspective. When we turn to the section of "In Memoriam," where Tennyson says: "My own dim life should teach me this, That life shall live for evermore," we see that the poet begins by acknowledging the boundlessness of life and soliloquizes as to what would be, if, leagues beyond leagues, there were not sea; then (in that case) he says: "Twere hardly worth my while to choose of things all

mortal, Or to use a little patience ere I die." Thus, one selection completes the other. The former treats man as one of many: "Unto the furthest flood-brim and leagues and leagues beyond there is more sea." His duty and experience is that of others; he is but one in a crowd, bound to add to the sum total of human happiness and progress; he is but one drop in the sea. Tennyson's extract emphasizes man as an individual: "Life shall live for evermore. Else . . . 'twere hardly worth my while . . . to use a little patience ere I die . . . 'Twere best at once . . . To drop head-foremost in the jaws of vacant darkness and to cease."

As to selection number eight, it sounds "mighty" like doggerel conned from a mischievous youngster's scribble.
Durham Co., Ont. J. E. W.

SELECTIONS IV., V., VI.

This short selection (IV.) deals with love, love of a fiery and passionate depth, buoyant and dashing as the poem itself. It is the love of a desert-dweller, one of the passionate children of a land of vast solitudes, warmed by a burning sun and watched over by brilliant stars. So the selection expresses something of the wild, ardent nature of the lover in its dashing rhythm. Contrast this with selection three. Here the narrower range of vision and the more even, uneventful life is expressed by the closer observation of every object and of the appearance of each. Thus the first lover's life is shown to be more slow and methodical in contrast with the fire and dash of the one following.

But to return to number four. How suggestive is the line, "On a stallion shod with fire"! How better could his swift impetuous course be described than saying that the stallion is shod with fire? Then, too, what extreme phrases are used, showing the intensity of the rider's love, as, "And the winds are left behind." This is shown too in the last three lines, which also form a most fitting and picturesque ending for the poem. But, still, how natural it is for this desert lover to promise by the natural objects he is most familiar with, such as the sun and the stars?

Now listen to the music and see the picture in the lines:

"Under thy window I stand,
And the midnight hears my cry."

How well it pictures the utter solitude and deep quiet? In number three there is no such solitude and no such devotion. The first lover is of the ordinary type. He makes no wild impulsive promises, but his love is like a deep but quiet river. His eagerness is shown not by the dashing rhythm of the verse but by the mention of the various objects in rapid succession, as though he were hurrying rapidly onwards. Yet he too reaches his goal where his dear one waits. Thus the two poems are the same, in that they picture deep and true love.

Selection V.—This poem is one grand picture of the wide free moorland, wild and stern. But not of the wide, wild moore, chiefly, but of the deep longing of a human heart for its native land. Wild and stern is the moorland, haunted by the cry of the peewees, and, like the cry of the peewees, is the cry of the author's heart weary for the "hills of home." The poem seems filled with the sighing of driving wind and the swish of rain. Its music is filled with the lonesome longings of a home-weary heart.

The first two lines form a splendid word-picture of the dreary day, bleak and dull with fleeting gleams of sunshine. The third line adds to the dreary yet grand picture, the tombs of martyrs and the desolate cries of the birds. These first four lines form the gray background for the wild picture. The details are filled in, in the next four lines as by the brush of a master artist. But the picture is not all gray, for the wide moor is "wine-red." Still the next line adds yet another note of loneliness to the scene in mentioning the "Homes of the silent vanished races." The eighth line fits the picture perfectly. The winds over the vast moorland are not soft and balmy, but as becomes its grandeur, "austere and pure."

As the author thinks of this picture an

overpowering desire seizes him to see it again, and his wish is pictured powerfully as he cries in bitter longing—

"Be it granted me to behold you again
in dying,
Hills of home!"

Just one glimpse of it all and then oblivion, with no more heart-hunger, is all he desires.

This poem presents an almost direct contrast to the one following it. Warmth and color seem to characterize the latter as austerity the former. There is all the difference in the world in the description of the rain and wind. To imagine the rain sobbing and the wind as blowing free does not fill your mind with a sense of dreariness as the description in the former does.

But while one writer pictures the wide bare moorland and the other a land of beautiful trees, yet they are one in their intense longing for their own country.

I like selection number five best.
Grey Co., Ont. J. KEMP.

Hope's Quiet Hour.

He Is Not Dead.

I dreamed that I knelt before the Cross,
The Cross upon Calvary,
Though I knew my Lord was hanging
there
To lift up my eyes I did not dare,
His Face I could not see.

No word was said, but I felt His gaze,
And His wondrous Presence filled
My heart with joy and my soul with fear,
My very body felt Him near,
And every nerve was thrilled.

'Twas years ago, but that dream of
peace,
That mystic vision clear,
An Easter message of joy still gives,
Reminding me of Him Who Lives
And, though unseen, is near.
DORA FARNCOMB.

The Cleansing Touch of Christ.

There came a leper and worshipped Him, saying, Lord, if Thou wilt, Thou canst make me clean. And Jesus put forth His hand, and touched Him, saying, I will; be thou clean. And immediately his leprosy was cleansed.—S. Matt. viii: 2, 3.

The man was filled with horror at his own loathsome condition. He longed to be clean and well. No physician could cure his awful disease, there was no hope in any direction but one. He knew of lepers who had been cured, and he knew Who had healed them. So he knelt at the Good Physician's feet and made that touching appeal, that strong act of faith which could not fail to reach the heart of Him Who was eager to save. The leper did not ask to be healed. He simply showed his desperate need of help, declaring his belief in the power of the Healer—and the miracle was wrought.

But that is an old story, is it ever repeated to-day? I heard someone say yesterday: "Christianity is the most successful thing in the world." He said that, knowing perfectly well how the outside world delights in ridiculing those who call themselves Christians. We are accused of being worldly and selfish, of praying on Sunday, and trying to drive hard bargains on Monday, of being self-satisfied hypocrites, etc., etc. Well, supposing some of these shafts of scorn hit us in a tender spot, does that prove the failure of Christ and of Christianity? Why, it only proves that we are failing to follow in the steps of Christ, and to practice the Christianity we profess. The amazing thing is, that, in spite of the weakness and sin of Christians, the Name of Christ still towers infinitely above all other names of men; that His Church is still tremendously alive and growing, after two thousand years. It seemed so weak and unimportant as compared with the mighty Empire of Rome; but now that Roman Empire has crumbled away, while the buildings where Christ is worshipped are countless, and the great multitude of those calling after His Name is increasing by the million.

More than this, we find that mankind

is tainted with the awful leprosy of sin, and One Saviour—only One—can cleanse the sinner. Some, who are struggling hard to remove the unspeakable degradation which results from herding human beings together in the overcrowded city slums, seem to think that to cure poverty would be to cure sin. But those who have really studied conditions among the rich know better. It takes something more than luxury to cure the disease of sin.

"He restoreth my soul," says the Psalmist. To "restore" is to bring back the beauty and health that has been lost. Who can restore a white lily that has been trampled in the mud of the streets? Who can restore the lost purity and self-respect of a woman who has recklessly flung away and trampled beneath her feet the whiteness of her sacred womanhood? Who can restore to the power of splendid manhood, one whose bloated, repulsive face tells truly its tale of years of debauch and vice?

We may say that these miracles are impossible. They certainly seem impossible, but One can and does work such miracles continually. When a sick soul begins to abhor vice and crime, and kneels at the feet of the Living Saviour, pleading for restoration, He still, with tenderest touch, declares His willingness and power to heal. "But some who turn to Him are not healed," do you say? That only proves that they did not hate their sins really—perhaps only wanted to get rid of the consequences of their sins, which is a very different thing from genuine penitence—or that they had no real trust in Christ's power to heal. While He walked visibly on earth, there were some places where He could do no mighty work "because of their unbelief." But, if He healed one leper, that was enough to show His power; and, if He restores one decayed life to-day, that proves His Living, Loving Presence in our midst. No one else can work this miracle, and yet it is a commonplace in the eyes of those who take the trouble to look.

I have just been reading a book called "Souls in Action," which tells of some of the wonderful miracles God has worked through the West London Mission. One case described is that of a woman who was a dipsomaniac. This mania for drink is quite different from ordinary drunkenness, and is declared by doctors to be incurable. This woman's father, grandfather, and brother, died of this awful disease. Her sister was helpless in its grasp, and she herself—though for a long time she taught in Sunday-school, led Band of Hope meetings, and even dared to come (without any faith in God) to the Holy Communion—sank lower and lower under the slavery of drink. One day she was persuaded to hear a sermon by Hugh Price Hughes, and it was like a mirror held up before her soul. She saw for the first time the loathsomeness of sin, told the whole story of her hypocrisy and drunkenness to one of the mission-workers, and battled for a long time with the terrible mania for drink which possessed her. One day she came to the lady who had given her loving sympathy and said it was no use trying any longer. She had prayed and fought, and the skies seemed brazen, and God gave no answer. She was in utter despair. Her friend said, tenderly, but sadly: "Well, dear, I can do no more for you. You know all I can tell you." Then she exclaimed: "I can't think why you don't respond. There is your Saviour, standing quite close to you, stretching out loving, pleading hands to you, longing to save you—and you turn away and won't believe Him. If you turn away from Him, how can I help you?"

Then the poor, despairing woman, had her eyes opened with startling suddenness. She was absolutely certain that the Saviour Who could help her was there. She instantly laid down at His feet her burden of sorrow and shame, felt herself forgiven, and almost fainted under the sudden sense of relief. For fourteen years she still had to fight the desire for drink—but she found strength for the fight, drew it day by day and moment by moment from the ever-present Saviour of Whose Presence she was now so certain. Now, for six years she has had no desire to drink; she is working in the East, teaching the heathen about the Master Who is all in all to her. She has a "fragrance of character and

a blithe and buoyant gladness, which shines in her eyes, sounds in her voice, and communicates itself in all the thousand kindnesses which make her busy life." She is not only pleasant, but merry; not only happy, but joyful, and is dearly loved by the little children.

Sceptics may deny the Cause of the cure, but they cannot deny the fact of the cure. That soul was not only cleansed, but restored—loathsomeness was transformed into beauty, misery into happiness, despairing helplessness into hope-giving helpfulness. And there are thousands of such cures; the touch of Christ can and does heal our souls when we hate our sins and trust simply in Him.

Hear another story. A woman had been down in the depths of sin and misery for six years. The innocence had all gone from her face, the faith from her eyes, the kindness and purity from her lips. She was wild and miserable, not with penitence, but with anger at her shipwrecked life. One of the women belonging to the West London Mission gave her a white flower, with a smile and a few kind words. God used that flower to restore the broken soul. Its whiteness haunted her from the contrast between its beauty and the darkness of her own state. She said to herself continually, "I was once white, like this flower." For days, weeks, and months, the thought of the whiteness of the flower was like the whisper of conscience or the voice of a guardian angel. "As invisibly as fragrance, the whiteness of the flower passed into her soul, and gently, tenderly, and sweetly turned it to God. At last she went to the Mission for help and guidance, and is now working hard as a servant, while her face reveals the beauty of her love for God and holiness.

Stories like these are everyday events in the City Missions, and there are far grander proofs of the power of Christ to be found in the lives that grow up from childhood in sweetness and beauty. If a leper rejoices when his disease is cured, how much greater reason has a healthy man to rejoice if he has never been diseased. If it is a high privilege to be allowed to help in the restoration of a shipwrecked soul, it is a far grander thing to help an innocent soul to walk with God from childhood all through life. The touch of Christ has power to cleanse, and has power to keep clean anyone who presses near to Him in loving, obedient faith. He can not only change misery into gladness, but He can give lifelong happiness to His real followers. Can any other leader do this? Heaven is where God is—and He is here.

DORA FARNCOMB.

The Beaver Circle.

OUR SENIOR BEAVERS.

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

Something to Do on a Rainy Day.

No doubt all you country boys and girls know that our wild birds are among the best friends a farmer has. Field sparrows, chickadees, bluebirds, nut-hatches, warblers, waxwings, thistle birds, and hundreds more—how they work away from morning until night, eating up flies and bugs that would injure crops and gardens and fruit trees, and picking into cocoons, killing any sleeping caterpillars that are in there in pupa form waiting for the time to "come out," perhaps as cabbage-butterflies, or something equally harmful. What if Mr. Robin or Cherry-bird should happen to eat some of your cherries! You would let him have all he wanted if you could only realize how much good he does all the rest of the year. After all, cherries only last a couple of weeks. Think what Robin's fare must be the rest of the time.

The birds do not ask any pay for the work they do; indeed they not only work for us, but cheer us all the while with their merry songs. What a lonely, silent, uninteresting world it would be were there no birds to sing,—no bobolinks, no catbirds, no peewees, no dear little warblers, no song-sparrows, no white-throated sparrows trilling out from the swamps. "I love dear Canada, Canada,

Canada!"—You who live about Georgian Bay should know the song well, and you who live in New Ontario.

The birds have a hard time coming back to us every spring. Many of them, on the long, long journey from the South, fly against wires in the night and are killed; many are beaten by tempest against light-houses and tall buildings, and fall to fly no more; others are caught by hungry animals and snakes; and others still are shot by cruel men and boys, often that their little dead bodies or feathers may adorn the hats of thoughtless, if not really cruel women. Don't you think we ought to be very kind to those of the little creatures who at last do manage to reach us after so many risks and hardships?

And, you know, you can encourage birds to come in greater numbers and live right about your homes, if you will. All you have to do is to make bird-boxes and nail them about to trees and posts, making sure that there are no convenient branches below on which marauding cats may find a foothold.

The boxes may be made of bits of hollow log, or of old weather-beaten boards, and should be snugly roofed to keep out the rain. Even tin cans may be used if the edges of the opening through which the bird is to go are turned back with pliers so that there are no sharp points. If possible, place the boxes where they will be shaded during the hottest part of the day. Have the openings facing the south, and see that they are of different sizes, about the size of a silver quarter of a dollar for wrens, from an inch and a quarter to an inch and a half in diameter for other birds. Do not have the holes too large, or crows and jays may get in. Mr. Forbush, in his book on "Useful Birds and Their Protection," says that the best way to keep out the English sparrow is to suspend the box by a wire or rope. This sparrow, he says, will not nest in such a home.

A little rest upon which the bird can stand before hopping into its nest should be placed below the openings of all boxes intended for swallows and bluebirds.

Just one point more. Every fall when the birds have left the boxes, clean them out thoroughly. This will make them much more healthful for the birds when they come again the next year.

Senior Beavers' Letter Box.

Dear Puck and Beavers,—Spring is here, and soon it will be time to go fishing again. I wonder how many Beavers go fishing? I caught 330 last year; well, not myself; my brother was mostly with me. We had three hooks, and we fished in turn. Of course, none were "whales"—I mean the fish.

I have a baby brother who is about 18 months old. He is beginning to talk quite a bit now. My father, who is away a great deal of the time (he travels for the immigration business), comes home on Sundays. It is great sport watching the baby and father. Father will take him up on his foot, cross one knee over the other, and give him a ride. The baby is all right then, but when he stops he gets cross and begins to cry.

Next year I hope to go to an Agricultural College, and after I am through there, I don't know whether to go to Guelph or not. What do you think, Puck? Please advise me.

Times are rather slow now skating and hockey are gone. I took my skates off my hockey boots, and am going to wear them to play baseball in; they are very light.

We had a fine cow die from blood poisoning yesterday. Father was away, and a young neighbor and I skinned it. It was my little sister's, but she seemed to take it very easy.

Wishing boys and girls of my own age to correspond with me, I will close.

H. ST. CLAIR CUTTEN
(Age 14, Grade VIII.)

P. S.—We have started weighing our milk, and have found it very interesting. [The Guelph College is a very good one, St. Clair. Boys go there from all over the world. Of course, your parents must have the most to say in deciding where you are to go.—Ed.]

Dear Puck and Beavers,—Though I live away in Ayrshire, Burns' country, father gets "The Farmer's Advocate." It is with great interest I read your column

for the young folk. I would have liked very much to have tried your last competition, but it was too late when I thought of it.

As I have said, I live in Ayrshire, therefore I am always coming in contact with things connected with our national bard's life. Our farm stands on the banks of the "Brawling Coyle," and a short distance away, just over the bridge, in fact, is Millmannoch, the place mentioned in Burns' "Soldier's Return." Every day I pass by the "Trysting Thorn."

I, with my sister and little brother, attend school at Coylton. Though only a country school, we have every subject which is taught at Ayr Academy, French, Latin, Science, etc., etc.

This year I hope to go to Ayr Academy. If I can, I mean to become a teacher.

Hoping this will escape the w.-p. b., and with best wishes for the success of the Circle, I am your Scotch friend.

JENNIE LYMBURN (age 13).
Cairnstone Farm.

P. S.—Do you mind my sending this paper on Chas. Kingsley? I wrote it one night when thinking over "Westward Ho!" and, as I have often been praised for my essays in school, I would like your unbiased opinion.

[Mind your sending the essay on Kingsley, Jennie? Why we are delighted to have it. It is interesting to hear that you live in "Burns' country." I suppose you have often seen the Alloway Kirk and "Auld Brig o' Doon." I once had a bit of vine from the former that

Altogether, it is the work of a man who, having a great imagination, loved the fables of the old Greek gods, and who must have studied old writings to a great extent.

J. L.

Dear Puck and Beavers,—I would like to be a member of your Club. My father has taken "The Farmer's Advocate" for nearly two years, and thinks it a splendid paper for farmers. When Friday comes, I always like to look at the Beaver Circle. We live on a ninety-acre farm, and have about three-quarters of a mile to walk to school. I am in the Senior Fourth Book, and will try for Entrance examination in June. I am studying very hard to pass. There is a large creek passes our barnyard, and I enjoyed lovely skating in the winter. I have three brothers and three sisters. There are four of us going to school. Our teacher's name is Miss Boufford. I will close now, wishing the Beaver Circle every success.

CLARISSA E. MELOCHE
(Age 14, Book Sr. IV.).
North Malden, Ont., R. R. No. 1.

Dear Puck and Beavers,—I would like to join your Club. I live on a farm of 125 acres, two miles west of Plattsville. I go to school every day, and have about 1½ miles to walk. The name of our school is Blink Bonnie.

We get our mail from Chesterfield post-office, which is about 50 yards from the school. It is a very small place. As



A Naughty Cat.

a friend brought me from Scotland, and I prized it very much, but it disappeared somehow. Come again, Jennie, and tell us more about those interesting places.—Ed.]

CHARLES KINGSLEY.

Few have been able to give their readers more pleasure than Chas. Kingsley. This author has a "nice" style, which one cannot help feeling in his numerous works. It has been a great pleasure to me to read "Westward Ho!" There is a lot of pathos, mixed with, here and there, just a spice of humor, in this book.

In my opinion, any book which can be read without moving the reader, without giving pleasure, etc., to the reader, that is, if the person is of a literary disposition, is not worth reading.

What could be more pathetic than Amyas' despairing cry, "Oh God! I am blind! blind!" It is infinitely sad to hear this cry of a great, proud, strong man, crippled in his bloom; for he was just in the bloom of his life when he was struck blind.

Is there not something touching about the way poor Ayacanora tried to be "an English girl" while, behind her back, the honest Jack Tars tried to control their mirth?

Besides all this, "Westward Ho!" gives one a good idea of what customs were in days of Good Queen Bess, of Spanish customs, especially of the animosity between those two races, Saxon and Spaniard.

my letter is getting long, I guess I will close. Good-bye for this time.

WILLIE FERGUSON
(Age 12, Jr. IV.).
Chesterfield, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. I am eleven years old. I am in the Sixth book. I live on a farm. We have two farms. We own four colts and six horses. I have a colt called Molly; she is a year old. We have lots of apples on our farm. I have a brother and sister, both younger than myself. Now I must close.

FRED LORAN JOHNSON.
Greenwich, King's Co., Nova Scotia.

Dear Beavers,—This is my first letter to you. I am nine years old, and I am in the Fourth class in school. I live on a fruit and stock farm, and one of the colts, named Primrose, is mine. I have three dolls, two large and one small, named Pink Lady, Marguerite, and Polly. I have two brothers.

HILDA JOHNSON.
Greenwich, N. S.

Dear Puck,—My father has taken "The Farmer's Advocate" for several years. I enjoy reading the Beaver Circle. We live between Dobbinton and Willscroft. We have the mail delivery and are getting the telephone. I go to school, and am in the Senior Third; our teacher is

Mr. Lillie. We have a piano, and I take music lessons, and like it. I have three brothers; the two oldest take music lessons also. My pets are a cat and dog; their names are Polly and Collie. Collie is very cute. We have a team of ponies. I think my letter is getting long and will close now.

ANNIE M. POWELL
(Age 11, Class Sr. III.).
Dobbinton, Ont.

The Ingle Nook.

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

Muscle-forming Foods.

Spring is here, fairly warm weather and plenty of hard work. It may not now be necessary to use so much fat in the daily fare—suet puddings and suet dumplings (for every good housewife knows that suet is one of the best heat-producers, and so especially advisable in cold weather)—but the necessity exists, even more than during the winter, for plenty of good muscle-forming food. In the wear and tear of hard daily work, especially manual work, the muscles are continually wearing out; they must be replaced, if health and strength are to be maintained.

In order, then, that this may take place, muscle-forming foods must be eaten, and they are the foods that contain nitrogen. Lean meat is one of the best proteid or nitrogenous foods, therefore serve it once a day. White of egg, consisting of almost pure albumen, is also a nitrogenous food, hence you will make no mistake if you serve plenty of eggs, boiled, poached, in puddings, etc. When boiling eggs, see to it that the white is not cooked to a hard, leathery mass, a process which renders it practically useless. Indeed, the word "boiling" should never be used in reference to eggs. They should not be "boiled," but simply cooked in boiling-hot water at the back of the range, or even on the damper,—ten minutes will be a sufficient length of time if the vessel is covered. Another good method is to put the eggs in cold water, and remove them the very second it comes to a boil.

Other nitrogenous foods are bread, cheese, milk, peas, beans,—this should be remembered by every housewife.

It is not, of course, necessary to serve many of these foods at one meal,—on the contrary, doing so might set up serious digestive disturbances,—the idea is that they should be served in judicious proportion to make a well-balanced diet. It has been estimated that each person needs about one part of nitrogenous food to four of starch and one of fat, this amount varying a little, of course, according to the occupation of the individual.

It would be a mistake, then, to eat meat, beans, cheese and nuts at one meal, and it would be no wonder whatever if anyone who did so should suffer from such surfeit of concentrated food.

As a rule, the following should be an advisable ration for the majority of fairly hard-working folk:

Breakfast.—A dish of well-cooked cereal with milk or cream, an egg or a couple of slices of well-cooked bacon, toast, a little jam or marmalade, tea or coffee. Some, of course, could eat two eggs instead of one with no unpleasant results, while many would prefer hot water with milk, or postum instead of tea or coffee. Unquestionably, tea and coffee, especially if poorly made, are injurious to a great many people.

For variety, breakfast might consist of raw fruit, toast and egg, muffins with marmalade, cocoa or chocolate to help to supply the nitrogenous part of the meal.

Dinner.—A little clear soup to start the digestive juices flowing, one kind of meat, potatoes, one other vegetable or a salad, a piece of pie with bottom crust only, or a dish of pudding, bread.

Supper.—A bean or pea puree (sort of thick soup), or a milk soup with biscuits or croutons (sippets of buttered



"No Longer Do I Fear Style Changes"

—So says Mrs. Emily Johnson, of Montreal, whose letter is as follows:

"There was a time when I used to be afraid to pay the price of good materials for a dress—so often was mine the experience of having clothes go out of style, or having them get soiled, so that I had to discard them.

"But what a difference now that I know what is possible with Diamond Dyes. No longer do I fear style changes. Not only do Diamond Dyes keep my wardrobe right up to the hour—by giving me constantly new colorings—but by slight alterations from time to time, the very latest styles are always mine.

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It would be well-nigh impossible to tell of the thousands upon thousands of homes all over the country which have had much happiness brought them in the shape of

Diamond Dyes

There are two classes of Diamond Dyes—one for Wool or Silk, the other for Cotton, Linen, or Mixed Goods.

Diamond Dyes for Wool or Silk now come in Blue envelopes. And, as heretofore, those for Cotton, Linen, or Mixed Goods are in White envelopes.

Here's the Truth About Dyes for Home Use

Our experience of over thirty years has proven that no one dye will successfully color every fabric.

There are two classes of fabrics—animal fibre fabrics and vegetable fibre fabrics:

Wool and Silk are animal fibre fabrics. Cotton and Linen are vegetable fibre fabrics. "Union" or "Mixed" goods are 60 per cent to 80 per cent Cotton—so must be treated as vegetable fibre fabrics.

Vegetable fibres require one class of dye, and animal fibres another and radically different class of dye. As proof—we call attention to the fact that manufacturers of woollen goods use one class of dye, while manufacturers of cotton goods use an entirely different class of dye.

Do Not Be Deceived

For these reasons we manufacture one class of Diamond Dyes for coloring Cotton, Linen, or Mixed Goods, and another class of Diamond Dyes for coloring Wool or Silk, so that you may obtain the very best results on EVERY fabric.

REMEMBER: To get the best possible results in coloring Cotton, Linen, or Mixed Goods, use the Diamond Dyes manufactured especially for Cotton, Linen, or Mixed Goods.

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bread toasted in the oven), bread and butter, fruit, one kind of cake.

For variety, scalloped potatoes, or cold meat with a salad, a cheese or egg dish, pancakes, or even celery or lettuce salad with cheese, may form the first course at supper, with Johnny cake and syrup instead of the other cake.

Such a ration as this would give the necessary total amount of nitrogen without too much concentration of it at any one meal. It would neither over-stuff with dangerous consequences sooner or later, nor starve for want of sufficient body-building material.

As a last word, now that summer is almost upon us, do not forget to give fruit and green vegetables a constant place on the bill-of-fare. They do not produce muscle, but they do supply valuable medicinal properties, also they assist in making up the proportion of "bulkiness" which is necessary in carrying the waste matter through the intestines. Remember that a varied diet is absolutely essential to health, happiness, and successful work, and that the variation must be made along the lines of common sense.

JUNIA.

WEDDING QUERIES.

Dear Junia,—I have for many years been an appreciative reader of your page in "The Farmer's Advocate," and now, like many others, am coming for help.

I am interested in a young bride-to-be, and have to manage her wedding for her. It is to be a small affair, with only the immediate relatives present. Is it correct to invite the pastor's wife, if only slightly acquainted with her? If the bride wears her travelling suit during the ceremony, should she remove coat and hat for luncheon? When unattended, how should the bride and groom enter the drawing-room? Lastly, could you suggest what would be nice for a luncheon not too elaborate? Could it include soup, cold fowl, ham, ice cream, and how would these be served, and what else would be necessary? When and how is it customary to serve the bride's cake? You see, I am needing a great deal of information, and should be most grateful to you for it.

We have noted your change of name, and will find it rather hard to think or speak of you except as Dame Durden, but think the new one very pretty. Thanking you in advance.

COUSIN JANE.

Oxford Co., Ont.

It is quite customary to invite the pastor's wife.

As a rule, when the travelling suit is worn, the bride and groom go directly to the station, and a reception is held after their return from the wedding-trip, i. e., if they continue to live in the same neighborhood. If, however, a luncheon is served after the ceremony, it would probably be a somewhat hurried affair, at which all the ladies might wear their hats, simply removing coats for convenience.

The menu items you have mentioned would be quite suitable. In cities, the soup or bouillon, is usually served in bouillon cups, but if one were not provided with these, soup-plates would do. It would be convenient to have the cold fowl sliced before putting it on the table. Ice cream is usually served with cake. In addition to the dishes mentioned, you might have oyster patties, olives, salted nuts, a pretty salad, nut sandwiches, candied fruit, coffee. One kind of cake in addition to bride's cake is enough.

In this country, the bride's cake is often placed on the table reserved for the bridal party, and the first piece is cut by the bride with a silver knife, to the handle of which a white ribbon bow has been tied. To save confusion, plates of similar cake, already cut, are placed on the other tables. In many places, however, the very ornate cake is left in its splendor, and is afterwards given to the bride to be disposed of as she chooses. Plates of similar cake are, however, distributed on the tables, and a pile of tiny white boxes, each containing a bit, is placed in the hall so that each guest may take one. This plan prevents mussiness, and is likely to become more and more popular.

There is really no hard-and-fast rule. The bride may choose any way that appeals to her. Of course, since she is the particular star of the event, she should be consulted.

When unattended, the groom steps into place first, and the bride enters leaning on the arm of her father or whoever is to give her away.

FOR A JUNE WEDDING.

Dear Junia,—I have been reading with great interest the helpful letters you have given us in the past and present issues of "The Farmer's Advocate." I now would like some information also.

I would like if you would describe an ordinary and stylish wedding breakfast for a June wedding. Also please describe the waiters; how dressed, and in what order the courses that you give must be served.

Hastings Co., Ont.

You are a girl after my own heart, Dark Eyes,—you ask your questions in good time.

Here are two menus, copied directly from a cook-book that is looked upon as an authority. You may take your choice.

No. 1.

Bouillon in Cups.
Sauce.
Broiled Salmon.
Potato Croquettes.
French Chops. Green Peas.
Creamed Sweetbreads. Vegetable.
Squabs on Toast.
Sliced Cucumbers and Tomatoes.
Lettuce. Mayonnaise Dressing.
Orange Ice. Ice Cream.
Fancy Cakes. Candy. Fruit.
Chocolate. Coffee.

No. 2.

Consomme in Cups.
Oyster Patties.
Salted Nuts. Olives.
Boned Turkey.
Tongue in Aspic Jelly.
Lobster Salad. Chicken Salad.
Nut Sandwiches.
Canned Fruit. Confectionery.
Fancy Ice Creams.
Orange Ice. Lemon Ice.
Bride's Cake.
Chocolate. Coffee.

Soup (bouillon, consomme, etc.), is always served first, the fish course follows, then the meats, lastly the sweets. Salted nuts, olives, pickles, celery, etc., are usually on the table from the beginning.

In the cities, a caterer usually sees to the entire dinner, sending waiters who are trained in the service. In the country, I should think young girls dressed in white, assisted by some of the young men of the neighborhood, could serve very nicely. As friends of the bride, and recognized as such, they would be glad to do it.

FOLDING NAPKINS.

Dear Junia,—I noticed in a recent issue of your paper that the latest way to initial napkins is to place the letter in the center. Can you tell me the proper way to fold it so as to have it come in center when folded?

SUBSCRIBER'S DAUGHTER.

Perth Co., Ont.

This method of initialing napkins is, possibly, but a fad of the hour. Turn two of the edges back, folding to meet at center, and iron down, then fold back similarly from the ends. If you experiment a bit with a square piece of paper, you will see how it is done.

A CHEAP GINGERBREAD-VOILE DRESS.

Dear Junia,—Have been a diligent reader of Ingle Nook for some time, and have derived a great deal of benefit thereby, especially from the recipes. I never saw one of gingerbread made without either butter or eggs, and occasionally, when both are at the remarkable price of 35c. at country points, a recipe of this kind comes in pretty handy.

Take $\frac{1}{2}$ cup brown sugar creamed together with $\frac{1}{2}$ cup lard, then add 1 cup baking syrup and 1 cup boiling water, 1 dessertspoon soda dissolved in hot water, 1 dessertspoon ginger, 1 teaspoon cinnamon, a little more of good eggs of Rose-



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Those who have not received our New Style Book listing fashion's latest decrees in Millinery and Women's Wear, are invited to send us their Names and Addresses and we will forward this interesting Booklet by return Mail--Free.

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Special features in the **NEW SCALE WILLIAMS**

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and make it the only Player-piano which will produce the effects the trained musician is after.

We will be pleased to give you full particulars about the New Scale Williams Player-piano, and if there is no dealer in your locality, will arrange to supply you direct from the factory.

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Look for the Quaker trademark on every package.

By leaving out the ginger and putting in 1 cup raisins, a nice raisin cake is the result.

And now, dear Junia, I come with a request. Can you give me any ideas on dyeing a cream silk voile dress? Have never had much experience with dyeing, but Maypole soap has been advertised so well, I just wondered if it would be all right in this case. I would prefer to have it colored black. If there were a

good dyer and cleaner near I would send it out, but as it is I'll have to depend on myself, and I'm afraid to put it into dyes and boil it for fear of ruining the fabric.

Was delighted to have the words of the "Fairies Song," as I think it goes to the tune of Rev. Crossley (the evangelist's famous song), "The Pearly Gates and Golden." Thanking you in advance, Huron Co., Ont. JANE L.

What a coincidence!—The very week before your letter came, I chanced to be at a little evening party at which one of the ladies wore a dress of the daintiest pastel blue imaginable—lace, insertion, material, all of the same color. So much did I admire the dress that I expressed my pleasure to the wearer of it, whereupon she informed me that the material, it had been white once, but that she had wished for a change, so had colored it with Maypole Soap. The soap, she thought, could be used with any kind of wash goods. She had experimented with the lighter shades of color only, but had been delighted with results, so I made up my mind on the spot that I would tell the Ingle Nook folk about it all some day.

On receipt of your inquiry about the cream silk voile, we wrote at once to the Maypole Soap Company for information. In reply, they have sent us a pamphlet which states that "cream" may be dyed any color, also that silk and wool, as well as cotton, may be colored by Maypole Soap. If I were you, I should write at once to the company (Frank L. Benedict & Co., 144 Craig St. West, Montreal) for one of these pamphlets. I should also try the soap on a bit of the goods to see just what treatment produces the desired shade.

FRANCES RIDLEY HAVERGAL.

Dear Junia,—Will you please print in your paper any information you can of Frances Ridley Havergal and her work as a hymn-writer? We have been getting your paper for about twenty years, and have nearly all the copies saved. We would not like to be without "The Farmer's Advocate." Thanking you in advance, I remain, M. T. Huron Co., Ont.

Frances Ridley Havergal was born at Astley, Worcestershire, Eng., on Dec. 14, 1836, the daughter of the Rev. W. H. Havergal. When she was five years old the family moved to the rectory of St. Nicholas, Worcester. Afterwards, she lived for a time at Leamington, and at Caswall Bay, Swansea, where she died June 3rd, 1879. She was a woman of remarkable scholastic acquirements, could speak several modern languages, and was no mean scholar in Greek and Hebrew. It is as a hymn-writer, however, that she has been remembered, many of her beautiful hymns and religious writings having been collected into books. "The Ministry of Song" (1869), "Twelve Sacred Songs for Little Singers" (1870), "Under the Surface" (1874), "Loyal Responses" (1878), "Life Mosaic" (1879), "Life Chords" (1880), "Life Echoes" (1883). Among the best-known among her hymns are, "I Gave My Life for Thee," "Take My Life and Let It Be," "Tell It Out Among the Heathens," "Who's on the Lord's Side?"

Her father was also a hymn-writer. As a musician of some talent, he composed the tunes to many of his daughter's as well as his own poetical productions.

FRUIT PUDDING.

I find this a good pudding recipe for using up scraps of cooked fruit:

Two cups of flour, 2 teaspoons baking powder, a pinch of salt, water enough to make a very soft dough. Drop a tablespoonful of dough in a cup, then some fruit (about a tablespoonful), then more dough to make cup half full. Steam about half an hour. This makes about five cups. SEAMSTRESS.

Bruce Co., Ont.

This certainly "sounds" like a good pudding. Seamstress.

TRANSFER GRAINING.

Dear Junia,—Could you give me any information about graining woodwork with transfer paper. I don't mean the old comb and rubber method, but a transfer paper with the grain of different woods on it. Do you know how it is applied? Would be glad of information and directions. I thought directions would have gone with the paper, but applied at store and found they didn't. Grey Co., Ont. GREYBIRD.

Look for the address of the manufacturers of the paper, and write to them for instructions. They should supply you with pamphlets describing the operation in full.

GOLDFISH—PLANTS.

Will you please tell me directions for keeping goldfish? I have some, and they are not doing well. What kind of water should be used? Can you tell me a kind of plant, about three feet high, that would grow close to the house on the north side? SCHOOLGIRL.

Stormont Co., Ont.

A friend of mine has had four goldfish for nearly a year, and they look quite healthy yet. She has kept them in hard water from the tap, changed once in three or four weeks, and she feeds them every day a crumbled bit of the rice-paper fish-food, sold for the purpose, about the size of a ten-cent piece. Others, however, treat the fish differently. One authority states that they should be fed every second morning, the amount of food allowed being one-fourth of a sheet for every six or eight fish. A salt-water bath—a teaspoonful of salt to a quart of water—given at intervals, is said to be beneficial.

Why not put some Alleghany vine, also known as adlumia, mountain fringe, and lace vine, at the north side of your house? It grows splendidly in a partially shaded situation, provided a mellow root-bed is given it, and it is very pretty. Other plants that will grow on the north side, are caladiums, tall ferns, manettia vine, meadow rue, godetia.

NOTE TO "NORFOLK READER."

I am sorry that just at present I have no pattern for novelty braid yokes, except the one given in this department before Christmas (Dec. 14th issue). We shall be pleased to hear about your draining shelf.—J.

BEDBUGS.

I have a good recipe for destroying bedbugs. Wash and clean the bedsteads thoroughly, then get ten-cents' worth of quick-silver and half a pound of lard and mix well with a small stick (it is hard to mix), then put in every crevice in the bedstead, or any furniture; also in the cracks in the walls, or any place they might be. I moved into a house, after we were there three days I found out it was full of bedbugs. In a short time after, a neighbor called on me and asked how I liked living there. I said I did not like it at all on account of the bedbugs. She told me what to do. I did what she said, and I never have been troubled since; that is 17 years ago. A SUBSCRIBER.

QUERIES—JOHNNY CAKE—FUDGE.

Dear Junia,—At last I have summoned up enough courage to fly to the extensive arms of the Ingle Nook for advice.

How should a girl of sixteen wear her hair, which is neither wavy nor fluffy?

What length should she wear her skirts?

Lastly, if "Junia" will please publish in our corner a recipe that is tried, tested, and proven excellent, of chocolate fudge?

If Junia's patience is not already tried to the utmost, I shall give a good recipe for what is called Johnny cake.

One egg, one cup of sugar, one teaspoonful of salt, one cup of buttermilk, two small teaspoonfuls of soda, one cup sweet cream, one cup flour, and one and a half cups of corn meal. This is excellent. BRENICE BROOMSTICK.

Dundas Co., Ont.

The way that a girl of sixteen should wear her hair must depend somewhat upon her size. Also she must choose the way that is most becoming to her. If she is small and very girlish for her age, she may twist it at the ears into a loose roll, and tie it back with a large ribbon bow, letting the ends hang. If she is tall and mature-looking, she may twist it at the ears in the same way, and arrange the back hair either in a coronation braid around the head, or in the little series of three coils low at the back of the head, which is so much affected by young girls just at present. She should wear her skirts about to her shoe-tops.

Chocolate Fudge.—Put into a pan 1 lb. brown sugar, 1 cup milk, 1 ounce butter, 2 ounces grated unsweetened chocolate. Boil 15 minutes, flavor with vanilla, and pour into buttered tins. Mark into squares before it hardens.



The **SIMPSON** Company Limited
Robert **SIMPSON** Limited
TORONTO.

Have just published a new Spring & Summer Catalogue, now universally regarded as The Authoritative Style - Book for Canadian Men and Women.

This is a book you'll hardly care to be without; it is an absolute check upon your cost of living. Whether you want a smart frock, stylish "Queen Quality" shoe or merely a spool of thread, the article is pictured for you and the price printed is what you pay for it at your nearest station. This system of Delivery - Paid Merchandise will soon be the only way Mail Order Customers will want to buy.

Try it once, and see how efficient it is—goods from factory to consumer with never a hitch and everything paid.

YOUR NAME ON A POST CARD WILL BRING YOU THIS NEW CATALOGUE

STOMACH TROUBLE.

Why is it that we, living in this age of enlightenment and prosperity, are not as efficient in our church work, in our social work, in our everyday work as we might be or as many of us would like to be? Why is it that we do not get as much joy out of life as we might get? Many answers might be given to these questions, but one answer may be given by asking two more questions: How many people do you know that have stomach trouble? How many different kinds of stomach remedies are there in use?

Now, why do we have stomach trouble? Again many answers might be given to this question, but again let me give one answer by two questions: Why do we eat so many different foods at one meal? Why do we generally feel tired and cross the day after attending a social or banquet? Have you ever dined at an hotel or restaurant and had already eaten a

meal of potatoes, meat, beans, etc., and then the waitress would come to you and recite: mince pie, plum pudding, syrup, etc. Of course you could eat one or more of these tasty dishes. Have you ever attended a social gathering after having previously eaten a good supper, filled your poor stomach again, and then someone would bring around some angel cake and you ate it also? Now, why do we go to extremes by eating such a variety of food at one meal, and in consequence of such a variety too much also? It is because there is that much hog, or rather animal nature, in our make-up that we eat nearly anything that is set before us. And why does the good and faithful housekeeper or hotel-keeper set such a variety of rich food before us? It is because they "hate to set a poor table," and "hate to let Mrs. Neighbor get ahead of them by having more and better things to eat!" and because we are willing to put up with

it if not demand it, and become inefficient, cross, and dope ourselves with stomach remedies in consequence of our indulgence. Now, how are we to get our cooks to understand that we want good plain food, such as our grandparents used to have in the pioneer days? And why not have one central dish at each meal, instead of such a variety of dishes, of which each one seems to be the central dish by the way we devour them, sometimes?

I would like to see this important matter discussed through the press, and also in Women's Institutes, as it is the women whom we have to educate, or at least persuade to feed us so that we may avoid stomach trouble and all its accompanying troubles, or perhaps, and more likely, get cured of it.

ORLOFF MALLORY.
 West Hill, Ont.

Our Scrap Bag.
ABOUT CURTAINS.

A fairly good idea when making up curtains of natural colored linen or cotton crepe, is to trim them all round, just inside the hem, with a band of chintz in coloring to match the room. When you get tired of this effect, as you possibly may after a few years, you can cut out the chintz and substitute heavy linen-colored or cream insertion. Then you will feel as though you have new curtains at comparatively little expense.

WASH DRESSES.

Shrink all wash goods before making them up by soaking them in a tub of water or folding in damp sheets. Dry partially in a shaded place and press out with an iron. Another plan is to run a tuck on the inside of the bottom hem. This can be let out if the dress shrinks.

PROVIDE FOR PATCHING.
 Tack a few bits of the material some-

YOU CAN GROW BIGGER CROPS AND BETTER CROPS

on your land if you set about to do this in an intelligent manner. There are three points to which you must give careful and particular attention: Proper Cultivation, Crop Rotation, and the Proper Use of the Right Kind of Fertilizers. To secure best results you must attend to all three of these. No matter how well your land is cultivated, or your crops regulated, unless you use in the proper way the right kind of fertilizers, you cannot secure the best results.

Harab Fertilizers

are the right kind of fertilizers. Made from animal products, they return to the land the plant food which has been taken from it. They are organic fertilizers and for this reason act much more naturally than inorganic or chemical fertilizers. This difference in action can be very well compared to the difference between the action of a food and a stimulant on a human being.

Harab Fertilizers are Foods and will have no injurious after effects. They will **not** sour your land.

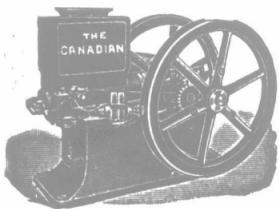
If you have tried other brands and are dissatisfied you will do well to give our goods a trial. They bring results. If you have never tried fertilizers you will be very wise to start now by trying Harab Fertilizers. Write us for full particulars. Our goods are put up as a finely ground powder in 125 lb. sacks. Can be handled without any trouble in an ordinary seed drill, or can be scattered by hand. We guarantee our goods to contain the plant foods represented, not only with you, but with the Government.

If we have no agent near you we want one. Write us for terms, prices, commission, etc.

"Harab Fertilizers"
are **Made in Canada**

by

THE HARRIS ABATTOIR CO.,
Toronto, Ontario



THE BEST

For every purpose is the CANADIAN ENGINE. Most simple, durable and economical. Sizes, 1 1/2 h.-p. to 35 h.-p.

The Canadian-American Gas & Gasoline Engine Co., Ltd.
Dunville, Ontario

FROST & WOOD CO., LTD., Smith's Falls, Ont.
Exclusive selling agents for Eastern Ontario, Quebec and Maritime Provinces.

Hay Tools, Litter & Feed Carriers, Stanchions, etc.

Get our prices before buying

R. DILLON & SON
South Oshawa, Ontario

SHORTHORNS FOR SALE

SARNIA TOWNSHIP, LAMBTON CO. ONE MILE WEST OF BUNYAN Pure-bred; heifers and cows from 2 to 7 years old; bargain prices; going to sell farm. W. ST. MARIE, R. F. D. No. 2, Lucasville, Ont.

Holstein bull calves for quick sale. Registered. Also grade Holstein heifer calves of superior breeding; dams 12,000 lbs.; sire imported; \$25 to \$75, according to age. MOUNT DAIRY, Box 53, Milton, Ont.

where on the inside of wash-dresses. They will fade as the dress fades (if it does so) and will be useful for patching later.

YOUNG PLANTS.

If any of the plants started in the house or hotbed have grown quickly enough to be ready for transplanting, transplant them to the cold frame to grow on until time to plant them out in the open ground.

TO BOIL A CRACKED EGG.

Add a teaspoonful of salt to the water and the white will be less likely to come out.

OPEN PANTRY SHELVES.

If pantry shelves have no doors, put up spring-roller shades, such as are used for windows, as a substitute.

EASTER LILIES.

If the stamens are removed from the centers of Easter lilies the lilies will last longer.

Seasonable Cookery.

Veal Cutlets:—Trim the cutlets and put the scraps in a pan with a tablespoon of butter. Lay the cutlets in and brown quickly. Add 2 or 3 thin slices of bacon, a sliced onion, and 6 carrots cut in bits; add 1 pint water, cover, and simmer gently for 2 hours. Season, thicken slightly with a little butter and flour rubbed together, and dish the cutlets on a hot platter with the carrots as a border.

Carrot Timbales:—Parboil 4 carrots and put them through the chopper. Mix with 1/2 cup sweet cream and 4 eggs well beaten, and season to taste. Put the mixture into cups, stand the cups in a pan of hot water and bake.

Veal Steaks:—Take 1 1/2 lbs. veal steak, pound with a small hammer, place in a pan with a lump of butter, sprinkle with a little flour, salt and pepper and bake in a hot oven 1/2 hour.

Left-over Fish:—Heat the fish from which the bones have been removed. While it is heating prepare the following dressing: To 1 lb. fish allow 1 1/2 cups canned tomato, 1 level teaspoon salt, yolk of 1 egg, pepper to season. Stew the tomato, strain and add salt and pepper. Beat the egg yolk in 2 tablespoons cold water. When the tomato is hot set the pan in a mild heat and add the yolk, stirring well. Do not boil the sauce after the egg is added. Put the fish on a hot platter, turn the sauce over it and serve.

Orange Salad:—Peel the oranges and cut into dice; place on lettuce leaves and serve with rich salad dressing.

Minute Ginger Cake:—Set a cup into a cake bowl and put into the cup 5 tablespoons boiling water, 1 large tablespoon butter, 1 of ginger, a dash of cinnamon, 1/2 teaspoon salt, and a large one of soda. Fill the cup with real New Orleans molasses, and stir until the mixture foams over. Turn all into the bowl, add flour to make a stiff batter. Bake in a moderate oven and serve hot.

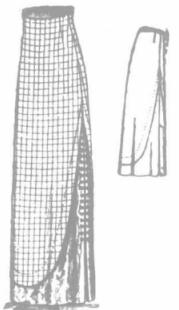
"The Farmer's Advocate" Fashions.



7356 Blouse or Shirt
Waist, 34 to 40 bust.



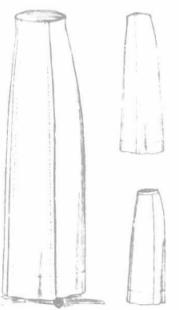
7386 Tuck-in Waist, 34 to 42 bust.



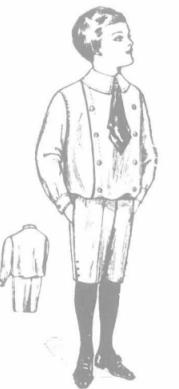
7367 Two-Piece Skirt in Tunic Effect, 22 to 33 waist.



7372 Two-Piece Skirt, 22 to 30 waist.



7357 Six Gored Skirt, 22 to 30 waist.



7390 Boy's Suit, 6 to 12 years.

Please order by number, giving age or measurement, as required, and allowing at least ten days to receive pattern. Price, ten cents per pattern. Address, Fashion Dept., "The Farmer's Advocate," London, Ont.



Try it—test it—see for yourself—that “St. Lawrence Granulated” is as choice a sugar as money can buy. Get a 100 pound bag—or even a 20 pound bag—and compare “St. Lawrence” with any other high-grade granulated sugar.

Note the pure white color of “St. Lawrence”—its uniform grain—its diamond-like sparkle—its matchless sweetness. These are the signs of quality.

And Prof. Hersey's analysis is the proof of purity—“99.99/100 to 100% of pure cane sugar with no impurities whatever”. Insist on having “ST. LAWRENCE GRANULATED” at your grocer's.

ST. LAWRENCE SUGAR REFINING CO., LIMITED, MONTREAL.



News of the Week.

The Dominion Linen Mills are to be moved from Bracebridge to Guelph.

Dr. Sun Yat Sen has announced that he is in favor of free trade and the taxation of land values.

The Triple Alliance concerning Germany, Austria-Hungary and Italy, has been renewed for another term of years.

Dr. Doyen, of Paris, declares that he is now able to confirm his theory that cancer can be cured by electric treatment.

A statue to Queen Victoria was dedicated at Nice, Italy, on April 12th, and one to King Edward at Cannes, France, on April 13th.

The total loss by the recent floods in Canada has not yet been estimated. Three persons were drowned at Compton, Quebec.

An agreement providing for closer trade relations between Canada and the West Indies was formally signed at Ottawa on April 9.

A gas-electric engine was successfully tested on the C. N. R., from Don Station to Richmond Hill, and return. It made a speed of 35 miles an hour.

The Toronto Board of Trade has appointed a special committee to investigate and report upon the matter of the high cost of living in Canada. There seemed to be an impression at the meeting that it is largely due to the lack of efficiency on the farms.

Premier Tang Shao Yi has declared that the administrative machinery of China will be in working order by May 1st. There is considerable anti-foreign feeling in China at present, owing to the delay of recognition by the Powers and the withholding of loans.

The Dominion Government has called for tenders for the new St. Lawrence dry-dock. This will be the largest in the world and will be located either at Quebec or Levis.

Canada has sent \$11,000, of which \$8,000 was raised by the Methodist Church, for the relief of the famine sufferers in China. The contribution from the United States totals \$170,000.

Dr. Beattie Nesbitt, ex-M.P.P., and former President of the Farmers' Bank, was arrested in Chicago on April 11th, and imprisoned awaiting extradition. The charges against him are: That he made false returns to the Government of Canada under the banking law; that he conspired to exchange certificates from the Treasury Board, and that he conspired to steal \$300,000 by means of forgeries.

Premier Asquith presented the Home Rule Bill in the British House of Commons on April 11th. It provides for a Parliament for Ireland, with power to pass laws “for the peace, order, and good government of Ireland.” There are special provisions in the bill for the protection of religious minorities, and to insure that the Parliament shall not endow nor give preference to any religion, nor grant concessions which will make any religious ceremony a condition of the validity of any marriage.

The leading impression left by the recent convention of the Ontario Educational Association at Toronto, is that the foremost educationists of this Province are not at all satisfied with the work that is being done in the rural schools. A radical change, it was argued, must be brought about, and speedily, if the children of to-day are to be equipped with the education necessary to enable them to cope with the changing conditions of modern life. Dr. Putman, of Ottawa, argued strongly that consolidation of rural schools must come, with a residence attached to each school, and a salary sufficient to ensure permanent and able teachers.

Delicious Home-Made Bread

Your bread-baking will always turn out successfully if you use

WHITE SWAN YEAST CAKES

Can be had in packages of 6 cakes at 5c. from your grocer. Why not send for free sample?

White Swan Spices & Cereals, Limited Toronto, Ontario

HARAB Poultry Foods

Make Poultry Pay

Our foods are made on our own plant from the very best materials, meat scrap bones fresh blood, etc., put through special processes, so that while all waste is extracted, the food values still remain in a highly-concentrated form. We have eight special lines:

Beef Scrap Poultry Bone
Chick Scrap Poultry Bone Meal
Beef Meal Blood Flour
Red Blood and Bone Tonic
Bone Meal and Oyster Shell Feed

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

If your dealer does not carry a stock, write us direct.

HARRIS ABATTOIR CO'Y LIMITED
Toronto, - Canada

BASIC SLAG

(Thomas Phosphate Powder)

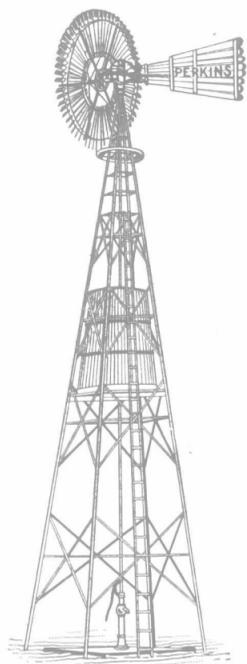
Sydney Works now in full operation Best Fertilizer for renovating old pastures without re-seeding

Farmers from Old Country know all about BASIC SLAG. Others who have no experience of its merits are invited to write for descriptive pamphlet giving full particulars. Until arrangements are made for its sale in every district, farmers who can take delivery in minimum carloads of twenty tons and pay cash with order can be supplied direct from works.

THE CROSS FERTILIZER CO'Y, LIMITED
Sydney, Nova Scotia

Branch of Alexander Cross & Sons, Ltd., Glasgow, Scotland
Correspondence invited from agricultural merchants

WHY IS THE PERKINS WOOD WHEEL



the best wheel for the farmer to buy. There are a great many reasons why the wood wheel is better than the steel wheel. The Perkins 10-ft. Wood Wheel on a Steel Tower makes the best job that money can buy:

- 1.—Because it is as good as money can make it.
- 2.—Because there is no contraction and expansion as there is to steel wheels to crack galvanizing and cause it to rust, the ends of fans to drop off, also rivets to pull out and cause the wheel to go to pieces.
- 3.—Because wood will never rot in the air, even though it never has a drop of paint; look at the siding on your barn that has stood from 40 to 60 years and shows no rot.
- 4.—Because it has three bearings on the Windmill Shaft and cannot sag to its tower; also has interchangeable boxings so that you can take up the wear at a very low cost, which can be done in half an hour's time.
- 5.—Because it pumps a stroke of water every time the wheel turns over, therefore reducing the wear on its journals to about one-fourth, and will run in a very light breeze.
- 6.—Because thousands of them are running at the age of 40 years still doing good work.

Now we can afford to be honest, because we build the steel wheel and build them as good as they can be built.

Our opinion is asked every day which is the best Mill to buy; it is always the old reliable wood wheel.

Over 50 years' of constant experience—established 1860—in the windmill business.

Write today for Circular

The Perkins Windmill & Engine Co., London, Ont.

SEED CORN

White Cap Yellow Dent—Ear corn, \$1.10 per bush. (70 lbs.); shelled and graded, \$1.15 per bush. Sacks extra—jute, 10c.; cotton 25c. If corn is not satisfactory in every way and does not test 90% good (a very high standard for this year), return within ten days at our expense, and we will refund your money.



BERRY PLANTS
Price Postpaid

Strawberries—Dunlap For home purposes this is the best variety grown, 50, 40c; 100, 70c, or 75 Dun ap and 25 each of two late varieties, \$1.

Raspberries—Kansas, black. A good standard variety, 12, 35c; 25, 65c Gibraltar, black A new variety; greatest yielder at Experimental Farm, Ottawa, 6, 50c; 12, 80c; 25, \$1.25.

Cuthbert, red. The standard of excellence among the red varieties, 12, 30c; 25, 55c. This is your opportunity to procure good plants of the best varieties of these easily grown, luxurious fruits at moderate prices; also seed corn that will grow.

N. E. MALLORY, Brnhelm, Ont.

100-ACRE FARM, \$1,000.

Oneida County, N.Y. Buildings insured for \$1,000; 55 acres rolling fields; spring watered; pasture for 15 cows; lots of wood and timber; on main road, 2 1/2 miles to village; good 7-room house, 40-ft. barn, poultry house, woodshed, hog-house; pure water; maple shade; owner very old, must sell before planting. Only \$1,000; \$600 cash; easy terms. Full details and travelling directions to see this and other remarkable farm bargains between Albany and Buffalo, N.Y., many with complete equipment, page 26, "Strout's Farm Catalogue 36," just out; copy free. We Pay Buyer's R. R. Fares. Station 2415. E. A. Strout, 47 West 34th St., and 170 Broadway, New York. Telephone, Groesley 3748.

HIGH-CLASS IMPORTED SHORTHORN BULL

FOR SALE CHEAP

We have for sale our high-classed imp. stock bull, also one year old bull and two young cows with calves at foot. All these are good individuals, and of the most fashionable breeding. Must be sold, as we are giving up farming. Apply to:

W. J. Shean & Son.
253 Eighth St. East, Owen Sound, Ontario

MENTION "FARMER'S ADVOCATE."

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.

ANCONAS—Bred for exhibition and winter egg production. \$2 setting; \$3 for 30. E. W. Wardle, Corinth, Ontario.

AFRICAN GANDERS—Three dollars: African goose eggs, twenty-five cents. Pure-bred. Mrs. McLennan, Beaverton, Ontario.

BARRED ROCKS and W. Wyandottes, at \$2 per setting. My birds are rich in blood to America's finest flocks. C. R. Rowe, Newton Robinson, Ontario.

BARRED White Rocks, White Wyandottes, White Leghorns, Black Minorcas, Buff Orpingtons, Aylesbury, Rouen ducks; settings, \$1. R. Laurie, Drumbo.

BARRED ROCKS—O. A. C. bred-to-lay strain. Thirteen fertile eggs for one dollar. Ed. Fulton, Cranbrook, Ontario.

BARRED ROCK EGGS—From strong, healthy, well-exercised birds. Noted egg producers. Eggs, \$1.00 per setting. T. Le Patrick, Ilderton, Ontario.

BROWN LEGHORNS—Pen headed by 1st Port Huron, 1st Essex, 1st Sarnia and 3rd Guelph cockerel; two weeks reduced price on eggs, \$1.25 per setting. Order now. Also White Wyandottes. Sunnyside Poultry-yards, Highgate, Ontario.

BUFF ORPINGTON EGGS that will hatch; 9 chicks guaranteed with every setting. Three splendid pens, \$1.00 per setting. Special prices on incubator lots and fancy stock. Hugh A. Scott, Caledonia, Ontario.

BLACK ORPINGTONS—Ottawa, Port Huron and Detroit winners. Eggs, \$3.00 and \$2.00 per setting. Rev. Geo. E. Fletcher, Cobden, Ontario.

BUFF LEGHORNS OF HIGH DEGREE—Eggs, \$1.25 per fifteen. Write for particulars. Charles Watson, Lonsdale, Ontario.

BUTTERCUPS—Eggs from this wonderful egg-producing breed. My stock improved by two imported cockerels. Choicest, \$3 per 15; utility, \$2. J. J. Dean, Winona, Ontario.

BABY CHICKS AND EGGS—From prize-winning winter layers, Anconas and Buttercups. Write now. Free circulars. Don't delay. Edmund Apps, V.P.A.C., Box 424, Brantford.

BARRED PLYMOUTH ROCKS—Eggs for hatching; highest winners; grand utility; heavy layers. Prices reasonable. Write me. Leslie Kerns, Freeman, Ontario.

BUFF LEGHORNS and R. I. Reds; both rose comb, from good winter-laying strains. Fine color. Eggs, \$1.25 per fifteen. Zeller Bros., Zurich, Ontario.

BRONZE TURKEY EGGS from 9 choice hens that all weigh 18 to 25 lbs. each, including the 1st Guelph pullet; also 1 won 1st and 5th on young toms and 2nd and 3rd old toms. One egg from each hen, 9 eggs for \$5. You get the same quality as I set myself. Also one choice pen of Black Minorcas, hens headed by 6th prize Guelph cockerel, no better color lot in Canada; eggs, \$3 per 15. Chas. Gould, Box 242, Glencoe, Ontario.

BARRED ROCK EGGS FOR HATCHING—One dollar per fifteen. C. H. Chalmers, Smith's Falls, Ontario.

BUFF ORPINGTONS—Winners at Guelph and Winter Fair, 1911, of 1st cockerel, silver cup; specials for best shape, best male, best bird, best three cockerels and 2nd utility pen (all classes competing). Over 50% egg yield since November 1st. Eggs from pens headed by above best three cockerels, \$5.00, \$3.00 and \$1.50 per setting of 15. Mrs. E. D. Graham, Queensville, Ontario.

BARRED ROCK EGGS—From well-bred blocks, heavy-laying, prize-winning birds. \$1 for fifteen; \$2 for forty; \$4 per hundred. Chas. Hilliker, Burgessville, Ontario.

BARRED ROCK EGGS—From good, strong, healthy, vigorous birds, and barred to the skin, mated especially for winter laying. \$1 per 15, or \$2 for 40. Hens have large orchard run. Plenty of exercise should guarantee a good hatch. Hervey Culp, St. Catharines, Ontario.

CARLUKE POULTRY-YARDS—Celebrated Barred Rocks. Eggs for hatching from winners at the principal shows in Canada, \$2.00 per setting (cockerel or pullet matings). G. Morton, Box 130, Carluke, Ontario.

CHOICE SINGLE-COMB BROWN LEGHORNS—Famous Becker & Gurney strains. Eggs, \$1.50 per 15. David A. Ashworth, Maple Grove, Ontario.

EGGS FOR HATCHING—Single-comb White Leghorns, Wyckoff strain, and S.-C. Rhode Island Reds; one dollar per fifteen. J. H. Stevenson, Copetown, Ontario.

EGGS FOR HATCHING—Regal strain White Wyandottes; good layers; one dollar per fifteen. Two cockerels cheap. S. Zehr, Tavistock, Ontario.

EGGS from prizewinning Bronze turkeys and Partridge Wyandottes. R. G. Rose, Glanworth, Ontario.

EGGS FOR HATCHING—S.-C. White Leghorns and White Wyandottes, \$1.25 per 15, from pure-bred stock and heavy laying strain. Can supply Leghorn eggs (only), \$4 per 100. Hugh McKellar, Tavistock.

EGGS FOR SALE—My birds won over four hundred first prizes at eight shows. Barred Rocks, White and Silver-laced Wyandottes, Houdans, Blue Andalusians, Black Javas, Spangled and Black Hamburgs, Silver-gray Dorkings, Black Spanish, Single and Rose-combed R. I. Reds, Brown Leghorns; \$2.00 per 15 eggs. Half price after June 1st. F. W. Krouse, Guelph.

EGGS FOR SALE—From choice S.-C. Black Minorcas, Silver Spangled Hamburgs, which will surely breed prizewinners, at \$2.50 per 15. David Planz, Hanover, Ontario.

EGGS FOR HATCHING—From heavy-laying strains White Wyandottes, Silver-laced Wyandottes, Barred Rocks, Single-comb White Leghorns, Rose-comb Brown Leghorns and Rhode Island Reds, \$1.50 for fifteen eggs. W. H. Furber, Dungannon Poultry Farm, Cobourg.

EGGS FOR HATCHING—From bred-to-lay, farm-raised White Wyandottes. Fifteen eggs, one dollar; larger orders at reduced prices. Write Marshall Smith, Palmerston, Ontario.

EGGS FROM PRIZEWINNING mating choice White Wyandottes; two dollars per thirty. J. G. Ellenton, Hornby, Ontario.

EGGS from genuine Indian Runner ducks, Mrs. Brooks' white egg strain, one fifty per setting; also choice White Wyandottes, Fells strain. J. Bertram, Vinemount, Ontario.

EGGS from high-class S.-C. W. Leghorns, two fifty per setting. For laying and prize-winners unexcelled. For reference apply F. S. Burgess, 439 Yonge St., Toronto, who refused ten dollars for single birds hatched from eggs bought of me last year. Thos. McDonough, Nashville, Ontario.

EGGS from prizewinning and laying Barred Rocks, one and two dollars per fifteen; five per hundred. Jas. Coker, Jerseyville, Ont.

EGGS FOR HATCHING—White Wyandottes and S.-C. White Leghorns; mated specially for vigor. Send for mating list. P. Bartram, Grimsby, Ontario.

EGGS—S.-C. White Leghorns, heavy layers and prize-winners, \$1.00 per 15. A hatch guaranteed. \$4.00 per 100 eggs. Also two choice cockerels for sale. Geo. D. Fletcher, Binkham, Ont.; Erin Sta.

EGGS—Rose-comb Rhode Island Reds; prize-winners. Owen and Shoemakers' strains; 15 for \$2.00; 50 for \$4.50; 100 for \$8.00. H. I. Smith, Comber, Ontario.

EGGS from S.-C. White Leghorns, \$1.00; Golden-laced Wyandottes, \$2.00 per setting. R. H. Sanders, Box 22, Baling, Ontario.

EGGS—\$1.50 per setting. Barred Rocks, Indian Runner Ducks. H. N. Tisdelle, Tilbury, Ontario.

EGGS FOR HATCHING—From Barred Rocks, Partridge Rocks, Rhode Island Reds, White Wyandottes, White and Brown Leghorns. Bred to lay; grow quickly; fatten readily. \$1.50 per 15; \$5.00 per 100. Norfolk Specialty Farm Co., Ltd., St. Williams, Ontario.

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FREE handsome catalogue of fancy poultry—Describes and prices fifty varieties, land and water fowls. S. A. Hummel, Box 23, Freeport, Illinois.

HATCHING EGGS—Express prepaid to your nearest express office. Turkeys, ducks and geese; also ten different varieties of poultry. Send for price list. J. H. Rutherford, Caledonia East, Ontario.

GOLDEN-LACED WYANDOTTES—Cockerels for sale; also a few pullets, 26c right. Good stock. Peter Daley, Box 26, Sealforth, Ontario.

HIGH-CLASS BARRED ROCKS—From first January to March fifteenth we got four thousand and forty eggs from one hundred and fifteen of our standard-bred heavy-laying Rocks. Pullets started to lay at five months and six days old. Eggs from a select pen, \$1.25 per fifteen. Charles Watson, Lonsdale, Ontario.

HATCHING EGGS—Single-comb White Leghorns. Size, vigor, productiveness; unexcelled eggs, dollar setting; four dollars hundred. E. W. Burt, Paris, Ontario.

I HAVE one cock in White Bearded Polish Bant, \$1.50; 1 cock, 4 hens, S.-S. Hamburgs, \$10.00; 1 Red-cap hen, \$2.00. Eggs, 10 ets. each. Robert Houser, Canboro, Ont.

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PURE BARRED ROCK COCKERELS, \$2.00. Eggs, dollar per fifteen. Royal White Wyandotte eggs, dollar per fifteen. Mrs. C. J. Teunisch, Ontario.

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PEACHGROVE FARM offers eggs from Indian Runner ducks at 10c. each. Single-comb Rhode Island Reds, \$1.00 per 15; \$1.75 per 30. Frank Bainard, Glanworth, Ontario.

PURE-BRED EXHIBITION BARRED ROCKS—Eggs for hatching from first winners at Elmira, Hanover, Owen Sound and Listowel. Eggs, \$1.00 and \$3.00 per 15. Write for mating list. Jas. E. Metcalfe, Hanover, Ont.

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ROYAL WHITE WYANDOTTES—Eggs for hatching, one dollar fifteen; five dollars per hundred. Special mating, headed by gold special winner at Winter Fair, Guelph, two dollars fifteen. Wm. Howe, North Bruce, Ontario.

ROSE-COMB BUFF LEGHORNS, COLUMBIAN WYANDOTTES—I have for immediate sale trios and pens of above breeds. Winners at Chicago, Buffalo, Ottawa, Brantford and Woodstock. Eggs for hatching; Leghorns only. Mating list for the asking. W. J. Vrooman, Tutela, Ontario.

RHODE ISLAND REDS—Both combs. Eggs, \$1.50, \$1.00. Rose-comb, 100, \$4.50. Wm. Ranney, Byng, Ontario.

ROSE-COMB RHODE ISLAND RED EGGS. Bred to lay. One dollar per fifteen; five dollars per hundred. Leonard Parkinson, Guelph, R. R. No. 1.

ROSE-COMB REDS—Prize stock. Eggs for hatching from number one pen, two dollars; number two pen, one dollar. Cockerels for sale. Fred Colwell, Cookville.

REGAL WHITE WYANDOTTES—Fifty large vigorous, snow-white cockerels, at \$2 and \$3 each, worth double. Eggs from exhibition matings, \$3 and \$5 per setting; utility matings, \$9 per 100. Send 10c. for the White Wyandotte book; finest book ever published, dealing wholly with the White Wyandotte. Have won best display at New York State Fair last six years. Catalogue free. John S. Martin, Drawer F, Port Dover, Ontario.

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SILVER-GRAY BARRED ROCKS, R. I. Reds, White Wyandottes, S.-C. Brown Leghorns, selected matings. Eggs, \$1.50 per 15. W. J. Bunn, Birr, Ontario.

SILVER-LACED WYANDOTTES—Prize-winners. Eggs for hatching, \$1.50 a setting. Frank McDermott, Tavistock, Ontario.

SINGLE-COMBED BLACK MINORCAS—Eggs from heavy-laying strain, \$1.50 per setting; \$7 per hundred. M. H. Peterson, Norham, Ont.

SINGLE-COMB ANCONAS—Bred to lay, win and pay. Eggs: \$2 per thirty; guaranteed fertile. James Snyder, Wales, Ontario.

S.-C. WHITE LEGHORNS—Heavy-laying strain. 13 eggs, \$1.00; 12 dozen, \$6.00. T. Worrod, Angus, Ontario.

SILVER-GRAY DORKINGS—The best utility fowl. Eggs from Canada's champion flock: Pen No. 1, \$3.00 per 15; other grand matings, \$2.00 per 15. 12c. a piece for 2 settings or over. Gordon Burns, Ayr, Ontario.

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WHITE WYANDOTTES EXCLUSIVELY—Bred for heavy egg production and standard points. Eggs: \$1.00 per 15. Good hatch guaranteed. Thos. F. Pirie, Banner, Ont.

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WHITE WYANDOTTES—Eggs for hatching, \$1.00 per 15. W. Readhead, Lowville, Ontario.

WHITE WYANDOTTES—Cockerels, \$1.50; eggs, \$1 per 15. Bred-to-lay stock. J. A. Orchard, Shedden, Ontario.

\$6.41 PER HEN—Write for our beautifully illustrated catalogue. Photos from life. B. P. Rocks, White Wyandottes, R. C. R. I. Reds, S. C. White Leghorns. Eggs: \$1.50 per 15; \$2.75 per 30; \$7.00 per 100. L. R. Guild, Box 16, Rockwood, Ont.

EGGS EGGS EGGS
PLEASANT VALLEY FARMS

For hatching: White Wyandottes, \$5 per 100; special mating, several prizewinners, \$3 per 15; S.-C. White Leghorns, \$4 per 10; special mating, \$1.75 per 15 eggs. Grand laying strains, both varieties. GEO. AMOS & SONS, Moffat, Ont. Private phone Milton.

125 Egg Incubator \$10
and Brooder BOTH FOR \$10
If ordered together.
Freight paid out of pocket.
Rockers, hot water, copper tanks, double walk, double glass doors. Free catalog describes them. Send for it today.
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Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock. TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

EXPERIENCED SHEPHERD WANTED—Bow Park Farm, Brantford, Ontario.

EXPERIENCED FARM HANDS WANTED—Permanent positions for eight people. Bow Park Farm, Brantford, Ontario.

FARMERS—Suitable help promptly supplied. Phone or write Employment Supply Company, 33 John South, Hamilton.

FARM hands and hotel help awaiting situations. Apply: 139 Front St. W., Toronto.

VANCOUVER ISLAND, BRITISH COLUMBIA, offers sunny, mild climate; good profits for men with small capital in fruit-growing, poultry, mixed farming, timber, manufacturing, fisheries, new towns. Good chances for the boys. Investments sale at 6 per cent. For reliable information, free booklets, write Vancouver Island Development League, Room A, 23 Broughton Street, Victoria, British Columbia.

WANTED—Four first-class milkers. Must be quick and clean. Wages, \$25.00 per month and board. Steady employment winter and summer. Apply: S. Price & Sons, Eridale, Ontario.

WANTED—Experienced married man for farm work. Yearly engagement. House supplied. Apply: J. A. Pettit, Freeman, Ont.

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

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

MORE LAMB ON BARGAINS

SARNIA TOWNSHIP—150 acres; about 6 miles from Sarnia; rural mail; phone line; church, school, library and oil station in same block; natural gas; no fuel to buy; house, stone block; natural gas; cement collar, etc.; barn; cement foundation, cement collar, etc.; large floor in cattle stable, silo 14' by 34' inside; open cattle barn, cement floor and loft; large implement shed (new); henhouse; shed with loft; weigh-scales house; other buildings for colts, calves, etc.; system drainage of 100 acres shown in map; 13 acres fall wheat; 19 alfalfa; 3 orchard; pumpkin plant; natural-gas engine; oil wells; the 50 acres has good pasture; water well, windmill, etc.

PETROLIA—100 acres; under 2 miles from Petrolia; rural mail and phone routes; barn house; 5 acres wheat; good natural drainage; 1 rock well; 1 flowing water; 30 acres pasture; 20 acres hay; clay loam; first-class canning factory land.

G. G. MONCRIEFF, PETROLIA, ONT.

Early Potatoes—Big Money, Extra Early Eureka Seed Potatoes, fine seed, \$1.75 per bushel, F.C.B., St. Thomas P. N. H. 1671, St. Thomas

"The Manor" Scotch Shorthorns

Present offering: Three choice yearling bulls. Young cows in calf. Yearling heifers: Clippers, Minas, Wimples, Julias, etc. Inspection solicited. Prices moderate. Phone connection.

J. T. GIBSON, DENFIELD, ONTARIO

TRADE TOPIC.

A factory to grind basic slag is now in operation at Sydney, Cape Breton, under the management of the Cross Fertilizer Co., Ltd., a branch of Alexander Cross & Sons, Ltd., Glasgow, Scotland. Basic slag has been used extensively in the United Kingdom, and is well understood by farmers there. Many have used it in Canada, but for the benefit of those not familiar with this form of fertilizer, the company will send, upon request, pamphlets explaining fully the composition and uses of this tetra-calcic phosphate. Phosphoric acid is necessary to plant growth. See the advertisement in another column, and write the Cross Fertilizer Co., Ltd., Sydney, Cape Breton, for full information concerning their basic slag.

GOSSIP.

John Elder, Hensall, Ont., Shorthorn breeder, who advertises seed barley, reports that he has, through the advertisement, sold about 300 bushels O. A. C. barley, and has about 200 bushels yet for sale. He also reports the sale of a promising young bull to head the herd of Amos Moore, Camlachie, Ont.

The Scarlet Pimpernel.

A STORY OF ADVENTURE.

By Baroness Orczy.

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(Continued from last week.)

CHAPTER XVII.

Farewell.

When Marguerite reached her room she found her maid terribly anxious about her.

"Your ladyship will be so tired," said the poor woman, whose own eyes were half closed with sleep. "It is past five o'clock."

"Ah, yes, Louise, I daresay I shall be tired presently," said Marguerite, kindly; "but you are very tired now, so go to bed at once. I'll get into bed alone."

"But, my lady . . ."

"Now, don't argue, Louise, but go to bed. Give me a wrap, and leave me alone."

Louise was only too glad to obey. She took off her mistress' gorgeous ball-dress and wrapped her up in a soft billowy gown.

"Does your ladyship wish for anything else?" she asked, when that was done.

"No, nothing more. Put out the lights as you go out."

"Yes, my lady. Good-night, my lady."

"Good-night, Louise."

When the maid was gone, Marguerite drew aside the curtains and threw open the windows. The garden and the river beyond were flooded with rosy light. Far away to the east, the rays of the rising sun had changed the rose into vivid gold. The lawn was deserted now, and Marguerite looked down upon the terrace where she had stood a few moments ago trying vainly to win back a man's love, which once had been so wholly hers.

It was strange that through all her troubles, all her anxiety for Armand, she was mostly conscious at the present moment of a keen and bitter heartache.

Her very limbs seemed to ache with longing for the love of a man who had spurned her, who had resisted her tenderness, remained cold to her appeals, and had not responded to the glow of passion which had caused her to feel and hope that those happy olden days in Paris were not all dead and forgotten.

How strange it all was! She loved him still. And now that she looked back upon the last few months of misunderstandings and of loneliness, she realized that she had never ceased to love him; that deep down in her heart she had always vaguely felt that his foolish inanities, his empty laugh, his lazy nonchalance were nothing but a mask; that the real man, strong, passionate, wilful, was there still—the man she had loved, whose intensity had fascinated her, whose personality attracted her, since she always felt that behind his apparently slow wits there was a certain something, which he kept hidden from all the world, and most especially from her.

A woman's heart is such a complex problem—the owner thereof is often most incompetent to find the solution of this puzzle.

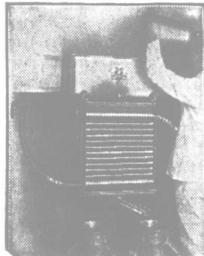
Did Marguerite Blakeney, "the cleverest woman in Europe," really love a fool? Was it love that she had felt for him a year ago when she married him? Was it love she felt for him now that she realized that he still loved her, but that he would not become her slave, her passionate, ardent lover once again? Nay! Marguerite herself could not have told that. Not at this moment at anyrate; perhaps her pride had sealed her mind against a better understanding of her own heart. But this she did know—that she meant to capture that obstinate heart back again. That she would conquer once more . . . and then, that she would never lose him. . . . She would keep him, keep his love, deserve it, and cherish it; for this much was certain, that there was no longer any happiness possible for her without that one man's love.

Thus the most contradictory thoughts and emotions rushed madly thro' her

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30 lbs. by oz. - \$3.50
30 lbs. by tenths - 4.00
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60 lbs. by tenths - 5.00

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25 lbs. - 38c. 50 lbs. - 59c.

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- Hard Milker Outfit, in case - 3.00
- Teat Openers, nickel - .50
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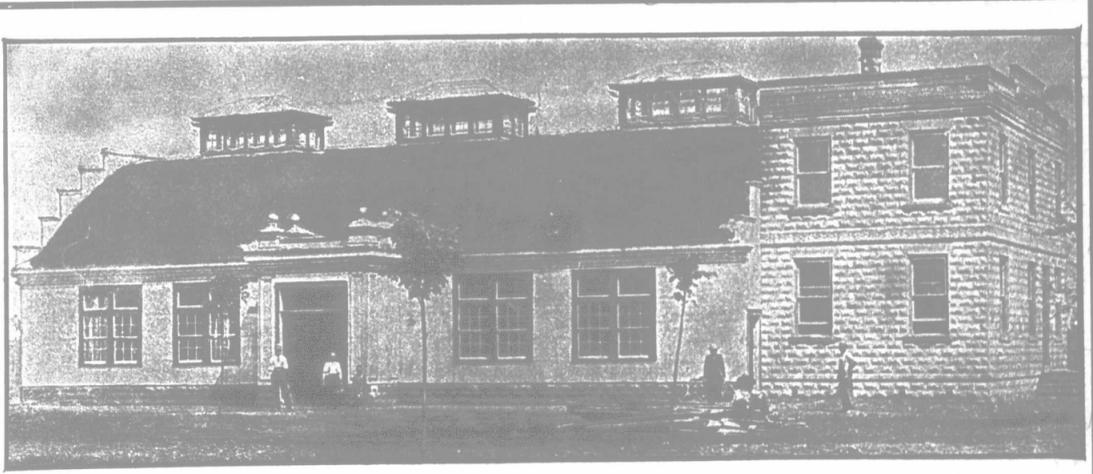
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Public Buildings—buildings erected to endure—are logically covered with the best roofing procurable. BRANTFORD ROOFING, on account of its almost indestructible qualities, is very often specified in the contract. The cut shows BRANTFORD ROOFING on the Armouries and Agricultural Hall of Forest, Ontario. Municipal architects, all over the Dominion, specify Brantford Roofing along with slate and iron thereby testifying to its fire-resisting, element-defying qualities. Here's another fact worth serious

consideration when about to buy roofing. Fire companies quote very low rates on buildings covered with BRANTFORD ROOFING. The reasons for the marked superiority of BRANTFORD ROOFING are very simple. Its body or "Base" is long-fibred pure wool. This is saturated through and through with pure Asphalt—the only mineral fluid that has successfully defied the ravages of the elements for centuries. Fire cannot destroy BRANTFORD ROOFING. Rains, sleet, or snow driven by cyclonic storms cannot penetrate it.

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Your choice of the two standard methods of cream separation. We make both cone and disc machines. Both are fully explained in our latest catalogue. Send for a copy. Get reliable, accurate information on the subject. 31

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An analysis of Acetylene shows it to be almost identically the same as daylight—a pure white light.

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For this reason an Acetylene light of 24 candle power is easier to read or work by than is an equally brilliant light of any other kind. Colors and shades seen by Acetylene light look the same as they do by daylight, everything is more distinct, and the eyes do not feel the same strain that is caused by other artificial lights.

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Write us for full information about Acetylene lighting. We'll gladly give it, without any obligation on your part. 10

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mind. Absorbed in them, she had allowed time to slip by; perhaps, tired out with long excitement, she had actually closed her eyes and sank into a troubled sleep, wherein quickly fleeting dreams seemed but the continuation of her anxious thoughts—when suddenly she was roused, from dream or meditation, by the noise of footsteps outside her door.

Nervously she jumped up and listened: the house itself was as still as ever; the footsteps had retreated. Through her wide-open windows the brilliant rays of the morning sun were flooding her room with light. She looked up at the clock; it was half-past six—too early for any of the household to be already astir.

She certainly must have dropped asleep, quite unconsciously. The noise of the footsteps, also of hushed, subdued voices had awakened her—what could they be?

Gently, on tip-toe, she crossed the room and opened the door to listen; not a sound—that peculiar stillness of the early morning when sleep with all mankind is at its heaviest. But the noise had made her nervous, and when, suddenly, at her feet, on the very doorstep, she saw something white lying there—a letter evidently—she hardly dared touch it. It seemed so ghostlike. It certainly was not there when she came upstairs; had Louise dropped it? or was some tantalizing spook at play, showing her fairy letters where none existed?

At last she stooped to pick it up, and, amazed, puzzled beyond measure, she saw that the letter was addressed to herself in her husband's large, businesslike-looking hand. What could he have to say to her, in the middle of the night, which could not be put off until the morning?

She tore open the envelope and read:—

"A most unforeseen circumstance forces me to leave for the North immediately, so I beg your ladyship's pardon if I do not avail myself of the honour of bidding you good-bye. My business may keep me employed for about a week, so I shall not have the privilege of being present at your ladyship's water-party on Wednesday. I remain your ladyship's most humble and most obedient servant,
PERCY BLAKENEY."

Marguerite must suddenly have been imbued with her husband's slowness of intellect, for she had perforce to read the few simple lines over and over again, before she could fully grasp their meaning.

She stood on the landing, turning over and over in her hand this curt and mysterious epistle, her mind a blank, her nerves strained with agitation and a presentiment she could not very well have explained.

Sir Percy owned considerable property in the North, certainly, and he had often before gone there alone and stayed away a week at a time; but it seemed so very strange that circumstances should have arisen between five and six o'clock in the morning that compelled him to start in this extreme hurry.

Vainly she tried to shake off an unaccustomed feeling of nervousness: she was trembling from head to foot. A wild, unconquerable desire seized her to see her husband again, at once, if only he had not already started.

Forgetting the fact that she was only very lightly clad in a morning wrap, and that her hair lay loosely about her shoulders, she flew down the stairs, right through the hall towards the front door.

It was as usual barred and bolted, for the indoor servants were not yet up; but her keen ears had detected the sound of voices and the pawing of a horse's hoof against the flag-stones.

With nervous, trembling fingers Marguerite undid the bolts one by one, bruising her hands, hurting her nails, for the locks were heavy and stiff. But she did not care; her whole frame shook with anxiety at the very thought that she might be too late; that he might have gone without her seeing him and bidding him "God-speed!"

At last, she had turned the key and thrown open the door. Her ears had not deceived her. A groom was standing close by holding a couple of horses; one of these was Sultan, Sir Percy's favourite and swiftest horse, saddled ready for a journey.

The next moment Sir Percy himself appeared round the further corner of the house and came quickly toward the horses. He had changed his garments

This Washer Must Pay for Itself

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

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

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

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

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

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

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

I know it will wash a tub full of very dirty clothes in six minutes. I know no other machine ever invented can do that, without wearing out the clothes.

Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges nor break buttons the way all other machines do.

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

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

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

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

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

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in 6 minutes.

Address me personally—C. L. Bach, The 1900 Washer Co., 357 Yonge St., Toronto, Ont.

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LARGEST STEAMERS CANADA

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CANADA MAY 4; JUNE 1; 20
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COMPANY'S OFFICE, Toronto, Ont.

FOR SALE Holstein bull thirteen months old; his grand sire is Pontine Hermes. Also a few nicely marked this spring's calves from choice dams; their grand sire is Baron Boutsie De Boer. M. C. Wyman, Chute à Blondeau, Ont.



ball costume, but was as usual irreproachably and richly appa...

Marguerite went forward a few steps, he looked up and saw her. A slight frown appeared between his eyes.

"You are going?" she said quickly and feverishly. "Whither?"

"As I have had the honour of informing your ladyship, urgent, most unexpected business calls me to the North this morning," he said, in his usual cold, drawly manner.

"But... your guests to-morrow..."

"I have prayed your ladyship to offer my humble excuses to His Royal Highness. You are such a perfect hostess, I do not think that I shall be missed."

"But surely you might have waited for your journey... until after our water-party..." she said, still speaking pickily and nervously.

"My business, as I had the honour to tell you, Madame, is as unexpected as it is urgent... May I therefore crave your permission to go... Can I do aught for you in town? ... on my way back?"

"No... no... thanks... nothing... But you will be back soon?"

"Very soon."

"Before the end of the week?"

"I cannot say."

He was evidently trying to get away, whilst she was straining every nerve to keep him back for a moment or two.

"Percy," she said, "will you not tell me why you go to-day? Surely I, as your wife, have the right to know. You have not been called away to the North, I know it. There were no letters, no couriers from there before we left for the opera last night, and nothing was waiting for you when we returned from the ball... You are not going to the North, I feel convinced... There is some mystery... and..."

"Nay, there is no mystery, Madame," he replied, with a slight tone of impatience. "My business has to do with Armand... there! Now, have I your leave to depart?"

"With Armand? ... But you will run no danger?"

"Danger? I? ... Nay, Madame, your solicitude does me honour. As you say, I have some influence, my intention is to exert it before it is too late."

"Will you allow me to thank you at least?"

"Nay, Madame," he said coldly, "there is no need for that. My life is at your service, and I am already more than repaid."

"And mine will be at yours, Sir Percy, if you will but accept it, in exchange for what you do for Armand," she said, as impulsively, she stretched out both her hands to him. "There! I will not detain you... my thoughts go with you... Farewell!"

How lovely she looked in this morning sunlight, with her ardent hair streaming around her shoulders. He bowed very low and kissed her hand; she felt the burning kiss and her heart thrilled with joy and hope.

"You will come back?" she said tenderly.

"Very soon!" he replied, looking longingly into her blue eyes.

"And... you will remember? ... She asked, as her eyes, in response to his look, gave him an infinity of promise. "I will always remember, Madame, that you have honoured me by commanding my services."

The words were cold and formal, but they did not chill her this time. Her woman's heart had read his, beneath the impassive mask his pride still forced him to wear.

He bowed to her again, then begged her leave to depart. She stood on one side whilst he jumped on to Sultan's back, then, as he galloped out of the gates, she waved him a final "Adieu."

A bend in the road soon hid him from view; his confidential groom had some difficulty in keeping pace with him, for Sultan flew along in response to his master's excited mood. Marguerite, with a sigh that was almost a happy one, turned and went within. She went back to her room, for suddenly, like a tired child, she felt quite sleepy.

Her heart seemed all at once to be in complete peace, and, though it still ached

with undefined longing, a vague and delicate hope soothed it as with a balm.

She felt no longer anxious about Armand. The man who had just ridden away, bent on helping her brother, inspired her with complete confidence in his strength and in his power. She marvelled at herself for having ever looked upon him as an imine fool; of course, that was a mask worn to hide the utter wound she had dealt to his faith and to his love. His passion would have overmastered him, and he would not let her see how much he still cared and how deeply he suffered.

But now all would be well; she would crush her own pride, humble it before him, tell him everything, trust him in everything; and those happy days would come back, when they used to wander off together in the forests of Fontainebleau, when they spoke little—for he was always a silent man—but when she felt that against that strong heart she would always find rest and happiness.

The more she thought of the events of the past night, the less fear had she of Chauvelin and his schemes. He had failed to discover the identity of the Scarlet Pimpernel, of that she felt sure. Both Lord Fancourt and Chauvelin himself had assured her that no one had been in the dining-room at one o'clock except the Frenchman himself and Percy—Yes!—Percy! she might have asked him, had she thought of it! Anyway, she had no fears that the unknown and brave hero would fall in Chauvelin's trap; his death at any rate would not be at her door.

Armand certainly was still in danger, but Percy had pledged his word that Armand would be safe, and somehow, as Marguerite had seen him riding away, the possibility that he could fail in whatever he undertook never even remotely crossed her mind. When Armand was safely over in England she would not allow him to go back to France.

She felt almost happy now, and, drawing the curtains closely together again to shut out the piercing sun, she went to bed at last, laid her head upon the pillow, and, like a wearied child, soon fell into a peaceful and dreamless sleep.

(To be continued.)

TRADE TOPIC.

Demonstrations showing the use of C. X. L. stumping powders on the farm, will be held at the following places:

- On W. F. Swain's farm, Langton, Ont., April 19th, at 1 p.m.; on Lynddale Farms, Simcoe, Ont., April 20th, at 1 p.m.; on W. Churchill's farm, St. Thomas, Ont., April 22nd, at 1 p.m.; on J. Bradley's farm, Aylmer, Ont., April 23rd, at 1 p.m.; on Brigdon, Ont., April 25th, at 1 p.m.; on Inwood, Ont., April 26th, at 1 p.m.; on Petrolia, Ont., April 27th, at 1 p.m., under supervision of the District Representative of the Ontario Department of Agriculture; on "The Farmer's Advocate" farm, London, Ont., April 30th, at 1 p.m.; on Mark Haley's farm, Cainsville, Ont., May 1st, at 1 p.m.; on J. R. Hasting's farm, Winona, Ont., May 2nd, at 2 p.m.; on Government Experimental Farm, Jordan Harbor, Ont., May 3rd, at 2.30 p.m.; on St. David's Wine-growers' Farm, St. Catharines, Ont., May 4th, at 10.30 a.m.; on W. F. W. Fisher's farm, Burlington, Ont., May 7th, at 1 p.m.; on F. Stanley's farm, Port Union, Ont., May 8th, at 1 p.m.; on D. Riley's farm, Alliston, Ont., May 9th, at 1 p.m.; on T. Holden's farm, Stouffville, Ont., May 13th, at 1 p.m. All parties interested are cordially invited to attend and see this cheap and quick way of clearing land and improving the farm.

GOSSIP.

Unwashed wool, as advertised, is wanted by The Horn Bros. Woollen Co., of Lindsay, Ont. Early shearing, unwashed, is the improved method, which is growing in favor with up-to-date breeders.

A copy of volume 28, of the Dominion Shorthorn Herdbook, containing pedigrees of Shorthorn cattle, imported, Canadian and American, recorded from January 1st to December 31st, 1911, inclusive, has been received at this office. This volume contains pedigrees of 3,174 bulls, numbering from 81067 to 84510, and of 3,934 cows, numbering from 93757 to 97699, a total of 7,108.

Wear Guaranteed Hose Send for Price List

YOU ought to wear hosiery that really WEARS. Write for the price list on HOLEPROOF HOSIERY - six pairs guaranteed to wear without holes, rips or darns for six months. A MILLION PEOPLE are wearing Holeproof Hose because of the wonderful service and comfort they give. These hose are so made that they wear longer than any other hose and yet they are soft and flexible. They are made in the lightest weights if you want light weights. No hose were ever more comfortable. Wear them this summer and your feet will be cool, yet the hose will wear SIX MONTHS. That is guaranteed. Think what it means! 6 Pairs Wear 6 Months Or NEW HOSE FREE! That's what we do. If they wear out (one pair or all pairs) we give you new hose free. 6,650,000 pairs outlasted the guarantee last year. But we replace every pair that does wear out without any question or quibble. Here's how we get the "wear" and the softness that have made "Holeproof" famous— We use a yarn that costs an average of 70c a pound, while common yarn sells for 30c a pound. It is Egyptian and Sea Island cotton, 3-ply strands, the softest and strongest yarn that's produced. We spend \$55,000 a year for inspection—just to see that each pair is perfection, capable of the guarantee. Then we have had 39 years of hose making experience. We know how to make hose wear, and how to make them stylish, too. These are the original guaranteed hose—the whirlwind success—the most popular hose in existence. You ought to try them.

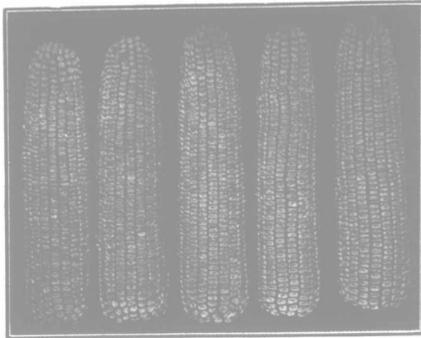
Send for Trial Box! Stop Darning! End Discomfort! Men need not any longer wear socks with holes in them. (Children may now always wear neat-looking stockings. WOMEN MAY SAVE ALL THE DARNING!) Think of the darning you do now; then order. Or send for the "Holeproof" list of sizes, colors and grades. Don't pay out good money for hose that wear out in a week. Get this Trial Box of "Holeproof" and learn how hosiery should wear—even the lightest weights. Send the coupon and \$1.50 now while you think of it. (If you want them for women or children, Remit in any convenient way.) Holeproof Hosiery Co. of Canada Ltd. 191 Bond Street, London, Can. Are Your Hose Insured? (320)

'NEW CENTURY' WASHER Let the New Century Do Your Clothes Washing It goes right after the dirt and removes every trace without the slightest injury to the most delicate fabric—and "SO EASY". Ask any good dealer to demonstrate how the New Century saves time and strength. Look at the springs that do half the work and the ball-bearings that make it run "SO EASY". Notice the Rust Proof shaft that makes the machine rigid and lasting, and also the Anti-Warp rust-proof steel ring sprung into groove inside tub. These are unique features. This machine pays for itself in the clothes it saves. Ask for "Aunt Salina's Wash day philosophy"—an interesting booklet showing many ways of lightening work on wash day. A-1-12 GUMMER-DOWSWELL HAMILTON, CANADA. LIMITED.

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SEED CORN

Buy Yours on the Cob



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

70 lbs. to the bush. of cob corn

Wisconsin No. 7,	Ontario grown, price on the cob..	\$1.50	per bush., bags free
White Cap Yellow Dent,	shelled.....	1.30	" " " "
Improved Leaming,	on the cob..	1.40	" " " "
Longfellow Flint,	shelled.....	1.25	" " " "
Compton's,	on the cob..	1.40	" " " "
King Philip,	shelled.....	1.25	" " " "
North Dakota White Flint,	on the cob..	1.65	" " " "
	shelled.....	1.50	" " " "

The Eureka Hand Corn Planter \$1.25 each

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Just received, some of the finest Oats we have handled in years. They test 44 lbs. to the bushel and were grown in the great Midlothian district, Scotland. Any Scot would be proud of them. ASK FOR SAMPLE.

Regenerated Abundance Regenerated Banner

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

Ontario Grown Oats

Daubenev, test 36 lbs., at \$1.25; Abundance, test 38 lbs., at 85c; Siberian, test 37½ lbs., at 85c; Bumper King, test 37½ lbs., at 90c; White Cluster, test 37 lbs., at 85c; Lincoln, test 37 lbs., at 85c; Banner, test 36½ lbs., at 85c. We also offer good, clean Banner Oats that test 36 lbs. to the bushel, but contain a sprinkling of barley, at 80c. per bushel. BAGS FREE.

Barley

O.A.C. No. 21, our best lot, test 49 lbs., at \$1.35; O.A.C. No. 21, good sample, at \$1.20. BAGS FREE.

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Herewith find prices good for one week from date of issue of this paper if unsold. If you live in Ontario and order 180 lbs. or more of our clovers and Timothy, we will pay the freight to your nearest station. Otherwise our prices are ex warehouse, Toronto. Cotton Bags for Clover and Timothy at 25c.

Red Clover —	Gov't Stan.	Price
"Sun" brand	No. 1	\$15.50
"Moon" brand	" 2	14.50
"Comet" brand	" 3	13.75
Alfalfa Clover —		
"Gold"	" 1	13.00
"Silver"	" 2	12.00
Alsike —		
"Ocean"	" 1	14.00
"Sea"	" 2	13.50
"Lake"	" 3	13.00
Timothy —		
"Diamond"	" 1	9.50
"Crescent"	" 2	8.50
"Circle"	" 3	8.00

Fertilizers

Order along with your seeds

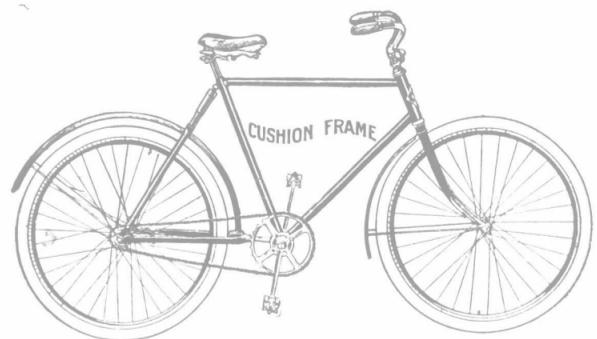
Muriate of Potash.....	\$48.00	per ton
Sulphate of Potash.....	58.00	" "
Acid Phosphate.....	19.00	" "
Nitrate of Soda.....	57.00	" "

Our Catalogue tells how to mix for the different crops.

Send for Catalogue

Spring Issues Her Clarion Call to the Bicyclist

Now comes the greatest time of all the year! Now comes the stir in the blood—the thrill of the spring air in the lungs and the vigor—the mighty stimulus that reaches every fibre of our being from the finest exercise the world has ever known—bicycling.



THOUSANDS will ride again this year who rode last season, and thousands more will ride who have not ridden before in years.

The bicycle is not merely coming back—it is here. Our factory has turned out 100 bicycles a day for weeks. The bicycle business in Canada has trebled in three years. England built more bicycles last year than ever before, and in the United States the business has had similar growth, first in the west and now making eastward.

A better bicycle can be bought today than ten years ago and for much less money—bicycles with the latest and greatest improvements, the Cushion Frame and the Coaster Brake.

THE CUSHION FRAME is the greatest invention for the bicyclist's comfort since the pneumatic tire. It absorbs vibration and makes rough roads smooth.

THE HERCULES COASTER BRAKE is the strongest, safest and most positive coaster brake on the market. Simpler than any other, has less back lash than any other, is half to one pound lighter than any other, is no larger than the average plain hub, and has no unsightly side arm. Fitted with this coaster brake the wheel can be quickly and easily removed from and replaced in the frame.

These important improvements can only be secured on the following famous makes, each of which can also be had, if preferred, with the rigid frame as well:

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"PERFECT"

Now is the time to place your order. Whichever of these famous bicycles interests you, call on the agent and look over the cushion and rigid frame models. Catalogues supplied either by us or by the agent. Secure your copy at once.

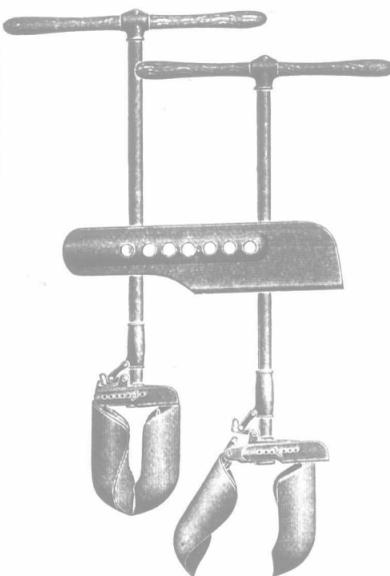
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- That is guaranteed to do the work with half the effort.

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THE "Big Limited" moves out on the tick of the second—does its thousand mile run and arrives on time.

European railroad men marvel at the reliability of train service in Canada and the States—the speeds maintained and the close adherence to schedules.

They do not realize the character of the American railroad employee—his acute sense of time—and the watch he carries.

The HOWARD Watch is railroad standard—officially certified and adopted by the Time Inspectors of 180 leading American railroads.

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pivots run so true under jolt and vibration.

These are the crucial points where the ordinary watch goes back on its owner—the jar of driving or riding, jumping on and off cars, or even of walking, knocks it out of true.

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The price of each watch is fixed at the factory and a printed ticket attached—from the 17-jewel (*double roller*) in a Crescent Extra or Boss Extra gold-filled case at \$40, to the 23-jewel at \$150—and the EDWARD HOWARD model at \$350.

You can buy HOWARD Watches all over Canada. Find the HOWARD jeweler in your town. Not every jeweler can sell you a HOWARD. The jeweler who can is a good man to know.

Send us your name on a postal card and we will send you—free—the little HOWARD Book, full of valuable information for the watch buyer.

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Oldest Cedar Pole Firm in Business

Producers for 32 Years

MONROE, MICHIGAN

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QUESTIONS AND ANSWERS. Miscellaneous.

MARE FAILS TO CONCEIVE.

I have an imported Scotch mare five years old which aborted a year ago last fall. Since then she has failed to conceive. Would you advise breeding her any further, or do you think it impossible to get her with foal?

C. E. M.

Ans.—Feed her well, and breed her again this summer. There is a chance that she may conceive. The abortion should not render her sterile.

REGISTRATION OF STALLION.

A sold an imported stallion in March, 1906, to B. He was registered in A's name in the Canadian Shire Studbook in Toronto. When A delivered the stallion to B, A gave the certificate of registration to B. B shipped the stallion to the West, and sold him same year, 1906. A now receives an attorney's letter stating that the horse is registered in A's name in the National Live-stock Records in Ottawa, and asking A to sign a transfer of ownership. But B sold the horse in the West and knows nothing of the horse or certificate now. I presume this stallion has been changing hands several times since. Is A bound in any way to sign a transfer of ownership, as when A delivered said stallion the full contract of sale was fulfilled? A's own opinion is that he could not legally sign a transfer of ownership without the certificate to accompany the transfer to Ottawa, as A has no knowledge whether this is the same stallion or not.

W. L. F.

Ontario.

Ans.—No. We would add that we think A is right in exercising caution in the matter. If, as a matter of courtesy, he should be disposed to comply with the request, he ought only to do so after being fully satisfied that it comes from the present actual owner of the animal. And it ought to be accompanied by production of certificate.

SHEEP WORRIED BY DOGS—SEED OATS.

1. Sheep were worried by dogs in barnyard by night. When discovered in the morning one was almost dead (was immediately killed), and nine others more or less worried, some quite badly. Municipal Council pays two-thirds value damage done in this way. Is owner of sheep entitled to any compensation except for the one actually dead, as at this time of the year dead lambs may be the result of injuries, even if the sheep should otherwise recover.

2. I bought 100 bushels of oats some time ago which came from the burnt elevator at Collingwood. They are a very fine sample, and would, from appearance, make good seed, as they are apparently uninjured by fire. As I presume that these oats were grown in Western Canada, would it be safe to depend upon them for seed this year, or would they require to become acclimatized before they would give best results? I have heard that such is the case.

G. Y.

Ans.—1. In cases where the owners of the dog or dogs which did the worrying are not known, the sheep valuator appointed by the Township Council must be called in to investigate the injury within 48 hours after notice thereof is given to him. He reports the extent of injuries to the Clerk of the municipality, giving the extent of the injury and amount of damage done. Two-thirds the amount of damage done is paid by the municipality. The amount is thus left with the valuator, and his estimate of the damage is what the Council go by in making the reimbursement. Where the owner of the dog is known, damages may be collected from him, and he must destroy the dog. In this particular case, we would expect that the valuator would make allowance for the damage done the sheep other than the one killed outright.

2. Western oats, provided they are plump and free from foreign seeds, especially those of the bad Western weeds, should prove satisfactory for seed. Before sowing these, however, we would advise that you make a germination test by placing a known number of seeds, say, 100 in a small box in a little moistened sand, to ascertain whether or not they have been injured by the fire.

WEIGHT OF MANGELS.

A bin of sugar mangels 22 feet long, 14 feet 6 inches wide, 6 feet 2 inches high. How many tons are there in this bin?

M. B.

Ans.—The Engineer of the Dominion Sugar Company of Wallaceburg, Ont., estimating the weight at 37.3 pounds per cubic foot, calculates that such a bin would contain about 36½ tons of sugar beets. No doubt the same bin filled with mangels would weigh nearly as much.

A RAILWAY IN DEFAULT.

I sold a strip of land all along the front of my farm to a railroad company in 1910. They have never paid a cent on the land yet. They agreed to put up a new fence, and to keep it up for all time. The fence was taken away in that year, and some grading done. My place has been lying open ever since. Cattle are allowed to run the road, and considerable damage has been done.

1. How long can they hold the land without paying for it?

2. Who is responsible for the damage done?

A SUBSCRIBER.

Ontario.

Ans.—1 and 2. The company ought not to be allowed to withhold payment any longer, or to further delay the erection of the fence. You should instruct a solicitor to make a demand upon them in respect of both matters, and also for damages, and to bring an action, if necessary, in order to get the whole case speedily and satisfactorily disposed of.

MARE RUN DOWN.

A 13-year-old mare has worked in the lumber woods for the past seven months. She has been several times sick with colic or indigestion. She became weak and emaciated. Veterinary said she was too weak to get a purgative, and fed her some condition powder. The mare is in foal, and is due about May 20th. What should I feed her, and what could I safely give as a tonic to build her up?

YOUNG FARMER.

Ans.—The mare should not be forced to work. Give her regular exercise, but do not compel her to draw heavy loads. Avoid giving purgatives. Feed moderately on easily-digested food, and avoid sudden changes of diet. Give her oats and bran mixed as a grain ration. The bran will serve to regulate her bowels. A small amount of oil cake might be added, but with great care, as it might upset her digestive organs. A good horse tonic is a tablespoonful of the following mixture three times daily, viz.: Equal parts of sulphate of iron, gentian, ginger, and nux vomica. As a rule, the less medicine administered to an in-foal mare the better. Feed her on good, well-cured clover or alfalfa hay, and as soon as grass comes get her on pasture, but be careful in changing from the dry to the green feed not to make it too rapidly.

CONTRACTED FEET.

I have a horse with contracted front feet. I have not had him long, but know he went wrong last summer. Could you suggest something I might put on to make his feet grow out; also something to help in his shoeing? Would rubber shoes be advisable? He is seven years old, and a pacer. Anything on the subject will be greatly appreciated. At present I am using saltpetre and sweet oil, and rubbing it on the coronet and the frog of the foot. I was given this recipe by a man who said he grew new feet on a team with quarter cracks in three months.

I. T. C.

Ans.—Contraction is the result of disease of the feet, and is not of itself the cause of lameness. It is probable the animal has navicular disease, and cannot be cured, but it is likely he can be helped by encouraging the growth of hoof. Pull his shoes off and give him rest, and blister the coronet every four weeks. For a blister, take 2 drams each of biniodide of mercury and cantharides, and mix with 2 ounces vaseline. Clip the hair off two inches high all around the hoof; tie so that he cannot bite the parts. Rub well with the blister once daily for two days, and on the third wash off and apply sweet oil. Turn in a box stall now, and oil every day until the scale comes off, when the blister can be again applied. If it is impossible to give him rest, poultice the feet. A few months' run without shoes on grass during the coming summer would be a very good thing.

QUESTIONS AND ANSWERS. Miscellaneous.

MANURING, PLANTING AND SPRAYING POTATOES.

1. Will you please state, through the columns of your paper, for potato-growing on sod ground that has been cropped three seasons successively with corn and wheat, if it is necessary to manure heavily, moderately, or not at all, in order to prevent worms destroying the tubers?

2. Also, please say whether it is best to put two, three or four seeds in a hill?

3. In addition to the foregoing, kindly inform me and your readers generally, what is the best thing to spray them with.

4. Is there a book of which you know that you can recommend on potato-growing? M. T.

Ans.—1. On fairly good soil, a moderately heavy coat of barnyard manure should be sufficient. Too heavy coats promote scab. A correspondent of "The Farmer's Advocate" some time ago, stated that he had good results from placing the manure in small forkfuls on each hill, as compared with spreading it over the surface. How this can affect the action of the wireworm is difficult to see, unless the increased strength of the fertilizing material concentrated in one place proved distasteful to the worms. Short rotation of crops and clean cultural methods are the only means of combating wireworms. The injury is generally greatest the second year after the sod is broken up.

2. This depends on the size of sets and distance apart of hills. Two two-ounce sets should be enough. Would rather plant in a furrow bottom, one set in a place, 15 or 18 inches apart.

3. For spraying potatoes, Bordeaux mixture may be used, 5-5-40 (five pounds lime, five pounds bluestone, and forty gallons water), instead of the usual 4-4-40. One pound of Paris green, or three pounds of arsenate of lead are strong enough as a poison for a forty-gallon barrel of Bordeaux. Begin spraying early, and keep well coated with the material.

4. "The Potato," by Fraser, a very good book, may be had through this office, at 80 cents, postpaid.

DOMESTIC SCIENCE FAVORS BOVRIL

Advance in knowledge compels attention to the value of food rather than quantity.

For 26 years experts in matters of diet have been occupied in ensuring the regular high quality of BOVRIL, and the results of recent scientific experiments at Trinity College, Dublin, have testified to the success of this work. (See The British Medical Journal, September 16th, 1911.)

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IS A GREAT BODY BUILDER

**Now Dyer
Makes a Big
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My Crown Cabled Fence is very strong and artistic, just the thing for your home, your church, school, etc. Handsome and sturdy. Oval top pickets in heavy crimped No. 9 wire, 2 1/2 inches apart. Cabled laterals 7 inches apart. Galvanized finish. My prices beat all comers.

36 inches high	7 1/2c.	42 inches high	8 1/2c.	48 inches high	9 1/2c.
	per foot		per foot		per foot

Delivered free in Ontario, south of North Bay. Outside points deduct 1/2c per foot and you pay freight. Order to-day while my special low prices last. For fence painted green or white, add 2c per foot. I make fencing for every purpose. GATES—to match, 3 or 3 1/2 ft. wide, scroll top, \$3.00 each. Drive gates, 10 ft. scroll top, \$6.50 each. Satisfaction guaranteed or money refunded. Remit by money order (any kind), check, draft or registered letter, to

DYER, The Fence Man
Dept. C., TORONTO

BEST RESULTS ARE OBTAINED FROM ADVOCATE ADVERTISEMENTS.

GARGET.

What is the cause, and prevention of garget in dairy cows?

C. E. S.

Ans.—The specific causes of garget are injuries sometimes from adjoining cow, tramping on the udder, from cold floors, drafts, etc., or the introduction of germs by dirty milkers, or from filthy stables. Preventive measures might be used if the approach of the trouble were at all noticeable, but such is not generally the case, as the ailment usually puts in an appearance without warning. As soon as it is noticed, purge with from one to one and a half pounds of Epsom salts, and follow with a teaspoonful of saltpetre in a pint of water as a drench daily, or in the feed for a week. Rub the udder well twice daily with goose grease and turpentine after bathing with hot water and vinegar. Some recommend the air or oxygen treatment, as given in cases of milk fever.

ABUNDANCE OATS.

I have secured some Abundance oats for seed. Have been told that they do not stool, and I would have to plant four bushels per acre. I have seen statistics on the subject, but cannot now find them. Kindly give me the information as to the truth of this statement.

R. A. J.

Ans.—There is a great difference in the stooling powers of different varieties of oats, and the character of the soil and the season make some difference also. In 1909, experiments with oats were carried on at the O. A. C. to ascertain the difference, if any, in stooling power, and the results showed great variation. The average number of stools per plant was 11 in the Abundance variety, showing it to be only an average, or below average stooler. Siberian gave 14 stools, Sixty Day 17, American Banner 17, Daubeney 18, and Joannette 21, while Storm King and Tartar King gave only 8 each, and Early White Jewel 6. However, during the same season tests were made with several varieties sown at different rates per acre, and the Abundance variety, sown at 2 bushels per acre, gave a trifle larger yield than where sown at 4 bushels per acre. For reasonably good soil, would not think it necessary to sow more than 2 bushels per acre.

Raise The Crop That Never Fails

Just sit down and write us for full particulars of the best business proposition you are likely to hear this year. Let us tell you, in plain words, how very little money will start you in the profitable business of poultry-raising The Peerless Way. Let us show you why it will pay you well

to adopt the Peerless methods, to make use of the advice and aid of the Peerless Board of Experts—pay you well, and profit you speedily.

One PEERLESS user will sell 200-000 fowl this year

Scores and hundreds—twenty thousand people in fact—all over Canada, are following The Peerless Way to their profit. More than eleven million dollars' worth of eggs were sold in Canada last year. Yet with all this output prices stay high for every sort of good poultry and eggs. The market is far bigger than the present product—and it grows bigger day by day. Poultry-raising is the best business for any farmer, any farmer's child. Pays better for the time and money invested. Profit is sure. Isn't overcrowded—and never will be.

Poultry ought to be a side-line on every farm—

The poultry-crop is the one crop that never fails. Every farmer certainly ought to make poultry a side line, at least—it is a certain profit for him, no matter how bad a year he may have with his other crops. And the Peerless customer need feel no worry about finding a market for all he wants to sell in the way of poultry or eggs. We look after that for him. We find him a buyer who pays the best market prices in spot cash.

Your credit with us makes it very easy to start—

Your credit is perfectly good with us. You can equip yourself fully for successful poultry-raising, and you don't need ready money to do it. We trust you; and we will make the terms so easy for you that you will never feel the outlay. In fact a Peerless Outfit pays for itself and quickly, too.



Let us ship you this. We will trust you with it, show you how to succeed, and give you a 10-year guarantee.

Within a month or so from this very day, you could have a poultry-for-profit business well under way.

Write and ask us to prove to you that success with poultry, The Peerless Way, is possible for anybody of good sense in any part of Canada. Get the facts about it. They are facts that will probably be new to you. Send for them—it's for your own benefit we suggest that you send for them at once, without another day's delay. Just use a post card, if you haven't a stamp handy—put your name and address on it—say "Show me" that's all that's necessary.

FREE Manufacturing Co., Ltd.
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PEERLESS users get valuable help and service free—

Besides finding a buyer for our customers' poultry products, (which we do free of any cost to you) our Board of Experts stands ready always to advise, counsel, help with practical suggestions free,—entirely so, to Peerless users. These practical men have developed the greatest poultry business in Canada—The Poultry Yards of Canada, Limited. Long experimenting in the hatcheries of this great plant brought the Peerless to perfection, and proved it as the one successful incubator for use in every section of the Dominion.

More than 20,000 PEERLESS users are successful—

Poultry-raising with the difficulties taken out of it—that is the reason why The Peerless Way has proved profitable for over twenty thousand people, scattered all over Canada. There is not a reason on earth why it would not do as much for you as it has for the most successful of them. No matter where your farm is, you can do well The Peerless Way—and you won't need to depend much on plain farming, either.

Send right away for interesting offer and FREE very valuable information.

You will know why The Peerless Way is the way to get profit from poultry, once you have read the big and plain-spoken free book we want you to ask for. With the book will come an outfit to outfit you for poultry profit on terms—that will meet your wishes and, if you mean, please write and, for this now—make your start now. It will pay you to.

We carry ample stocks in our big distributing Warehouses at Winnipeg, Regina, Calgary, for the convenience of our Western friends. Address all letters to Head office, Pembroke, Ont. The will receive prompt attention.

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.

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IN YOUR
Bath Room
clean the tub, tiling, taps, pipes, basin, bowl, etc., with
Old Dutch Cleanser
Its fine porous particles quickly absorb dirt
Many uses and full directions on Large Sifter-Can 10"

150-Acre Farm FOR SALE

In the Township of Tuckersmith, in the County of Huron, one and one-half miles from the town of Seaford, which is one of the best markets in the Province of Ontario. Twenty acres hardwood bush, ground cleared. Well fenced, tile underdrained, good water and a never-failing spring creek. There is an ever-bearing orchard of ninety trees, mostly winter apples. Soil clay loam. There is a ten-roomed brick house, with all modern conveniences, including hot-water heating; telephone woodshed and ice house. Good bank barn, pigery, implement shed, carpenter shop and other outbuildings. Selling to close an estate.

R. E. Cresswell, Egmondville, Ont.

FOR SALE CLYDESDALE STALLION

Prince Charles (12573) dark bay; foaled June 12, '10; sire Fiscal Member (1214); dam by Cornstone (11016); sound every way and of splendid quality and action. Come and see him, or write.

JOS. W. HOLMAN, Columbus, Ontario
Myrtle C. P. R., or Brooklyn G. T. R.

Island Seed Oats

The only really high-grade, absolutely safe seed oats in Canada this year. No danger frosted germs.

JOSEPH READ & CO'Y, LTD.
Summerside, P. E. Island

500 bus. O. A. C. No. 21 Barley (Six rowed)

This is the heaviest yielding, longest and stiffest strawed barley ever grown in Ontario, and we have been the leading growers and distributors to present time. Price, \$1.25 per bus; best bags, 25c

J. N. ELDER & SON, Hensall Ont.

For Sale—Two registered Jersey show bulls, two and three years; g ade price. Mt. Forest Ont., Jersey Farm, Box 13.

Essex-grown, White Cap Yellow Dent Seed Corn, \$1.00 per bushel. Money refunded if not satisfactory. J. S. T. E. North Ridge, Ont.

TRADE TOPIC.

William S. Myers, director of Chilean nitrate of soda propaganda, states that several cases of low-grade nitrate have in the past appeared on the market, and suggests nitrate be purchased from trustworthy dealers only. One adulterant is common salt, and sometimes salt cake has been used. Both are worthless as fertilizers, and contain no plant food. It is preferable to purchase nitrate in original bags, which contain about two hundred pounds. So far as the Chilean producers of nitrate are concerned, however, the greatest care is taken, and samples are drawn by inspectors from all cargoes before they leave the ports of Chili, and heavy fines would be imposed upon any producers who attempted to export low-grade nitrate. Salt cake residue made, as a by-product in the manufacture of nitric acid, has also been used to adulterate nitrate, and in certain cases has been sold as niter cake. This name tends to give it a false value. It is also worthless as plant food. Mr. Myers says his firm has done all that is possible to maintain a high standard, and that their policy will be the same in the future.

QUESTIONS AND ANSWERS. Veterinary.

POLL EVIL.

Horse bruised his neck just behind the halter-band. It swelled, gathered, and broke; healed very slowly, but seemed to be all right. Now it has again enlarged and is very tender.

A. A. C.
Ans.—This is poll evil, and the only means of effecting a permanent cure is an operation by a veterinarian. Lancing the present abscess freely, and then flushing out the cavity twice daily with an antiseptic, as a five-per-cent. solution of carbolic acid, a solution of corrosive sublimate 15 grains to a quart of water, or other antiseptic, will effect an apparent temporary cure, but in a variable length of time it will again form matter. The injury is deep seated, and there are little tubes or sinuses leading from the surface to deep-seated parts. Probably the bone is injured and decaying. The whole must be opened up to the deepest part, all diseased tissue, whether muscle, ligament or bone, removed, and then treated as an ordinary wound. It usually requires several months' treatment. In many cases it is necessary to remove a few inches of the strong ligament that is placed just beneath the skin, forming the crest. While the operation is not considered a serious one, it is a formidable one, makes a very large wound, and can be successfully performed only by those who know the anatomy of the parts and the nature of the disease. V.

Miscellaneous.

SEED OATS.

Will good seed oats from the Province of Manitoba do well if sown here in York County? N. G. S.

Ans.—If clean and plump they should. Make a germination test before sowing.

GOSSIP.

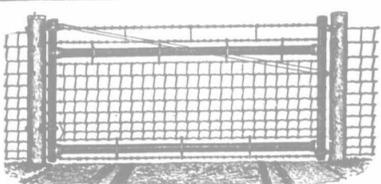
In a scathing editorial skit aimed at the knighting of Max Aitken, who is understood to have engineered the cement merger, the last number of "Ourselves" observes that "the situation regarding knightings is distinctly amusing, and perhaps a little pitiful. There are people who value these distinctions," we read, "and it would perhaps be too bad to have an investigation that would cast too clear a light upon the methods used to secure them. The floating of mergers that have plenty of water in them is very sloppy work, and the overflow of bonus stock sometimes finds its way into unexpected pockets." "Still," he goes on to say, "it might not be a bad idea if someone in authority would explain just why this particular knighting was conferred. It is not impossible that Sir Max entirely deserved it for some reason that has yet eluded observation, and that money played no part in it. If that is the case, it would be well to let the public into the secret, for at the present moment, knightings are somewhat at a discount because of Sir Max's elevation to the dignity."

A QUICKLY-SOLD CLYDESDALE.

In the issue of "The Farmer's Advocate" of March 21st appeared an illustration of the yearling stallion, Kelvin's Pride, imported and owned by Smith & Richardson, of Columbus, Ont. In the following week he was sold to Felix Sundien, of Merriton, Ont. This is only one of very many instances of this kind, showing the value of the columns of "The Farmer's Advocate" in which to illustrate animals for sale. Mr. Sundien has got a good colt, that should develop into a horse of more than ordinary merit. Messrs. Smith & Richardson have also lately sold the high-class stallion, Hyacinthus (imp.), to S. W. & J. M. Mills, of Hopeville, Ont. Hyacinthus is a horse of ideal draft character. He won many prizes in Scotland, including first at Aberdeen, and since coming to Canada won second at the Toronto National, second at the Ottawa fall and winter shows, and first at the Guelph show. Breeders in that section of Grey County will certainly benefit by having access to the services of a horse of his outstanding excellence. This noted firm of importers have still a few left, up to the usual high standard of their selections, which they are pricing well within their value in order to clear out.

20,000 Clay Gates

WERE sold last year, after a trial (see 60 day offer below) Clay Steel Farm Gates will not bend, sag, break or rust; last a lifetime; positively keep back breechy stock; swing over snow by simple adjustment. Clay Gates are made of high carbon steel tubing, vastly superior to gas-pipe. Made in variety of styles and sizes. Every gate fully guaranteed against defects in material or workmanship. Send for price-list.



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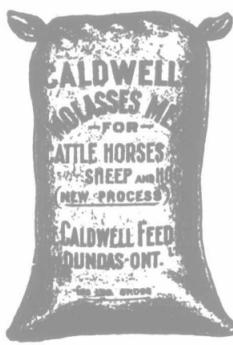
60 Days' Free Trial Try a Clay Gate for 60 days without expense or obligation. 20,000 sold last year on these terms.

Cairnbrogie Clydesdales

Our first importation for 1912 are in our stables—Stallions from 1 year up to 6, Fillies from 1 year up to 3. We have the size, breeding, conformation, character, quality and action that win in any company. Many of them were winners in Scotland. We have now the biggest and best selections for intending purchasers in Canada. We never had a better lot. If you want a winner for either the stud or show ring let us hear from you. True representation and a square deal is our motto.

Long-Distance 'Phone

GRAHAM BROS.
Cairnbrogie Farm, Claremont P. O. and Stn.



MR. DAIRYMAN

Have You Tried
Caldwell's Molasses Meal
for Your Cows?

- ☞ If not, now is the time to get the very best results from its use.
- ☞ Cows that come through the winter in a thin condition are **not in shape** to do their best at the milk pail.
- ☞ When turned on grass it takes a **month** or two before they are back to normal condition.
- ☞ Can you **afford** to lose the time, when one bag of Caldwell's Molasses Meal fed to each cow from now until the pasture is ready will insure **perfect condition** and **profitable returns**?
- ☞ Caldwell's Molasses Meal contains no spices or drugs, is manufactured in the largest and most modern feed mill in Canada under expert supervision. No beet molasses enters into its composition. It is dry to the touch, of a pleasant odor, palatable, highly nutritious and best of all **gives results**.
- ☞ And please remember that it costs you **nott-ing extra** to use it as it takes the place of an equal quantity of ordinary chops.
- ☞ Mail the coupon and we will send you booklet and all particulars as to cost, etc., together with current copy of our magazine.

CUT ALONG HERE

Please send me booklet and full particulars as to cost, etc., of Molasses Meal.

Name

Post Office

County..... Province.....

The Caldwell Feed Co. Limited
Dundas, Ont.

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THE CASHIER SAID—"I notice your Butter Checks have been getting bigger lately. Did you buy another cow?"

THE FARMER SAID—"No, I'm using WINDSOR SALT. It makes better butter and I am getting better prices. It certainly does pay me to use Windsor Dairy Salt."

THE CASHIER SAID—"I should say it does. Do you mind if I let some of my friends in the secret?"

THE FARMER SAID—"Go ahead. Tell them all to use WINDSOR DAIRY SALT if they want to get the 'top' price for their butter" 67D

WINDSOR DAIRY SALT

You Need This FREE BOOK

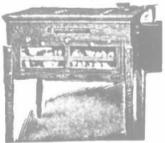


Poultry Experts say it is the most practical, helpful book on poultry raising published.

It contains the results of years of experience—tells how the most successful poultrymen make big money—how you can succeed with very little capital—how you can make your own brooder—how to construct your hen houses, coops, etc.—in fact every one of its 112 pages bristles with money making, money saving facts. No manufacturer ever put out such a book before. Think of it—75 of its 112 pages contain no advertising—just helpful information and beautiful illustrations that will interest and instruct.

You Want This Book and we want you to have it. **It is Free** Just write a postcard for it today. Read how one man made \$12,000 in one year raising poultry. Get the benefit of the experience of others. Learn how to select your layers—what feeds are best—how to treat diseases, etc. We publish this big book and distribute it free and postpaid because we want every man, woman or child we start in the poultry business to succeed and make money. A little helpful advice and information at the start will prevent serious mistakes. Before you buy an incubator you will surely want to know about the 1912 Prairie State Sand Tray and other new improvements. See for yourself why

PRAIRIE STATE Incubators and Brooders



hatch and raise strong healthy chicks—the kind that grow into profits fast. Prairie State machines are endorsed by the leading experiment stations and agricultural colleges everywhere. Sending for the book does not obligate you. Write today. **Ship your eggs to us and get highest market prices.**
Gunn, Langlois & Co., Ltd.
Box 216 Montreal, Canada
Manufacturers of the Prairie State Incubators in Canada.

Three imported Shire stallions, and a pair of imported Shire mares, matched, and in foal, are advertised for sale in this issue by R. D. Ferguson, Port Stanley, Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

CROP FOR PASTURE.

Which would be the best to sow on a 4½-acre plot that was sown to oats last year, and seeded with clover and timothy, but is a very poor catch. I did intend to pasture it and then plow for wheat. It lies beside an eight-acre pasture, which is also to be plowed for wheat. Would it be better to sow crimson clover, or to plow lightly and sow oats, sugar-cane and red clover, pasture for both horses and cattle?

J. M. G.

Ans.—The annual pasture composed of 51 lbs. oats, 30 lbs. Early Amber sugar-cane, and 7 lbs. common red clover, sown early in May, would give far better results than crimson clover for a pasture crop. From the description given, it would be far better to plow the poor seeding and sow this crop than to leave it, as thin clover and grass gives weeds a splendid opportunity to flourish.

BUYING MANURE—GREEN MANURE—BEANS.

1. Is it a profitable investment to buy barnyard manure from town at the rate of 50c. or 75c. per load, considering the amount of bad weed seeds one is liable to get? I have bought a fifty-acre farm and would like to get it built up, but fear I cannot do so by means of clover without some food to encourage it.

2. I see the question asked continually as to the value of buckwheat as manure, and find that you strongly advise cow-peas in place. Would you kindly give the value of green corn compared with peas. I find clover shows a better stand after a crop of harvested corn than anything else. This makes me wonder if one could not grow corn to a height of a foot or eighteen inches, and plow down for fertilizer to some advantage for a stand of clover the next year.

3. I also notice that your paper is highly recommending beans as a profitable crop for building up land for a clover stand. My place is a low place, inclined to be light, and I sometimes think beans might be a profitable experiment for me. Kindly advise as to the best method of handling crop from beginning. Would they be profitable where one had to thresh them with a common threshing machine? What would be best time to sow? How much ground would you sow to the crop where there is, I might say, no help on farm but the man himself?

L. A.

Ans.—1. Good manure at 50c. to 75c. per load, provided it can be drawn in the winter during the slack season, should be a good investment. Of course, you must run a certain amount of risk of getting bad weeds in the soil, but the only thing to do is adopt clean cultural methods to insure safety on this point. The best method would be to follow the manuring with a hoed crop, kept thoroughly worked, then sow a cereal, and seed heavily to clover.

2. For plowing down as a green crop, we recommend common peas, not cow peas. We would not advise plowing down corn. Peas, being a legume, would do much better. The reason clover does so well after corn is due no doubt to the clean and thorough cultivation given the corn, which, coupled with the manure generally used, puts the land in good condition for clover seeding.

3. Plant on fall plowing where possible. Work the soil well. The crop is frost-tender. Planting is usually done between 1st and 20th of June. Use the grain drill, planting in rows 28 inches apart. Two or three inches is deep enough to plant. Cultivate from the time the rows can be seen across the field until the crop is out in flower, then cease. As soon as the pods are ripe, begin harvesting. Use a bean puller, which puts two rows in one. They must be shaken up either by hand or machinery. A side-delivery rake is said to be satisfactory. Two men can handle from five to seven acres daily with the puller and the rake. It is necessary to turn the crop from time to time until dry, when they can be harvested. Do not thresh for considerable time after harvesting. Bean threshers are used for this time. The grain thresher splits quite a percentage of the beans, and for this reason is not satisfactory. Would try them on a small acreage first.

"British" Treasure

The Leading Cast Iron Range in Canada



"British" Treasure

is plain in design, easily cleaned, smooth castings, handsomely nickel plated, which is removable for cleaning purposes.

"British" Treasure Range, with high shelf and reservoir.

British Treasures are fitted with our patent draw-out grate, interchangeable for coal or wood.

British Treasures are made of the very best material it is possible to put in them. No scrap iron used in their manufacture. Will last a lifetime with care.

British Treasure. Nickel is extra heavy triple plate. Will last as long as the range. Will not wear off.

British Treasure's guaranteed to work perfectly. See that the dealer gives you the guarantee with it.

British Treasures are made in different styles and sizes to suit every household.

FOR SALE BY DEALERS EVERYWHERE

Write for descriptive circulars and full information.

Manufactured by

The D. Moore Co., Limited, Hamilton, Can.



BRUCE'S BIG FOUR FIELD ROOT SPECIALTIES

BRUCE'S GIANT ROSE FEEDING BEET—The most valuable Field Root on the market; combines the rich qualities of the Sugar Beet with the long keeping, large size and heavy cropping qualities of the mangels. 1-4 lb. 20c., 1-2 lb. 34c., 1 lb. 55c., postpaid.

BRUCE'S MAMMOTH INTERMEDIATE SMOOTH WHITE CARROT—The best of all field carrots. 1-4 lb. 68c., 1-2 lb. \$1.24, 1 lb. \$2.30, postpaid.

BRUCE'S GIANT YELLOW INTERMEDIATE MANGEL—A very close second to our Giant Feeding Beets and equally easy to harvest. 1-4 lb. 20c., 1-2 lb. 34c., 1 lb. 55c., postpaid.

BRUCE'S NEW CENTURY SWEDE TURNIP—The best shipping variety, as well as the best for cooking; handsome shape, uniform growth, purple top. 1-4 lb. 18c., 1-2 lb. 24c., 1 lb. 40c., 4 lbs. \$1.40, postpaid.

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John A. Bruce & Co., Ltd., HAMILTON, ONTARIO.
Established Sixty-two Years.

SAVE-THE-HORSE

OUR LATEST Save-The-Horse Book—Is our 16 Years' Experience and **DISCOVERIES**—Treating 87,864 Horses for Ringbone—Throbin—**SPAVIN**—and **ALL** Shoulder, Knee, Ankle, Hoof and Tendon Trouble—It is a Mind Settler—Tells How to Test for Spavin—What To Do for a Lame Horse.

IT COVERS 58 FORMS OF LAMENESS—ILLUSTRATED

NOTE THE WORK THIS HORSE DOES IN FIVE DAYS.

Mr. R. H. Williams, of Sikesville, Md., Jan. 13, 1912, writes: "Troy Chemical Co., Binghamton, N. Y.—Have used Save-The-Horse five days; it is wonderful. The horse was unable to put heel to the ground, when walked day and went for load of wood; got in place where they had to do their best or stay there. She lifted as hard as I saw her. Expected to see her lame next morning, but she was not. How long shall I continue to treat her?"

WE Originated the Plan of—Treating Horses by Mail—Under Signed Contract to Return Money if Remedy Fails. Our Charges Are Modest. But first write describing your case, and we will send you—**BOOK**—Sample Contract and Advice—**ALL FREE** to (Horse Owners and Managers—Only)—**PUT HORSE TO WORK AND CURE HIM NOW.** Write! **AND STOP THE LOSS.**

Address—**TROY CHEMICAL CO., 118 Van Horn St., Toronto, Ont., and Binghamton, N. Y.**
Druggists everywhere sell Save-The-Horse with contract or sent by us Exp. prepaid.

QUESTIONS AND ANSWERS. Miscellaneous.

CORN FOR SILO—SILO LEAKS.

1. Which of the three following varieties of corn do you consider to be the best for silo purposes, North Dakota, White Cap Yellow Dent, Compton's Early. Please give a description of each variety. Or if you know of a more suitable variety.

2. I built a silo last summer. Dug about three feet into ground to get level with stable floor, using cement mixed 1 to 6. Did not plaster it on inside, but whitewashed it several times on outside with cement and water, but it does not keep out the water. Have to keep it baled out in order to get at silage. Can it be made water-tight, and how? From ground up we erected a stave silo advertised in your columns last fall under the name Ideal Green Feed Silo. It has given very good satisfaction.

T. P.

Ans.—1. By North Dakota, we presume you refer to Salzer's North Dakota, a variety which gives large yields of fodder, but not as large yields of ears as Compton's Early. White Cap Yellow Dent is, of course, a Dent variety used extensively for silage purposes, and yields far more ears than Salzer's. Compton's Early gives a little more fodder, but not as much shelled grain per acre as White Cap Yellow Dent. Bailey and Leaming are two good fodder varieties.

2. It may be necessary to dig down the outside of the wall and place a tile drain around the outside of the silo, and use some gravel around this, and also plaster the cement work on the outside.

BUILDING A DRIVE HOUSE.

Kindly give me some points on a drive-house. The building is to be 28x50x12-ft. posts (with timber). Three bents, with up-stairs for workshop and storing cutter and lumber. What length of rafters required, and how far apart? Pine siding, tongued and grooved. How many feet, and about what cost? Hemlock sheathing and shingles for roof. If there is anything more, I should know. Kindly let me know.

A. N. W.

Ans.—If this building is only intended to store wagons, one door may do, but if there are to be various other farm implements, such as manure spreader, or any vehicle or implement which is often required, I would advise having the front made into three doors, so there would be no difficulty in getting out any machine without disturbing the others. Very often one door is made in the rear to allow of driving right through.

I note that you intend to use timber frame construction for this building, and feel that this is a mistake, but very likely the material is on the ground now, so I will not dwell on the saving that you might have effected by using plank frame.

The most of the timber will be 8x8 inches, except the girths 5x5 inches and the rafters 2x6 inches, set on 36-inch centres, and will be 18 feet 3 inches from outside edge of plate to ridge of roof, which provides for a rise of 10 inches to every foot of run. This is rather steep, but the span is wide, and with a flat pitch would require purlins, but if you will only strip the roof at 24-inch centres and use corrugated iron, I am sure that it is quite safe. By the use of the iron roof you get a lighter load, by 3 lbs. per square foot, than a wood shingle would be.

The walls of the building will take 2,690 square feet of matched lumber, 2-inch thick, and I think you intend to lay a floor over the carriage house. In this case it will require 78 joists 2x8 in. x 16 ft. 8 ins., set on 24-inch centres, and to cover this with 7/8-inch matched lumber will take 1,680 square feet.

The roofing materials will be 90 pieces 1x4 in. x 12 ft. of hemlock, which is 360 square feet, 84 sheets 33 in. x 96 ins. corrugated iron, and 42 sheets 33 in. x 48 ins. corrugated iron, 52 lineal feet of 12-inch ridge roll.

I wish to draw your attention to the matter of the long distance between the bents, if you only use three, and feel that this will require four; one at each end, and two between, set 16 ft. 8 ins. centre to centre posts. As there will be no sill at the front, it will be best to build a concrete pier for the bottom of these posts.

A. A. G.

BIBBY'S CREAM EQUIVALENT

RAISE CALVES WITHOUT MILK

CALF MEAL

BIBBY'S TESTS THE BEST AND CONTAINS TWICE AS MUCH FAT AS OTHERS SOLD BY ALL DEALERS WM. RENNIE CO. LIMITED, TORONTO

Not How Cheap-- But How Good?

That's what will concern you after your Fence is on your posts. Mere economy in price without satisfactory service is no economy at all. For example, compare a shoddy suit with a good, well-made tweed. We could easily produce a cheaper kind of fence, but we believe it pays better to give people extra good value in the fence itself. The very Quality of Frost Fence means economy. Comparison of the value it contains is what makes it sell so readily in competition with other fences. The value is there in the quality of our wire and the service-giving way the Fence is woven.

Frost Fence is not woven as fast as possible, but is woven as good as it is possible to produce a ready-woven Fence

If we could take you through our factory, we could show you with what care Frost Fence is made on looms of a special type, that make every wire absolutely the same length and tension, and with the same long, deep, spring-wave that prevents the Fence from ever getting slack.

Mere newspaper claims are worth nothing if the fence doesn't prove them in service. Examine for yourself a good stretch of Frost Fence and talk the question over with our local agent or write us for our Catalogue which describes the quality of Frost Wire and how Frost Fence is woven to give satisfactory service all the time. Don't place your order until you have examined into the superior value Frost Fence offers you.

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We Make Our Own Wire. It Is All Hard Steel It Is Full Gauge and Heavily Galvanized.

"Frost" Fence

MONEY IN POTATOES



You Bet There's Money in Potatoes If Properly Cultivated

Last year, the average selling price all over Canada was 60c. a bushel, against 45c. in 1910. The demand for potatoes is increasing each year; they are used in every home in Canada. Last year, Canada's Potato Crop increased in value OVER SIX MILLION DOLLARS. The demand is getting greater each year, consequently, more potatoes will have to be grown to feed the people of Canada. It is up to you to grow this supply to fill this demand.

Why should you not when the average price in Toronto during the month of February was \$1.60 per bag in carload lots and the average cost of production and marketing is 22c. per bushel.

"O.K. Canadian" Potato Cutter, and Planter These Machines take all the hard work out of the Potato Crop

"O.K. CANADIAN" POTATO CUTTER— for cutting seed potatoes—is the handiest little implement on the farm at planting time—and costs so little that you can't afford to waste time doing the work by hand. It cuts from 5 to 7 bushels an hour—cuts potatoes in uniform, blocky shapes—with eyes on each piece.

You can cut only about one bushel an hour by hand.

We also make Cattle Stanchions, Sanitary Stalls and Water Bowls.

"O. K. CANADIAN" POTATO PLANTER is as easy to operate as a horse rake, and it does all the work. It opens the trench—drops the potatoes at any distance you set—puts in the fertilizer if you wish—covers the seed with moist soil—and marks for the next row. All you have to do is to drive the horses and keep the hoppers filled with seed and fertilizer.

It plants from 4 to 6 acres a day—plants round or cut seed—and the special shape of the carrying cuts prevents seed being bruised.

Make up your mind that you are going to make money out of Potatoes. Sit right down—clip out and fill in the coupon—and send it off to us to-day.

CANADIAN POTATO MACHINERY CO., LIMITED. GALT, ONT.



THAT COUPON MEANS DOLLARS FOR YOU CLIP IT

CUT HERE L CANADIAN POTATO MACHINERY CO., LIMITED, - GALT, Ont. Please send me free copy of your book—"Money in Potatoes." NAME ADDRESS

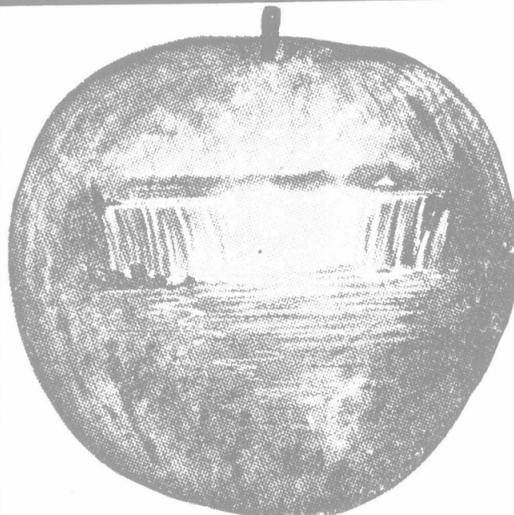
NIAGARA SPRAY

Niagara Lime-Sulphur

Has now been sold in Ontario for the past four years, and has always proved its merits as an insecticide and fungicide. Niagara shows the highest Beaume test. It is absolutely clear and uniform. **Niagara is not an experiment.** It always gives results. Our **ARSENATE OF LEAD (Swift's)** is used and endorsed by all up-to-date growers. It is guaranteed to contain 15 per cent. arsenic oxide. It mixes easiest, sticks and kills best. **Niagara Sprays are guaranteed.** **REMEMBER—"Wherever Fruit Excels Niagara Spray is used."** Our book on "Sprays and How to Use Them" is free.

WE SUPPLY

Lime-Sulphur, Arsenate of Lead, Raw Sulphur, Gasoline Engines, Spray Pumps (Hand and Power), High Pressure Hose, Spray Rods, Nozzles, Hydrometers and Accessories.



TRADE MARK, REGISTERED

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POWER OUTFITS

Bean Giant and Niagara Triplex, three-cylinder pumps of great power, capacity and durability. They spray at 250 lbs. pressure. Operated with $2\frac{1}{2}$ or $3\frac{1}{2}$ H.P. Engine. **Bean Duplex**, a two-cylinder pump of slightly less capacity. Operated with $1\frac{1}{2}$ or $2\frac{1}{2}$ H.P. Engine. All our pumps have porcelain-lined cylinders, so are proof against corrosion. They have many excellent features.

Write for our Illustrated Catalogue.

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Every Shot a Kill

are more than his means of recreation; they're his companions, his every-day friends. The gun is ever ready to be used on crows, hawks, and any prowling "varmints" that molest the poultry house.

Then when the ducks are flying, and partridges are rustling in the cover, the farmer has on his own place sport that the city man must go hundreds of miles to enjoy. The

Tobin Simplex Gun

is the shotgun for every-day shooting, because it will stand up under the hardest usage. It's also the gun for real sport, because of its wonderful accuracy, the perfect "balance" and trigger-action that makes shooting a matter of instinct. It is equipped with the Tobin machine fine-cut rib, that prevents all glare in the line of sight.

Guaranteed with a positive agreement to give you all your money back if you aren't satisfied. Priced from \$20 to \$210. Write your dealer, or send for the new catalogue that contains good news for sportsmen.

THE TOBIN ARMS MFG. CO. Limited Woodstock, Ont.



UNWASHED WOOL WANTED

The Horn Bros. Woollen Co., Limited
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Imported Shires

I have for sale an imported stallion rising 4 years, two 2-year-old stallions, imported; also a pair of imported mares, matched, in foal.

R. D. FERGUSON, Port Stanley, Ont.
Bell Telephone

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

When Writing Mention Advocate

QUESTIONS AND ANSWERS. Miscellaneous.

SHARING IMPLEMENT—STRAY ANIMALS.

1. A and B have equal shares in a farm implement. A falls out with B, and one day when B was away from home, and A knew he was away, he took the implement out of B's barn, where B had it put away for the winter, as it is the custom for the one that uses it last to keep it till it is needed the next year, and took it home. Could A do this?
2. Could he have taken it if B's wife had forbidden?
3. Can B sell his share of the implement without A's consent?
4. If any stray animals come to your place, and you mark them as your own are marked, and do not try to find an owner, and keep them two or three months, can you be fined for it? And can you be made to pay a fine if you don't advertise?

A SUBSCRIBER.

- Ans.—1. Under the circumstances, no.
2. Not properly.
3. Yes; assuming that there is nothing in your agreement to the contrary.
4. It is an indictable offence to so keep and appropriate cattle, and renders the party liable to three years' imprisonment. Not advertising would be an added circumstance of guilt.

EARLY-POTATO INQUIRIES.

I have been much interested in Mr. Rush's letter in "The Farmer's Advocate" concerning the growing of early potatoes, and considering the high price of potatoes last fall and since, I intend to put in some early ones this spring, if I can get good seed of Early Ohio.

1. How about cutting the seed and planting? Would it not do as well to cut pieces to two eyes, and plant two feet apart in row, as one eye one foot apart in row? It would appear to me that pieces would be stronger, and the saving in cutting seed and planting would be considerable.

2. Is ground put under sets in flats? Have no greenhouse in which to put seed to start. Would it do to put the flats upstairs in room where stovepipe goes through? About what temperature should the room be to get the required growth in three or four weeks? The weather at present would look as though one could not get seed shipped before 15th April, or nearly that, so to get the seed outside by 1st or 8th of May would not leave as long as you advise in flats.

W. L.
Ans.—1. It would be waste of good land space to plant two feet apart instead of one. The Ohio potatoes only produce three or four potatoes close to the stalk. Some growers plant nine inches apart.

2. You can sprout potatoes in any light room at a temperature from 60 to 70 degrees F. Read what A. H. McLennan says in "The Farmer's Advocate," March 28th, page 650. You must be guided by the season. Do not plant until snow and frost have gone.

J. W. RICH



Buy A McCormick Binder This Year

GO to the McCormick agent in your town, before the harvest season begins, and have him set up a binder for you to inspect. Buying a McCormick binder is the easiest way yet devised for saying good-by forever to all harvesting and haying troubles in the field. Seventy-five years of invention and experimentation go into this binder. The hardness or softness of every shaft and bolt in McCormick machines is a matter of accurate knowledge. Making a good binder is a matter of many kinds of knowledge and experience, and a good harvest is a matter of a good binder.

Tell the local agent you want a binder made for your province, designed especially for upper and lower Canada, and he will show you the 1912 McCormick, made at Hamilton, Ontario. Ask him to explain the reel adjustment to you. It alone is enough to establish a reputation for any machine. It can be adjusted high, low, forward, or backward to save grain under all conditions, whether it is short, tall, standing, down, or tangled. This reel eliminates the possibility of waste.

Have the local agent show you a McCormick binder, mower, rake, tedder, or hay loader, or, write the nearest branch house for a McCormick catalogue.

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At Hamilton, Ont. London, Ont. Montreal, P. Q.
Ottawa, Ont. St. John, N. B. Quebec, P. Q.

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U.S.A.



McCormick Loudens Double Harpoon Fork

HERE'S the best Harpoon Fork made, simple, powerful and positive in action, and lifts a bigger load than any other double harpoon fork on the market.

It is made entirely of the best steel and tines are slender and straight, entering green or wet hay easily. Carries its load close up to the carrier, without dribbling or scattering. Has a Special Patented Tripping Device which works perfectly and deposits its load in good shape for handling.

LOUDENS DOUBLE HARPOON FORK AND JUNIOR HAY CARRIER make a haying equipment that can't be beat for speed and ease—does the work of 4 to 6 men and gets the hay in quick.

We also make Loudens Famous Balance Grapple Fork, the best in the world for Clover, Alfalfa, Wheat, Straw and other short stuff; also Hay Slings, Stackers, Hoists, etc. Write for our catalogs of modern barn equipment.

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Enters the Hay Easily

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offering, 75c. per bushel. LINCOLN. Weighing 42 lbs. per measured bushel. Seed procured first year from Toronto seedman. Good crooked bays 25 cents. J. S. D. J. Campbell, Fairview Farm, Woodville, Ont.

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will be natural, and justified, if you plant Ewing's Reliable Seeds and give them proper care. The bumper crops which, for forty years or more, have been grown from

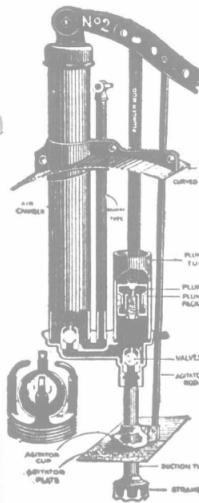
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are explained by the care which we take to give our customers only specially selected seeds that are clean, fresh, healthy and true to type—seeds that produce grains, roots, vegetables and flowers of which the growers may well be proud. Write for our handsome illustrated catalogue, and if your dealer hasn't Ewing's Seeds order from us direct.

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These wonderful hand machines gave excellent satisfaction, and will do your work well.

They are guaranteed in all sizes. For Painting, White-washing, Tree and Crop Spraying, Weed-destroying.

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

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CREAM WANTED

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

QUESTIONS AND ANSWERS. Miscellaneous.

PEA WEEVILS—NITRO-CULTURE

1. We have noticed the pea bug in our peas this year for the first time. Would the formalin solution used for smut be strong enough to kill them?

2. How much nitro-culture would it take to treat 140 lbs. alfalfa clover seed? R. R.

Ans.—1. Use carbon bisulphide. Place the seed in a tight box or barrel. A coal-oil barrel is good. It will hold about five bushels. Place three or four ounces of the carbon bisulphide in a small pan on top of the peas. Cover the barrel with a cloth or blanket weighted down with a tight cover, and allow to remain for 48 hours. The carbon bisulphide will have evaporated, and the gas being heavier than air, will settle among the peas and smother the weevils.

2. An ounce does a bushel. Three ounces would be necessary, as it is put up in ounce bottles.

ALFALFA AFTER PEAS.

I have a 12-acre field. Last year six acres were in oats, and I did not get it plowed last fall. I was thinking of putting on some manure and sowing some Early Britain peas, and soon as they come off to seed down with alfalfa. Would I be reasonably sure of getting a catch? I have no trouble to get a catch when seeded with barley. What time is best suited to sow the peas? In case you do not think this would be advisable, I will summer-fallow this part of field till June and then seed to alfalfa. The other half of field I intend to seed down with alfalfa with barley this spring. A. W. M.

Ans.—While you might secure a pretty good catch of alfalfa following a crop of early peas, yet, considering the expense of seeding to alfalfa and the considerable interest at stake through risk of failure, we question the advisability of trying to get a crop of peas first. Would suggest that you avoid risking the whole area anyway. Try part after peas, and part sown alone in June on fallowed land. Sow the peas early if at all.

MAIL ROUTE—POTATOES—GRAFTING.

1. We have a stage pass here every day, and we would like to have free mail delivery. To whom would we have to write to get it, and how many subscribers will we need?

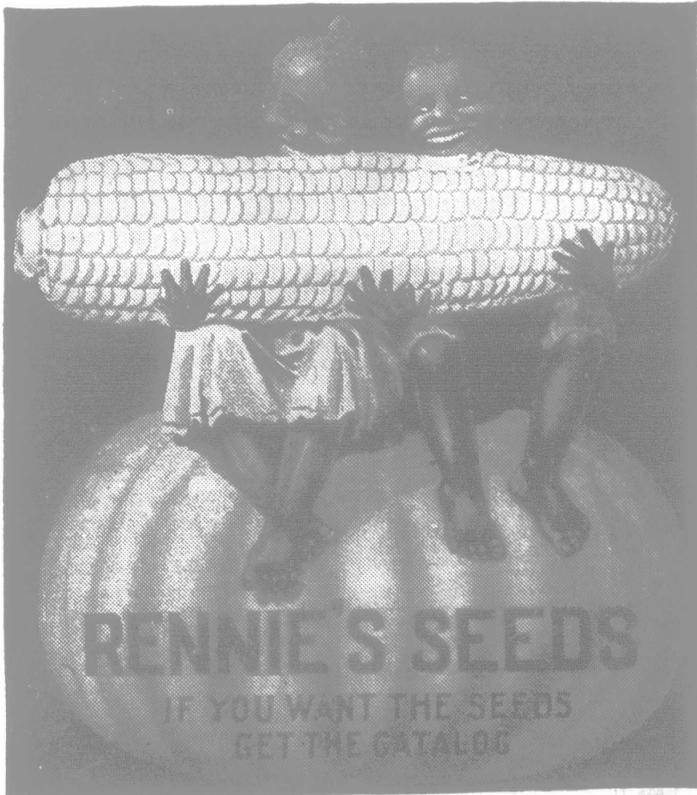
2. How is it that Green Mountain potatoes sell higher at the Toronto market than any other? Are they a better potato? Are they a good cropper? Are they as good as the Rural New Yorker?

3. Where could I get a book that tells how and when to graft trees? M. W.

Ans.—1. Those concerned should apply for a form of petition to the Post Office Department, Mail Contract Branch, Ottawa, or to the Post Office Inspector of the postal district in which the proposed rural-delivery route is situated, which petition should be circulated over the route and signed by those who are willing to accept rural delivery on the terms and conditions set by the Department, and, when completed, should be forwarded to the Post Office Department, or to the Inspector of the Division. A copy of the regulations governing rural delivery will be forwarded by the Department or by the P. O. Inspector on request. The Department requires at least 50 per cent. of the residents on a route to purchase and erect boxes before authorizing the establishment of rural delivery.

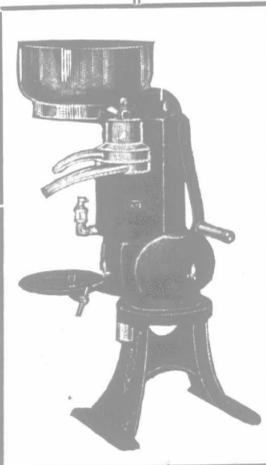
2. The high price is likely commended on account of the fact that they are shipped in in car lots, thus enabling dealers to get desired quantities of one variety, insuring uniformity. They are also good croppers, and a good quality potato. In experiments, they have not outyielded the Rural New Yorker No. 2.

3. Bulletin 194 of the Ontario Department of Agriculture, "Apple Orchardening in Ontario," gives valuable information on grafting trees, and may be had on application to the Fruit Branch, Ontario Department of Agriculture.



RENNIE'S SEEDS HAVE GOT TO GROW IF YOU GIVE THEM BUT A SHOW THE FINEST IN THE LAND WM. RENNIE CO. LIMITED, TORONTO, MONTREAL, WINNIPEG, VANCOUVER

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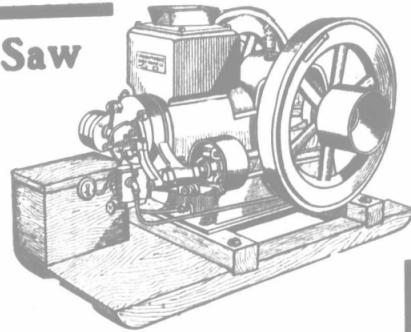
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Pump Water, Saw Wood, Grind Grain, Churn

and do many other labor-saving tasks with the **Barrie Engine**. Will pay for itself quickly by saving valuable time for you. Strong, rugged construction. So simple a lad can run it. Sure in action. Economical in operation. Every farmer needs one.

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For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.
This preparation (unlike others, acts by absorbing rather than blistering). This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederick 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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from a Bone Spavin, King Bone, Splint, Curb, Side Bone or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. \$2.00 a bottle delivered. Horse Book 9 E free.
ABSORBINE, J. K., ointment for mankind. Removes Painful Swellings, Enlarged Glands, Gout, Wens, Bruises, Varicose Veins, Varicosties, Old Sores. Allays Pain.
Will tell you more if you write. \$1 and \$2 a bottle at dealers or delivered. Manufactured only by W. F. YOUNG, P. D. F., 258 Lyman Bldg., Montreal, Ca

QUESTIONS AND ANSWERS. Miscellaneous.

MAKING UP LOST TIME.

Last year I had a man hired for eight months at \$25 per month. He got sick and went home for 25 days in July, and when his time was in in November, he wanted to put in this lost time day for day. This I would not do, as I had to pay a man \$1.75 per day while he was sick. He would agree to nothing but put in the time day for day; and so he left without coming to a settlement. Later he demanded his pay, and I offered to pay him if he threw off \$1.50 per day for the time he was off, or put in 30 days for overtime. Now he demands full pay, and refuses to do overtime at all, or throw anything off. What is the law? Must I allow a man to put in day for day, or else lose it? STOIC, Ontario.

Ans.—We think that, having regard to the law in the matter, and the circumstances of the case as stated, it would be prudent to agree to his putting in the twenty-five days' work.

USELESS COLT.

I want you to please send me legal advice about a colt I bought last April. I asked the man when I bought it if it was all right, and he said it was. Now this colt has turned out to be perfectly useless, and never was any good to me. I saw the man and asked him if he did not think he should allow me something back on the price I paid, which was \$140, and I agreed to take \$40. But he said I should have come to him sooner, and would do nothing. I understand he had a veterinarian attending this same colt before I bought. The veterinarian says she is paralyzed in hind quarters, and I have been treating her all winter to no avail. Kindly say if I am in a position to get damages or not, on account of the length of time from when I bought until I asked a rebate. I don't want any law in the matter, or as little as possible. REX, Ontario.

Ans.—Your right of action is not yet barred by the statute of limitations; but the long delay in making complaint, and other circumstances which you mention, are so prejudicial to your chances of success in an action, that we could not advise your litigating the matter.

JOINT ILL—CLIPPING—LENGTH OF EVENER.

1. In using disinfectants on the navel of a foal, should there be any injected into the navel just after the foal is dropped? How much should be injected, if any, and how strong should it be? Should the navel string be cut? If so, how long should it be left? Should it be tied at the end after cutting, or if left natural length, should it be cut?
2. Is it right to clip a draft mare in the spring before foaling time, if she has to work?
3. As a rule, is there more danger of an early colt taking joint ill than the later ones? At what time of the year do they seem less subject to the disease?
4. What is the proper length to have the doubletree for a four-horse team on a cultivator? BEGINNER.

Ans.—1. It is not necessary to inject the antiseptic into the navel, simply apply it to the navel cord thoroughly, being sure that all raw portions are treated. Use carbolic acid in a five- or ten-per-cent. solution, or a ten-per-cent. solution of Zenochem, Creolin, or some other coaltar product, or corrosive sublimate 20 grains in a pint of water. The navel cord is usually broken naturally, or the mare bites it off. If not, disinfect a soft cord, and tie it around the navel cord tightly, and cut off just below it. Leave it about three inches long, and treat as above.
2. Provided she is kept blanketed when exposed to cold or drafts, and is well cared for and does not foal shortly after being clipped, no evil results should follow.
3. Yes. Colts foaled while the mares are confined to stalls are more likely to contract the trouble than those foaled while the mare is on grass. This is due to the fact that the ground which causes the disease lies in the stalls, and in dust. Keep the stall clean.
4. About seven feet between the end and heel.

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"VANCO" Lime Sulphur Solution
will keep your fruit trees free of Scale, Parasites and Fungi. It is strong, uniform, clear, efficient—the strongest perfect solution that can be made and far superior in every way to home-made mixtures.
The Canadian Government Bulletin proves this. Specific Gravity on every barrel, to protect you.

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

"Vanco" Fertilizers—Murrate of Potash—Sulphate of Potash—Acid Phosphate—Nitrate of Soda. We are the only house in Canada selling straight fertilizing chemicals of guaranteed analysis.

Save Freight—by ordering Sprays and Fertilizers together and having us make one shipment of the lot.
Send for the "Vanco" Book—study it—and spray for fall profits.

CHEMICAL LABORATORIES, 148 Van Horne St., TORONTO. 44

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A large importation of specially-selected 2-year-old stallions, fillies and show mares. Will arrive early in May.
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SPRING HILL Top Notchers. Stallions, mares and fillies. 65 per cent. guarantee with stallions. Every mare guaranteed in foal. Ages, 3 years old and upwards.
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IMP. CLYDESDALE STALLIONS AND FILLIES
In my late importation of Clydesdale stallions and fillies I have exceptionally choice breeding ideas draft characters; as much quality as can be got with size, and I can undersell any man in the business. Let me know your wants.
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I have for sale mares and fillies, from foals up to 5 years of age; richly bred and big in size; a number of them in foal; matched pairs, the kind to make you money. They will be sold at prices that defy competition.
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Imp Clydesdale Stallions of Size and Quality
Our latest importation of Clyde stallions include several that were 1st prizewinners in Scotland. We have them from one year old up, of choicest breeding, big, flashy quality fellows, full of draft character. Our prices are the lowest, and our terms the best.
L.-D. 'phone. GRAWFORD & McLACHLAN, Theford P.O. and Sta.

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John A. Boag & Son, Bay View Farm, Queensville, Ont.
On the Toronto & Sutton Radial Railway Line. Long-distance 'Phone.

16 Clydesdale Stallions and Fillies
5 years and under. Some winning in Scotland and Canada. Bred from such noted sires as Hiawatha, Everlasting, Prince of Carruchan and Baden Powell—horses that will make a ton, with quality. Prices right. W. B. ANNETT, ALVINSTON, ONTARIO
Watford station, G. T. R., 30 miles west of London.

Imp. Stallions and Mares—Percheron, Shire, French Coach and Standard-bred, ages from 3 to 8 years. Many first prize, champion and gold medal winners at Ottawa Fair, 1911. All for sale cheap. Write or come to our barns. Terms to suit purchasers. Stallions two winters in Canada makes them much surer as foal-getters.
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We have them on hand imported this year, Stallions and Fillies, many of them winners, the best blood of the breed, with size, character and quality. There are none better and no firm can sell cheaper.
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A Few Choice Glyde Fillies—I am offering several choice and particularly well-bred Clydesdale fillies from foals of 1911 up to 3 years of age, imp. sires and dams. Also one stallion, each of 1911, imp. sire and dam. These are the kind that make the money.
HARRY SMITH, Hay P.O., Ont. Exeter Sta. L.-D. 'Phone.

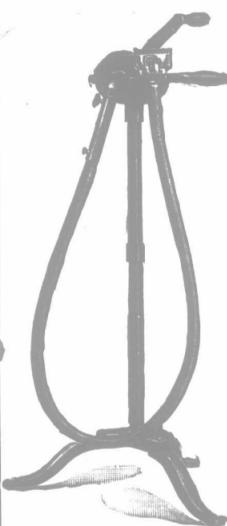
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 A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all bunches from horses. Impossible to produce scar or blemish. Send for sheet larv. Special advice free.
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Clip Your Horse in 30 Minutes

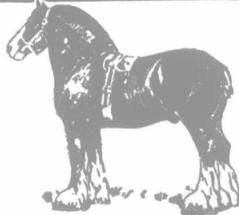
No matter how thick or scraggly the hair, the "BURMAN" HORSE CLIPPER



will clip it in 30 minutes. Always ready for use, easy to manipulate, always dependable and clips cleanly, evenly and as close as you wish. If you have one horse or twenty, this clipper will save your time and money—there is a low first cost, and no repair expense. Comes packed ready for use—clipping plates and shaft-hook for holding clipping-head supplied. Ask your nearest dealer, or write direct.

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For Sale Valley Dale Shires. Imported and Canadian bred Stallions, Mares and Fillies from 1 to 7 years old. For description and particulars apply to **Wm. Pearson & Son, West Flamboro, Address 103 York Street, HAMILTON, ONT.**

Balmedie Aberdeen-Angus I am offering for sale young bulls and heifers of the highest types of the breed. Show stock in show condition a specialty. Bred on the most popular lines. **Thos. B. Broadfoot, Fergus Sta., Wellington Co., Ont.**

Aberdeen-Angus—A few bulls to sell yet; also females. Come and see them before buying. **Drumbo Station, Walter Hall, Washington, Ont.**

QUESTIONS AND ANSWERS.
 Miscellaneous.

PURCHASE OF SCHOOL SITE.

A new school section was formed in May, 1911, a satisfactory site was selected by committee, the owner (A) agreeing to sell one acre for \$20. School Board proceeded to clear the ground and let the contract of building. A afterwards wrote secretary demanding some unsatisfactory restrictions in deed, and stating he would not sign if not adhered to. Schoolhouse was completed in September; the acre of land surveyed; a proper deed drawn by lawyer, and payment for lot deposited; A has been notified several times, but refuses to sign.

1. Is it sufficient to leave payment deposited and await his pleasure in signing deed, or should we expropriate?
2. What proceedings are necessary to expropriate?
3. Who should bear the expense?

Ontario.
 Ans.—The foregoing statement of facts is not sufficiently full to enable us to answer your questions. For instance, it does not appear whether the agreement referred to is in writing, or merely verbal. Assuming that the agreement is a written one, and sufficiently explicit, an action to compel specific performance of it would be preferable to expropriation proceedings, and for several reasons. But, in any case, there ought to be a legal tender made to A of the money, and of the deed of conveyance for execution. In the event of his refusing the cash and declining to execute the deed, the Board should personally consult a solicitor regarding the further steps to be taken.

WALL AND FLOOR MATERIAL—BREAKING A KICKER.

1. I intend raising an old frame barn, 30 x 70 feet, onto a cement wall. Could you give me estimates of material, and cost of same, for both wall and floor?
2. I have a three-year-old mare which I broke in this winter. She was very quiet and easy to break, but one day when the tongue of the sleigh hit her, she kicked one foot over the tongue and fell down. When I got her up she kicked when the trace touched her in turning around. I am afraid that she will get to be a regular kicker, so if you can help me, all suggestions will be gratefully accepted.

H. S.
 Ans.—1. Providing an eight-foot wall one foot thick is constructed, it will require about 15 cords of gravel and 60 barrels of cement for the wall, while the floor will take 30 to 35 barrels of cement, and between 9 and 10 cords of gravel. Allowing \$1 per cord for gravel, and nothing for drawing it, the total cost of gravel and cement would be, approximately, \$175 or \$180.

2. Handle her very carefully, and give her as little cause to kick as possible. Whipping her will do no good, unless she becomes vicious and it is necessary to apply the whip for safety. Keep her at work as regularly as possible, and if she persists in kicking, try her on the cultivator during spring's work. There is little she can damage on this implement, and if she kicks until exhausted, it may, to some extent, break her of the habit. Some recommend strapping one of the front feet on to the bellyband and compelling the horse to go until tired, when the foot can be let down, and if the animal still shows a disposition to kick, the other foot may be strapped up. This is said to have broken kickers of the habit. For a horse in single harness, tie a steel ring securely to the top of the horse's poll, having it directly over the crupper about four inches back of the highest point of the rump. Get two pieces of quarter or half-inch rope, each piece about 12 feet long. Tie one end of each piece to the bit ring, one on each side, carry the ropes through the ring at the top of the bridle; run one through each of the rings on the back band and both through the one ring on the crupper. Now pass each rope down and tie to the shaft or cross-bar. Care must be taken to have the ropes so tied that the horse can move without danger of his movement causing the ropes to jerk on the bit. A surprise is in store for the horse which tries to kick with this apparatus properly attached.

The Right Building Material
 for
Houses, Barns, Implement Sheds

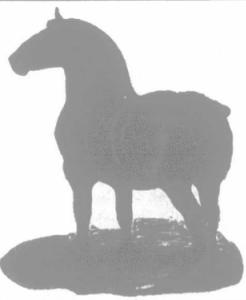
Whether you are building an implement shed, a granary or a house or barn, the most **ECONOMICAL** and **DURABLE** building material is "Metallic."

For Barns: Corrugated Steel Siding and "Eastlake" Metallic Shingles make a barn absolutely fire, lightning and weatherproof. For Houses; Metallic Rock Faced Stone or Brick Siding will give your house the appearance of a stone or brick dwelling. It is easily and cheaply applied and very durable. "A 25-year actual test" has proven "Eastlake" Shingles the best roofing. All about the permanent roof you want is told in our artistic free booklet, "Eastlake Metallic Shingles." Write for it now.

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PERCHERON STALLIONS



Prizewinners. We still have a few Percheron stallions to offer, among them being the first-prize three-year-old at the Toronto Exhibition last September, and the first-two-year-old at the Dominion Exposition, Regina, last August.

We don't sell all our best horses first, and can show intending buyers ton horses of the finest quality, both blacks and greys, and right in every way.

We are not looking for fancy prices, and these horses will be all sold worth the money.

Guarantee and terms the best obtainable. Phone, write or wire.

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I have sold more Clydesdales in the last four months than I ever did before in the same time. Why, because I can show more good horses than any other man in Canada. I have some crackers left. Come quick if you want the best the breed produces. No man can undersell me.

T. H. HASSARD, Markham, Ont.
 Markham, G. T. R. Locust Hill, C. P. R.

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Our winnings at all shows are your guarantee that whatever you buy from us will be the best in the land. You cannot afford to buy without first seeing our importations. Address all correspondence to Bedford Park P.O., Ont. Telegrams to Toronto. Telephone North 4483, Toronto.

Clydesdale Stallions and Fillies



Our past record for many years in the leading show-rings of Canada and in the yearly increase in volume of business is our best recommendation. This has been our best year. We have still some of the best of last year's importation in both stallions and fillies. We solicit your trade and confidence.

SMITH & RICHARDSON, Columbus P.O., Ont.
 Brooklin G. T. R. Myrtle C. P. R. Ottawa C. N. R.

Clydesdales, Stallions and Fillies, Percheron Stallions
 My 1911 importation have arrived—20 Clyde stallions, 18 Clyde fillies, 6 Percheron stallions. I have many winners at Old Country shows. Big, choice, quality stallions and mares, bred from the champions, and the best Percherons in Canada. Prices right.
 Long-distance phone. T. D. ELLIOTT, Bolton, Ont.

Mount Victoria Stock Farm, Hudson Heights, P. Q.
 We have for service this season the Champion Imp. Clydesdale stallions Netherlea, by Pride of Blacon, dam by Sir Everard; also Lord Aberdeen, by Netherlea, and the Champion Hackney stallion Terrington Lucifer, by Copper King. For terms and rates apply to the manager. T. B. MACAULAY, Prop. ED. WATSON, Manager.

Clydesdales, Imp., Just Arrived Our new importation has arrived safely, and we are now in a position to supply the trade with stallions from 1 year old up to 4, with more draft character, big, strong, flat bone, and better breeding than any other firm in the trade. Prices and terms as favorable as any other importer in Canada.
BARBER BROS., GATINEAU PT., QUEBEC, NEAR HULL.

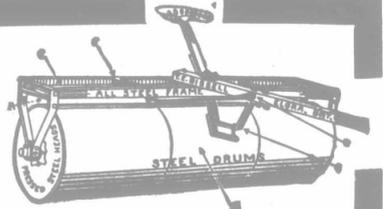
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The good points cannot all be told here. Ask your dealer about the "Bissell" Roller and do not be put off

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KINDLY ANSWER THE ABOVE

PURE BONE MEAL IS THE CHEAPEST FERTILIZER

THIS PLANT FOOD IS ALL FROM OUR CANADIAN SOILS AND SHOULD ALL GO BACK

SEND FOR PRICES, ETC.

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AMERICAN SEPARATOR

THIS OFFER IS NO CATCH. It is a solid proposition to send, on trial, fully guaranteed, a new, well made, easy running separator for \$15.95. Skims hot or cold milk; making heavy or light cream. Designed especially for small dairies, hotels and private families. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Shipments made promptly from WINNIPEG, MAN., TORONTO, ONT., and ST. JOHN, N. B. Whether your dairy is large or small, write us and obtain our handsome free catalog. Address: AMERICAN SEPARATOR CO. Box 1200 BAINBRIDGE, N.Y.

IMPORTED BULL FOR SALE
Our Green Grove herd of Shorthorns is headed by the two imported bulls, Imp. Spectator = 5094 = and Imp. Royal Bruce = 5508 =. Present offering: Stock bull Imp. Spectator and two choice young bulls, herd headers, fit for service; also good females Geo. D. Fletcher, Binkham Ont., Erin Sta. C. P. R.

Woodholme Shorthorns
I have for sale a number of choicely-bred Scotch Shorthorn heifers and several young bulls, all of high-class quality and sired by Imp. Dorothy's King = 5509 =, a Lady Dorothy. I am also offering this bull for sale.
G. M. FORSYTH, North Claremont P.O. & Sta

OAKLAND SHORTHORNS I
Our present offering: Bulls from 8 months to 22 months, roans and reds; all got by Scotch Grey 72,692. Prices from \$75 to \$150.

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IMPORTED SHORTHORN BULL
Lord Lieutenant, 50050, for sale or exchange, quite sure and active; young bulls and heifers by him and out of dams direct from imported stock; also pacing stallion, rising three years old, sound, stylish and speedy.
L. K. WEBER, Hawkesville Ont. County Waterloo.

Shorthorns, Shropshires and Berkshires
—For sale: I have young bulls and heifers, bred for milk production. High-class flock-heads, winners, and covered to the ground. Berkshires, both sexes of breeding age, show stock
W. Wilson, Brickley P.O., Hastings Sta., G. T. R.

Shorthorns and Swine—Am now offering a very choice lot of cows and heifers, safe in calf, and some choice young bulls for the fall trade; also Berkshire and Yorkshire pigs; showyard material.
ISRAEL GROFF, Elmira Ont.

GOSSIP.

PROLIFIC EWE.

A cross-bred ewe belonging to Colin Currie, Arran, Scotland, gave birth on March 23rd, to four strong, healthy lambs. All are doing well. This ewe is four years old, and has given birth to ten lambs.

At the annual consignment show and sale of Shorthorns at Penrith, England, the last week in March, 117 head sold for an average of \$145. The highest price was \$1,470, for the handsome roan two-year-old bull, Tarty Cardinal, first in class and champion, exhibited by Jos. Robinson, Skelton, and purchased by D. McLennan, the well-known exporter to Argentina.

Official records of 264 Holstein-Friesian cows were accepted for entry to the American Advanced Register, from March 12th to March 22nd, 1912. This herd of 264 animals, of which one-half were heifers with first or second calves, produced in seven consecutive days, 108,803.3 lbs. of milk containing 3,920.298 lbs. butter-fat; thus showing an average of 3.6 per cent. fat. The average production for each animal was 412.1 lbs. of milk, containing 14.850 lbs. of butter-fat; equivalent to 58.87 lbs. or over 28 quarts of milk per day, and over 17.3 lbs. of the best commercial butter per week. It is becoming evident that the increased number of cows tested as soon after freshening as the rules will permit will this year somewhat raise the average per cent. fat shown for the entire number of cows tested.

QUESTIONS AND ANSWERS. Miscellaneous.

SOWING FERTILIZERS.

I have a piece of land, about three acres, that I would like to try fertilizer on for barley, and as I have never sown any before, would it be advisable to sow it broadcast on the land, as there are no fertilizer drills around here? If so, what would be the best time to sow it, after the barley was sown, or before? I cultivated the land. It was plowed last fall.

Ans.—The fertilizer can be sown very well broadcast, by hand. Where large quantities of fertilizers have to be applied, a machine is a great labor-saver, and even here a broadcaster seems to give slightly better results than a drill. Sow the fertilizer previous to the barley seeding, with the exception of part of the nitrate of soda, which can profitably be applied after the barley is up. Work it into the land with harrow and cultivator.

PITTING TURNIPS—POULTICING

1. Would you kindly answer, in your valuable paper, if one can pit turnips successfully, and if so, how?

2. Can one poultice horses' feet with the shoes on, and how would it be done?

Ans.—1. Turnips can be pitted quite successfully. Dig out a space for the pit to about six inches deep. Pile the turnips in a cone-shaped pile, cover with straw and a little earth, and as cold weather approaches increase the depth of earth to from six to nine inches. Place a few tiles on end along the top for ventilation. Turnips pitted this way in the fall will keep crisp and good until spring, provided they don't heat or get frozen.

2. It would be better to remove the shoes before applying the poultice.



The Feed That Makes The Cream

Livingston's Oil Cake is the cheapest feed for cows—cheaper than any shorts or even hay. Because it actually increases the richness of cream—and also increases the amount of butter that you get out of the milk.

Test your cows before and after feeding Livingston's Oil Cake—here month—and your "butter money" will show its economy.

Fine Ground, Coarse Ground, Pea Size and Nuted Grindings. If your dealer cannot supply you write us for prices and samples.

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Manufacturers J. & J. Livingston
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Slaughter-house by-products, Bone, Blood, Tankage, etc., are thoroughly sterilized, practically deodorized, then utilized in the preparation of

HIGH GRADE ANIMAL FERTILIZERS

Brands specially suited for Potatoes, Tobacco, Corn, Beans, Orchards, Grains, Vegetables, Greenhouse Crops, Grass Lands, Lawns, etc., are being manufactured at our Toronto factory. There is no doubt as to their superiority over mixtures of purely chemical compositions. Professors Harcourt, Blair, Cumming and Gamble highly commend them in their opinions expressed in our booklet. Samples of the raw materials may be seen on the FARMING SPECIAL now being run by the Ontario Government. (We will supply you with these raw materials if you prefer to do your own mixing—the economy is doubtful, however.) We pay freight on all orders of 200 lbs. or more, in the Provinces of Ontario and Quebec—all other quotations f.o.b. factory. Payments in the fall. Don't be satisfied with any brand your dealer happens to handle—demand Davies', and if he isn't "up-to-date in the Fertilizer line," order direct from us. It will cost you no more. Don't waste your money paying 10% duty on imported brands—we give you that in extra plant food. Increase your yields, profits and happiness for years to come by writing us for our assistance.

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ORCHARD GROVE HEREFORDS
Champions of 1911 shows, winning both senior and junior herds at Winnipeg, Brandon, Regina, Edmonton, Toronto and London; also fifteen championships. Young stock, both sexes, for sale at reasonable prices.
Long-distance Phone L. O. CLIFFORD Oshawa, Ont.

Shorthorns and Clydesdales—We are offering 10 choice young bulls, serviceable age, or exchange. In Clydes we present offering are two stallions rising 3 and 4 years old; big quality horses, from imported sires and dams; also cows and heifers, mares and fillies. Write us, or come and see them. A. B. & T. W. DOUGLAS, Strathroy, Ont. Farm one mile north of town.

Scotch Shorthorn Females for Sale I am offering at very reasonable prices, females from one year to five years of age. The youngsters are by my grand old stock bull, Scottish Hero (imp.) = 55042 = (9065), and the older ones have calves at foot by him, or are well gone in calf to him. Their breeding is unexcelled, and there are show animals amongst them. A. EDWARD MEYER, Box 378, GUELPH, ONT.

Pleasant Valley Farms Shorthorns For Sale: Scottish Signet, best son of imp. Old Lancaster, and several good young bulls of the best Scotch breeding, at prices to suit everyone. Write us for exactly what you want, or visit us. Farm 11 miles east of Guelph, C. P. R. Half mile from station.
Geo. Amos & Sons, Moffat, Ont.

SALEM SHORTHORNS Headed by (Imp.) Gainford Marquis, undefeated in Britain as a calf and yearling, and winner of junior championship honors at Toronto, 1911. Have on hand two yearlings and a number of bulls under a year for sale at reasonable prices.
J. A. WATT, Salem, Ont. Elora Sta, G. T. R. and C. P. R.

BEST RESULTS ARE OBTAINED FROM ADVOCATE ADVERTISEMENTS.

CAUGHT HEAVY COLD.

Left Throat and Lungs Very Sore.

There is no better cure for a cough or cold than Dr. Wood's Norway Pine Syrup.

It is rich in the lung-healing virtues of the Norway pine tree, and is a pleasant, safe and effectual medicine that may be confidently relied upon as a specific for Coughs, Colds, Bronchitis, Hoarseness, Sore Throat, Quinsy, and all Throat and Lung Troubles.

Mr. S. Monaghan, Charlottetown, P.E.I., writes:—"I certify that Dr. Wood's Norway Pine Syrup is an excellent medicine for coughs and colds. Last winter I contracted a heavy cold which left my lungs and throat very sore. I had to give up work and stay in the house for two weeks. I used several cough mixtures, but got no relief until a friend advised me to use Dr. Wood's Norway Pine Syrup. Three bottles entirely cured me, and I can recommend it as the best medicine for coughs."

Don't be imposed upon by taking anything but "Dr. Wood's" as there are many imitations of this sterling remedy on the market.

"Dr. Wood's" is put up in a yellow wrapper; three pine trees the trade mark; price 25 cents. Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Cattle and Sheep Labels

Size	Price doz.	Fifty tags
Cattle	75c.	\$2.00
Light Cattle	60c.	1.50
Sheep or Hog	40c.	1.00

No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, same and numbers. Get your neighbors to order with you and get better rate. Circular and sample. Mailed free. F. G. JAMES, Bowmanville, Ont.

Six Shorthorn Bulls

Different colors, and their breeding is good enough for any herd. Write me for prices before purchasing. WM. SMITH, COLUMBUS, ONTARIO



Lump Rock Salt, \$10.00 for ton lots, f.o.b. Toronto
Toronto Salt Works, 128 Adelaide St. E., G. J. CLIFF, MANAGER, Toronto, Ont.

WILLOW BANK STOCK FARM

Shorthorns and Leicesters
Herd established 1855, flock 1848, have a special good lot of Shorthorns of either sex of various ages; also a grand lot of Leicester sheep of either sex—a few imported ones to offer.
JAMES DOUGLAS
Caledonia, Ontario

MAPLE LODGE STOCK FARM

1854-1912
Have two very desirable Shorthorn bulls for sale, a red and a roan. A handsome young Clydesdale stallion for sale, and the Leicesters are doing splendidly.
A. W. SMITH, Maple Lodge, Ontario
Lucan Crossing, G. T. Ry., one mile.

Shorthorns of Show Calibre

Only one bull for sale now, but 13 grand heifers by Mildred's Royal must be sold, as we have no bull to breed them to. Come and see them, or write.

GEO. GIER & SON, Grand Valley, Ont

SPRING VALLEY SHORTHORNS

Herd headed by the two imported bulls, Newtor Ringleader, =73783=, and Scottish Pride, =36106=. The females are of the best Scotch families. Young stock of both sexes for sale at reasonable prices. Telephone connection.

KYLE BROS. - - Ayr, Ontario

GOSSIP.

J. & D. J. Campbell, Fairview Farm, Woodville, Ont., report as follows: The five Shorthorn bulls advertised in "The Farmer's Advocate" were sold to parties far apart. Messrs. Shibley & Son, Harrowsmith, Ont., secured by mail order the first selection; Hugh Grant, Cresswell, Ont., the second; Albert Ewen, Kirkfield, Ont., the third; to Messrs. Skinner & Son, Lochend, Alberta, the fourth was sent per mail order, while the fifth and youngest, a very promising animal, was taken by David Rogerson, of Linden Valley, Ont. We expect to have good reports later on of their doings as sires, being they were the best lot we ever bred at Fairview. Our Shropshires have wintered well, and lambs are fine, strong, and plentiful. One lot of eighteen ewes, bred rather late to Belvoir Sirdar, our St. Louis World's Fair grand champion, have dropped 35 living lambs, which are growing and thriving. Lambs sired by our Buttar-bred ram, imported last year, are very promising. Many of them are out of Belvoir Sirdar ewes.

SALE OF MERTOUN CLYDESDALES AND SHORTHORNS.

The dispersion of Lord Polwarth's herd of Shorthorns and stud of Clydesdales took place at Mertoun, St. Boswells, the last week in March. The Shorthorns, being principally of Booth blood, were not in active demand, and the average for the whole herd of 82 head was only \$85, the highest price being \$244, for the cow, Wild Wave, purchased by Wm. Duthie, Collynie, who also took the second highest, Mertoun Mayflower, at \$230. The highest price for a bull was \$175. The Clydesdales, however, brought very good prices, the 20 head sold making an average of \$355, the highest price being 445 guineas, \$2,335, for the four-year-old stallion, Knight of the Borders, by Baron O'Dee, out of a Hiawatha mare, uterine sister to Casabianca. He was purchased by Alex. Rennie, Paisley. The highest price for a mare was \$708, for a four-year-old daughter of Baron O'Dee, bought by R. Bruce, Inverurie.

BOOK REVIEW.

THE BOY AND GIRL CROP.

It is hopeful that an age in which the improvement of draft horses and bacon hogs has received pre-eminent attention should at least awaken seriously to the infinitely more important issue which is the subject of a new book from the Macmillan Company of Canada, entitled, "Farm Boys and Girls." The author is Prof. Wm. A. McKeever, of the Kansas Agricultural College, who dedicates the work to the ten million boys and girls enrolled in the public schools of America. He deals with the subject on the basis of building a good life, and he does it thoroughly, in a sensible and helpful way. Assuming the farm home to be the ideal place for rearing the rising generation, he gives an insight into what is meant by eugenics, and some vital considerations too often overlooked by parents. He shows the uses of play, work, recreation, the house and surroundings, literature, the school, the church, and the influence of parents, teachers and associates, in the rightful upbringing of boys and girls. Various chapters conclude with a list of references to books that deal more freely with special points covered, which readers may desire to consult. The illustrations are fine, several of them being drawn for "The Farmer's Advocate and Home Journal," of Winnipeg. It is a book especially to be commended for rural or village libraries, as well as farm homes, and deserves a wide and careful reading, as well for its instructive contents as its bright and entertaining style. Copies may be secured through this office, at \$1.60, postage prepaid.

TRADE TOPIC.

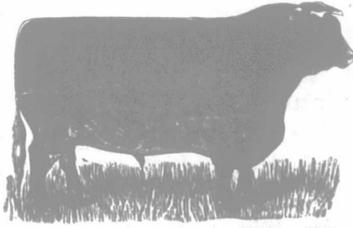
A pea thresher that does not break the grain, manufactured by the Koger Pea and Bean Thresher Co., Morristown, Tennessee, is advertised in this issue. It is highly spoken of by experimental station professors, will thresh oats and wheat, Canadian field peas, cow peas, and Soy beans, from the mown vines. A free booklet explaining its claims may be had on application.

Present Special Offering

- 20 High-Class Scotch Shorthorn Heifers
- 10 High-Class Young Shorthorn Cows
- 5 High-Class Scotch Shorthorn Bulls

At moderate prices, including Marr Missies, Emmas, Cruickshank Noapareils, Duchess of Glosters, Village Girls, Bridesmaids, Butt-rhys, Kinellar Clarets, Miss Ramsdens, Crimson Flowers; also a number of the grand old milking tribe, which have been famous in the showing.

ARTHUR J. HOWDEN & CO.
Columbus, Ontario



Shorthorn Bulls and Clydesdale Mares

If you are in the market for a young bull, write us for particulars, or, better still, come and see them. We have 13 young bulls, from 8 to 14 months old, of good breeding and quality. We also have four imported Clydesdale mares, safe in foal.

W. G. PETTIT & SONS, Freeman, Ontario

Bell 'phone. Burlington Jct. Sta., G. T. R., 1/2 mile from farm

10 SHORTHORN BULLS 10

If you are looking for a young bull to head a purebred herd, or one to cross on grade cows to raise first-class steers, I have them to suit all customers at very reasonable prices. They are reds and roans, and one extra good white show calf; ages from 9 to 14 months, nearly all sired by imported bulls and from the best Scotch families of cows. Will be pleased to furnish breeding and prices.

Claremont Sta., C. P. R., 3 miles. JOHN MILLER, Brougham P.O., Ont.
Pickering Sta., G. T. R., 7 miles.

SHORTHORNS

Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application.

H. CARGILL & SON, Proprietors, Cargill, Ont., Bruce Co.
JOHN CLANCY, Manager



THIS IS A GOOD TIME, AND I HAVE A GOOD PLACE, TO GET A HIGH-CLASS SCOTCH SHORTHORN BULL CALF by my great, Whitehall Sultan sire, or a young cow in calf to him, to start a herd that will be well-edged, SHROPSHIRE RAMS AND EWES, too, at low prices. CHILDREN'S PONIES, A CLYDESDALE FILLY, such as I can send you, is one of the best things any man can buy. Just write me and say as nearly as possible what you want, and I will surprise you with prices on goods that are genuine. ROBERT MILLER, STOUFFVILLE ONTARIO

Scotch Shorthorns

FOR SALE—One of our imported herd bulls and eight heavy-bodied, deep-bodied, low-down bull calves, 12 to 16 months old. Also twenty-five heifers and young cows bred to imported bulls. Farm 1/4 mile from Burlington Jct. Station. MITCHELL BROS., Burlington, Ont.

BLAIRGOWRIE STILL TO THE FRONT
SHORTHORNS—2 red bulls, 12 and 15 months; 1 red bull, 9 months; 2 roan bulls, 12 and 14 months. CLYDESDALES—One mare in foal, one filly rising three, two filly foals inspection invited.
Myrtle, C. P. R. Sta. L.-D. 'Phone. JOHN MILLER, JR., Ashburn, P.O.

The World's Finest Dairy Cows are Milked by the SHARPLES MECHANICAL MILKER



Owners of the highest priced dairy cows in America use the Sharples Mechanical Milker. One of the world's highest priced dairy cows, Imported Billy's Lady Frances Gazelle, owned by Branford Farms, Groton, Conn., is an example. Another, the 76 Dairy Cows on the famous "White Horse Farm" at Paoli, Pa., none of which is valued at less than \$1,000. Read this letter:

After considerable use of your Mechanical Milker, will say it is a decided success. I feel justified in saying I could hardly get along without it, so satisfactory has it proved to be from every point of view. It is merely necessary for the dairyman to become acquainted with the Sharples Milker to insure its perfect service and to convince him that it is for his own best interests.
Feb. 19, 1912. W. W. BLAKE ARKCOLL, Mgr. White Horse Farm, Paoli, Pa.

When owners of these high-priced animals use and endorse the Sharples Milker, surely you need have no fear of the slightest injury to even the most sensitive animal. Further, it will enable you to add \$300 to \$1,000 extra to your dairy profits each year. It will do away with the most disagreeable job on the farm; enable you to double your dairy capacity with the same help; give you absolute freedom from worry, and independence from shiftless, unreliable workmen.

Send this coupon for free catalog. We will give you ample time for trial. If the Sharples Milker don't make good, if it don't more than satisfy you, there will be no sale. Guaranteed by The Sharples Separator Company, which has been making high-class Dairy Machinery for 31 years. Write today for free catalog M

THE SHARPLES SEPARATOR CO.
WEST CHESTER, PA.
Chicago, Ill.; San Francisco, Cal.; Portland, Ore.;
Dallas, Tex.; Toronto, Can.; Winnipeg, Can.

THE SHARPLES MECHANICAL MILKER

Name.....
P. O.
State.....
I am milking.....
cows at.....
The Sharples Separator Co.
West Chester, Pa.
and
The Canadian Agency
The Ontario Agency

SIMPLICITY and SERVICE



are what you want
in an engine, and
what you get in the

CHAPMAN AND STICKNEY GASOLINE ENGINES

No other engine so easy to "manage"—no other does so many kinds of work with so little bother.

See our agent before you buy, or write for FREE catalogue of important engine facts.

Ontario Wind Engine & Pump Co.
Limited
Winnipeg TORONTO Calgary

Who Pays the Duty?

You can't get away from the fact that **directly or indirectly** the DUTY has to be paid by the consumer; therefore, why pay fancy prices for calf meals of foreign manufacture when you can buy CALFINE 15 to 20 dollars a ton cheaper and secure at least equal, and in most cases superior, results.

CALFINE

"The Stockman's Friend"

has been most carefully experimented with at Macdonald Agricultural College, where it has given excellent results. It is now in use on some of the largest and best equipped dairy farms in the Dominion.

Ask your dealer for a 100-lb. bag of CALFINE as a trial—you will soon be back for more. If your dealer does not handle it, write us. We will do the rest.

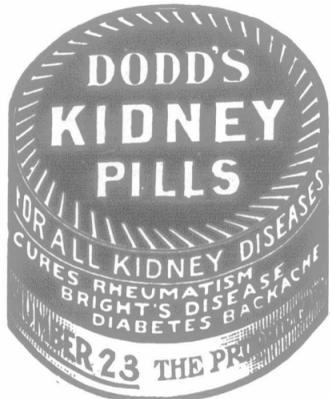
Feeding Directions Sent on Application.

Canadian Cereal & Milling Co.
Limited
TORONTO, CANADA

A HUNTER'S DIARY.

Johnny had two presents at the same time—one a diary, which he kept very carefully, and the other a pea-shooting pop-gun, which he fired indiscriminately on all occasions. One day his mother found the following terse record in his diary:

"Monday cold and sloppy. Toosdy cold and sloppy. Wensdy cold and sloppy shot Grandma."



QUESTIONS AND ANSWERS. Miscellaneous.

CARBON BISULPHIDE FOR WEEVILS.

I wish to treat my seed peas, as the weevil is very bad. Please tell me the amount of and how to use the carbon bisulphide. M. R.

Ans.—Place the seed peas in a tight box or barrel. A coal-oil barrel does very well, and holds about five bushels. For this quantity, use three or four ounces of carbon bisulphide, placed in a small vessel on top of the peas. Leave this in place 48 hours, and keep the barrel covered with a blanket weighted down tightly. The carbon bisulphide evaporates, and the gas being heavier than air, settles among the seed, smothering the weevils.

OCCULT SPAVIN.

A six-year-old driving horse went lame on a hind leg. He favors the leg by standing with the toe on the floor and the fetlock forward. He always limps when he is stepped over in the stall, and is lame for about eighty rods when he goes on the road. He acts very much as if he had a "jack," but has been examined by experienced horsemen, and no swelling or tender spot can be found. When he first went lame he was working hard, but is now on light work, and, although he is some better, he is still stiff. Is there such a thing as a blind, or inside "jack"? WORRIED.

Ans.—This is spavin. In some cases lameness is present before any enlargement is noticeable, and in some cases where the true hock joint is involved, there is permanent lameness, and no enlargement appears. A case of this kind is called occult spavin, or blind spavin, and the lameness is usually incurable. It is probable a cure may be effected by firing and blistering by a veterinarian.

BLIND TEAT.

I have a fresh milk cow that milks easily from three teats, but the opening in the other one is so small that the milk goes back up instead of coming out. Even the calf fails to get any milk. Can you tell me what to do? F. S.

Ans.—A teat siphon, which may be secured from a veterinarian, or a dealer in veterinary supplies, may help to relieve the trouble. Clean the instrument thoroughly by plunging it in boiling water before using, and care must be taken in introducing it to avoid injuring the lining of the teat. This will draw off the milk which comes down into the teat, and will tend to enlarge the orifice. This syphon, attached to a rubber tube and a bicycle pump, and used as in cases of milk fever to fill the quarters very full of air, and the quarters well massaged with the hands, the teats being tied with tape to prevent escape of air meanwhile, might have the effect of opening the milk glands and inducing a regular flow of milk. The experiment would be harmless, and possibly effective, and should be repeated.

GRAFTING.

1. What is the largest limb (in diameter I mean) that is safe to graft?
2. Should the limb be sawed straight across, or on an angle?
3. How many grafts should be put on one limb?
4. What is the best time to graft? Our spring is several weeks later than yours.
5. What is best time to cut the grafts? H. C. H.

Ans.—1. A limb larger than 2½ inches in diameter is not very successfully top-grafted.

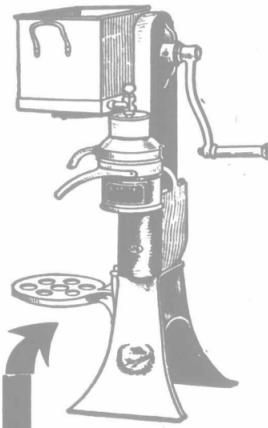
2. Make the cut at right angles to the limb, and insert the scions at a slight angle, the top pointing outward.

3. Two.

4. The last of March or early in April. Likely about the middle of April in your district. This is governed somewhat by the season.

5. Cut the scions from last year's wood. They can be cut in the fall, and stored in packing material in a cellar over winter, or they can be cut in the spring before the sap starts.

Last Pound Skimmed As Well As First Pound



WE will guarantee that you can take a "STANDARD" Cream Separator and skim to the full amount of its capacity, even if the milk is not at its natural heat, and that the last pound will be skimmed equally as well as the first-pound. After the skimming is done, open up the

Standard

bowl and you'll find the inside edges of the discs are not clogged with cream, nor the outside edges stuffed with foreign matter. That is because there is ample space between the discs and the bowl to provide room for more impurities than will accumulate in one hour's skimming. This is one of the greatest improvements in cream separators in recent years. It was suggested by Professor J. H. Grisdale, Director of Dominion Experimental Farms, Ottawa, and carried to completion by STANDARD experts. It means **clean cream, all the cream, no waste**. Our booklet explains this feature and many others more fully. Drop a post card to-day for a copy.

The Renfrew Machinery Co., Ltd.

Head Office and Factory: RENFREW, ONT.

Sales Offices: Winnipeg, Man.; Sussex, N. B.

CALVES WITHOUT MILK

Write for Free Booklet

"How to Raise Calves Cheaply and Successfully Without Milk"

Contains full information and complete feeding directions for using

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 Leicesters, England, in 1800.

STEELE, BRIGGS SEED CO., LTD.
WINNIPEG, MAN. HAMILTON, ONT. TORONTO, ONT.

Brampton Jerseys

cows and some calves for sale. Production and quality

B. H. BULL & SON, BRAMPTON ONT.

Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 5 now being bred. Brampton Stockwell the sire. A few good

Balaphorene A. J. Jerseys—Foundation stock, C. C. 20 months old; four choice young bulls and a few heifers of different ages, sired by Woodroffe Comrade, whose first heifer in milk gave 11,392 lbs. milk 480 lbs. butterfat in one year. Prices right. H. C. HAMILTON, BOX GROVE, ONT. Markham, G. T. R.; Locust Hill, C. P. R. Bell phone connection from Markham.

High Grove Stock Farm
No better Jersey blood in Canada. Stock all ages and both sexes for sale.
Arthur H. Tufts, P. O. Box 111, Tweed, Ont.

GLENHURST AYRSHIRES
Established over 50 years ago, and ever since kept up to a high standard. We can supply females of all ages and young bulls, the result of a lifetime's intelligent breeding; 45 head to select from. Let me know your wants.
JAMES BENNING, Williamstown P. O. Summerstown Sta., Glengarry

AYRSHIRES FOR SALE
Seven bulls and a few heifers of different ages, sired by Woodroffe Comrade, whose first heifer in milk gave 11,392 lbs. milk 480 lbs. butterfat in one year. Prices right. H. C. HAMILTON, BOX GROVE, ONT. Markham, G. T. R.; Locust Hill, C. P. R. Bell phone connection from Markham.

Calves Raise them without milk. Booklet free. CLOUGH & CO., Leavenworth, Que.

Stockwood Ayrshires are coming to the front wherever shown. This herd is now headed by White Hill Free Trader (Imp.) No. 33273, championship bull at Sherbrooke; also headed the 1st-prize aged herd. Stock of all ages for sale. Satisfaction guaranteed. D. M. WATT, St. Louis Station, Que. Telephone in house.

MENTION "FARMER'S ADVOCATE."

Ayrshires and Yorkshires—We have still some good young bulls. Now is the time to buy for the coming season, before the best go. We have females any age, and can fill orders for carlots of Ayrshires. Pigs of either sex on hand.
ALEX. HUME & CO., Menie, Ont.

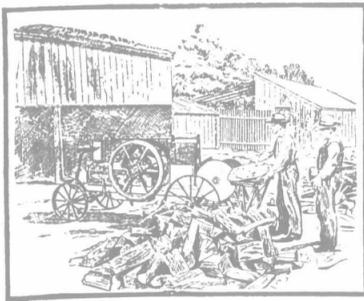
City View Ayrshires—One very choice bull, 20 months old; four grand individuals, and from R. O. P. ancestors; could spare two or three more cows. Write or phone.
JAS. BEGG, R. R. No. 1, St. Thomas.

HILLCREST AYRSHIRES—Bred for production and large teats. Record of Performance work a specialty. Fifty head to select from. Prices right.
FRANK HARRIS, Mount Elgin, Ont.

STONEHOUSE AYRSHIRES
Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers.
HECTOR GORDON, Howick, Quebec.

Dungannon Ayrshires and Yorkshires—For immediate sale are: Three choice young bulls and a few heifers; also young sows of breeding age, quality and breeding combined.
W. H. FURBER, Cobourg, Ont. Phone.

HIGH-CLASS AYRSHIRES
If you are wanting a richly-bred young bull out of a 50-lb. a day and over cow, imported or Canadian-bred dam and sire, write me. Females all ages. Prices are easy. D. A. Macfarlane, Kelso, Que.



An IHC Gasoline Engine Will Pay You Best

If you really want your money's worth when you buy a gasoline engine, buy an IHC with plenty of power to do your work. A gas engine that is not well designed, that is built roughly or of inferior material, is worse than none at all. It

costs almost as much as a good engine to begin with, and costs much more afterward in repairs and loss of time. Buy a reliable IHC engine and save yourself an endless amount of worry, lost time, money, and temper.

IHC Gasoline Engines

are simple, dependable, durable. The carburetor or gasoline mixer is the simplest and most effective known. Anyone can regulate it perfectly. Ignition is positive. The ignition apparatus is so simple you can understand it at a glance. The fine-grained, grey, cast iron cylinders and pistons are worked together to a perfect fit. The ground piston rings insure maximum power from the explosion.

All moving parts are perfectly balanced. The bearings are unusually large and carefully fitted. Every part is amply strong and no part is too heavy to be most efficient. In every detail, the IHC is a good engine—one you can depend upon for years to do your work when you want it done.

IHC engines are made in all styles—vertical and horizontal, portable and stationary, air and water-cooled; in sizes from 1 to 50 horse power, to operate on gas, gasoline, naphtha, distillate, kerosene or alcohol. Gasoline and kerosene tractors, 12 to 45-H. P. Grinding, sawing, pumping, and spraying outfits, etc.

The IHC local agent will show you the good points of the IHC engine. Get catalogue from him, or, write the nearest branch house.

CANADIAN BRANCH HOUSES

International Harvester Company of America (Incorporated)

At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

IHC Service Bureau

The purpose of this Bureau is to furnish free of charge to all the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to IHC Service Bureau, Harvester Building, Chicago, U.S.A.



KING SEGIS WALKER



The highest pedigreed sire in Canada. Average record of dam, gr. dams and g. gr. dams: Butter, 28.36 lbs.; milk, 544.42 lbs.; fat, 4.24 lbs. Fee for service, \$25. This sire's get are 80 per cent. females. For sale: Sons and daughters of this sire from high-record daughters of Pontiac Kornidye and King Segis.

A. A. FAREWELL, Oshawa, Ont.

LAKEVIEW HOLSTEINS!

Bull calves sired by Dutchland Colantha Sir Mona, and out of heifers sired by Count Hengerveld Fayne De Kol.

Telephone. E. F. OSLER, BRONTE, ONTARIO

Fairview Farms Herd

Is where you can secure a son of Pontiac Kornidye, admitted by all breeders to be the greatest

Holstein sire that ever lived. Look what his daughters are doing. Two of them with records over 37 lbs. each. Then, look at the work his sons are doing. HE IS THE GREATEST PRODUCING SIRE OF THE BREED, THROUGH HIS SONS. Every son of Pontiac Kornidye that has daughters old enough to milk is a sire of good ones. We can offer you several young ones that will give you great daughters.

E. H. DOLLAR, HUEVELTON, N. Y.

SUMMER HILL HOLSTEIN CATTLE and YORKSHIRE HOGS

Our senior herd bull, Sir Admiral Ormsby, is the sire of the world's record 2-year-old for yearly butter production. Also sire of the three highest record four-year-olds in Canada. The dam of our junior herd bull made 34 60 lbs. butter in 7 days, and gave 111 lbs. milk per day. Come and make your selections from over 70 head.

In Improved English Yorkshires we have won 95 per cent of all first prizes at Toronto Exhibition for ten years. We are still breeding them bigger and better than ever.

Buy Summer Hill Yorkshires, the big, quick-maturing kind, and double your profits.

D. C. FLATT & SON, R. F. D. No 2 Hamilton, Ontario, 2471, Hamilton.

Centre and Hillview Holsteins—We are offering young bulls from Sir Ladie Cornucopia Clothilde, the average of his dam sire dam and grand dams is 662.8 lbs. milk and 30.58 butter, 7 days, and 2,750.80 milk and 114.5 butter in 30 days; also Brookbank Butter Baron, who is a proven sire. He is sire of champion 3-year-old 30-day, 2-year-old 7-day and 2-year-old 30-day. Long-distance phone. P. D. EDE Oxford Centre P.O. Woodstock Stn.

Evergreen Stock Farm—High class Registered Holsteins for Sale. A splendid lot of heifers rising one year old, and heifer calves, good enough for foundation stock. Come and see them, or write for what you want. Satisfaction guaranteed.

A. E. HULET, Norwich, Ontario

Silver Creek Holsteins We are now offering about a dozen yearling heifers and 3 young bulls. They are all of superior type, and King Fayne Segis Clothilde, whose 7 nearest dams have 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.

MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.

QUESTIONS AND ANSWERS. Miscellaneous.

CANADIAN CHALLENGE SHIELD

1. Will the Canadian Challenge Shield be competed for at the Dominion Exhibition at Ottawa in September?
2. Will it be awarded each year?
3. What are the rules and regulations governing competition for same?
4. Will the Western Fair change its date till after it?

J. S.
Ans.—1. Yes; according to rules.
2. Yes.
3. It is presented for the champion Clydesdale stallion, bred, born and reared in Canada.
4. Not likely. The dates are set, and conflict.

PROBABLY COW POX.

Can you tell me what ails my cows? Small, white blisters come at the base of the teats, the size of a pea, and in a day or two hard lumps come under the blister and get very sore, scab over, and bleed. I have used lard without much success, as it was only on one cow two months ago. Six of the cows have it now. What is it? What will cure it? Would it be advisable to wash the hands after milking each cow?

H. D.
Ans.—This is probably cow pox, a contagious disease which takes about three weeks to run its course, and the contagion is liable to be carried from one cow to another by the hands of the milker, and for this reason the person milking affected cows should not milk others unless the hands are disinfected after milking a diseased cow. Dress the sores three times daily with an ointment composed of boracic acid, 4 drams; carbolic acid, 20 drops; vaseline, 2 ounces. Mix.

STOCK AND POULTRY FEEDING QUERIES.

1. How is cotton-seed meal made?
2. How is molasses meal manufactured?
3. To what live stock could the former be fed with advantage? What the latter?
4. Is oyster shell made use of by chickens simply as a shell-producer, or has it other value?
5. Has broken crockery any food value to chickens?
6. Is there any advantage in exchanging chop from mixed grain (barley, oats, wheat and buckwheat) for shorts for little pigs, both chop and shorts at \$1.45 per cwt.?

H. P.
Ans.—1. Cotton-seed meal is a by-product in the manufacture of cotton-seed oil. It is made at the oil mills by cutting the leathery hulls off the cotton seed by machinery, setting free the oily kernels, which are heated, placed between cloths, and pressed to remove the oil. The residual cake is the cotton-seed cake. For home trade, this cake is ground into meal.

2. There are several kinds of molasses feed. Cane or beet molasses forms the basis of these. Other material is used to make up the feed, and methods and proportions are known only to the manufacturers.

3. Cotton-seed meal should not be fed in large quantities to growing calves or pigs, as it seems to have a somewhat poisonous effect. In small quantities, it is good feed for dairy cows and fattening steers. It is also said to be good for horses fed in small quantities. Molasses meal, if it contains a large proportion of cane molasses, is valuable in fitting stock for show, or in finishing beef calves or steers. It is palatable, and much relished by stock. Beet molasses is not a good feed, as it is bitter and purging.

4. Ordinarily, chickens should get enough lime for body maintenance without oyster shell. It is chiefly used as a shell-producer, and no doubt has some value as a grit.

5. Broken crockery, if fine, would be of some value as a grit, but it is not the best form of even this. It would have no food value.

6. Shorts are considered by feeders one of the best feeds to start young pigs on. Mixed chop, like that suggested, would be rather strong for newly-weaned litters, and some advantage might be obtained by exchanging a small quantity of it for the shorts. As the pigs get older, gradually substitute the grains for the shorts, which could be used as a part of the ration for some time.

HAD WEAK and DIZZ YSPELLS COULD NOT SLEEP AT NIGHT.

People all over this land toss night after night on a sleepless pillow, and do not close their eyes in the refreshing slumber that comes to those whose heart and nerves are right.

The sleeplessness comes entirely from a derangement of either the heart or nerves, or both, but whatever the cause Milburn's Heart and Nerve Pills offer the blessing of sound refreshing slumber. They do this by their invigorating effect on the heart and nerves, and will tone up the whole system to a perfect condition.

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of High-Testing Holsteins—I have at present some bull calves, with dam and sire; dam averaging over 25 lbs. of butter in 7 days, testing better than 4 per cent. Phone connected.

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Springbank farm is offering two choice bred Holstein bulls for sale at reasonable prices. For particulars write to: Wm. Barnett & Sons, Living Springs P. O., Ont. Fergus station, C. P. R. and G. T. R.

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Orders taken now for this season's delivery. A few choice lambs and shearlings on hand. Every animal shipped is guaranteed.

Angus Cattle

Write, or come and see my young bulls and heifers. They are going at farmers' prices.

ROBT. McEWEN, Byron, Ont.

James McNeil Whistler and a friend, strolling through a London suburb, met a small boy. Whistler asked him his age.

"Seven," the boy replied.

"Oh, you must be more than seven," said Whistler doubtfully.

"Seven," insisted the boy, rather pleased at being taken for older.

Turning to his friend, Whistler said, "Do you think it possible that he really could have gotten as dirty as that in only seven years?"

JUST ONE MORE SPLENDID CURE

Rheumatism Was Vanquished
by Dodd's Kidney Pills.

Amable Lamarche Tells How His Kidney Disease Developed and How He Got Relief When He Used the One Sure Cure.

Lefayvre, Ont., April 15.—(Special).—Another splendid cure by Dodd's Kidney Pills is the talk of this village. Mr. Amable Lamarche is the person cured, and the cure is vouched for by his numerous friends.

"It was a sprain and a cold that was the beginning of my trouble," Mr. Lamarche says, in telling his story. "I could not sleep, my appetite was fitful, and I felt heavy and sleepy after meals. I was always thirsty, had a bitter taste in my mouth, and perspired freely. My limbs were heavy, and I had a dragging sensation across the loins.

"When my symptoms developed into rheumatism, I realized that my kidneys were the cause of the trouble, and I started to take Dodd's Kidney Pills. Six boxes made me a well man."

Kidney trouble quickly develops into painful and often fatal diseases. To ensure good health, cure the first symptoms with Dodd's Kidney Pills. They never fail.

QUESTIONS AND ANSWERS. Miscellaneous.

SOWING PEAS—ANNUAL PASTURE.

1. I want to sow about eight acres of peas, and I have no sod to turn in spring for them, but intend to sow the peas on land that grew oats last year. How should I go about to get best results? The oat stubble was turned down early last fall. Would it be well to plow again this spring? I have no manure to put on. Should a fertilizer be applied? What kind, and how much per acre, and what would be the cost per acre? When should it be applied so the peas would get the most benefit?

2. Could we do anything to prevent bugs in peas?

3. What is the best mixture to sow this spring for pasture in August for milch cows?

Ans.—1. We would not advise spring plowing of the land. Cultivate it and harrow down well before sowing the peas. Drill the peas in. If the land is in fair condition, a good crop might result without artificial fertilizer. If any fertilizer is used, no nitrogen will be necessary, unless the land is very poor. Phosphoric acid and potash might be applied. From 250 to 400 lbs. of acid phosphate, and 125 to 175 lbs. of muriate of potash could be used. The lighter dressings would likely be enough. Apply just previous to sowing the peas, and harrow and cultivate into the soil. The smaller quantity would cost about \$5.50 per acre, and the larger amount about \$8.25 per acre.

2. Treating the seed with carbon bisulphide will destroy the weevils in the seed. See answer to M. R. in this issue. Late sowing is sometimes effective in a degree for this purpose.

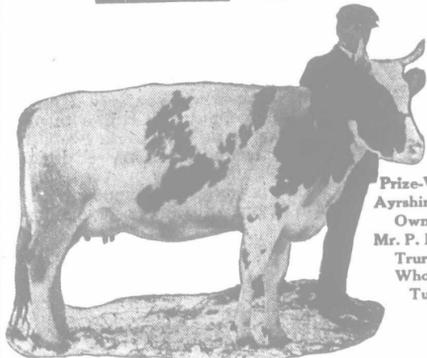
3. We can recommend no better mixture for annual pasture than 51 lbs. of oats, 30 lbs. Early Amber sugar-cane, and 7 lbs. of red clover, sown in the spring. This crop takes from six to seven weeks to be ready for pasture, and sown a little late should make an excellent August pasture for milk cows. Sow in May.

PIGGERY PLAN.

Intend building a piggery in the spring. Kindly publish a plan. Would like five pens, each to accommodate six or seven pigs. Would also like a hip roof. Please state the length of rafters. A. A. S.

Ans.—For a pen of the size desired, place the pens all on one side of the feed passage. Build with the pens on the south side of the building, if possible, and the feed passage along the north side. A building 20 feet wide and 40 or 50 feet long, would be about the right size for five pens. Make each pen 8 feet wide and 15 feet deep, with a 5-foot passage in front. The longer building would provide for a 10 x 15-ft. feed room in one end, which is very handy. If not desired, 40 feet long would suffice. Arrange a small door in each pen leading to the passage; also one leading to an outside yard, and for convenience in moving pigs from one pen to another, small doors in each partition are handy. Build so that one end of the pen is high enough to load pigs from the feed passage into a wagon box by driving them in nearly on the level. We can see nothing to gain by putting a hip roof on the piggery. It will mean extra cost. Why not make an ordinary gable roof, or a shanty roof; the latter would be cheaper? Ten or twelve foot scantlings would do for posts in the gable-roofed structure. This would allow a seven or eight foot ceiling, and a straw loft overhead. It is better to construct the ceiling rather loosely in order to give the straw a better chance to absorb moisture. Slope the floor of the pens toward the outer door, and in the other back corner of each pen a dry sleeping place elevated six or eight inches should be provided. Fresh air can be admitted by constructing shafts four inches by six inches in the wall. Three on either side would do in this pen. They should open outside near the ground, and inside near the ceiling, and provision should be made to control drafts. Outlets may consist of shafts about eight inches square, extending through the roof, and equipped on the top with revolving cowls to turn from the wind.

THE WINNERS



Prize-Winning
Ayshire Heifer
Owned by
Mr. P. Blanchard,
Truro, N. S.
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C. HODGSON,

Box 92, Brantford, Ont.

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Have a choice lot of sows in pig. Boars ready for service and young pigs of both sexes supplied not akin, at reasonable prices. All breeding stock imported, or from imported herds. Write or call on:

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P. R. and G. T. R. Long-distance phone.

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Present offering: Select sows bred for spring farrow. Choice boars ready for service, also younger stock, the get of Duke of Somerset imp., and our of imported dams. Satisfaction and safe delivery guaranteed. **H. M. VANDERLIP, Breeder and Importer** CANNSVILLE P. O. Langford-tation, Brantford and Hamilton Radial.

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Tickets on sale daily until April 15th.

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

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

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Second class tickets from Ontario stations to principal Northwest points at

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Compact, handy, and
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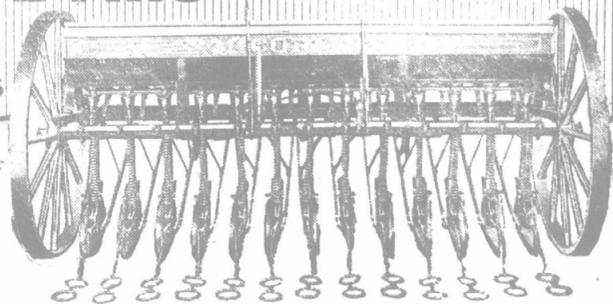
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McCormick Drills have disk bearings as near dust-proof as disk bearings can be made. Here's why; The oil runs from the inside towards the outside, and the constant supply tends to force out grit or dirt. The oil cups are large and convenient.

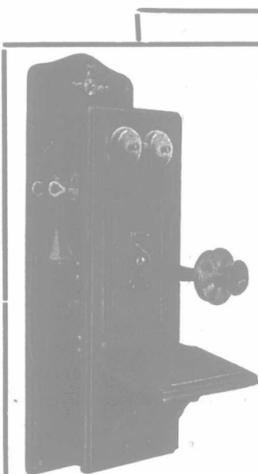
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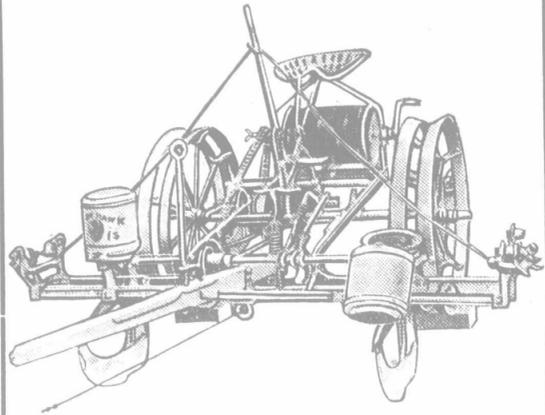
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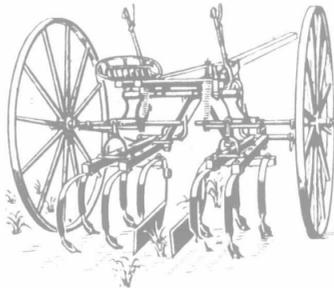
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PLANT your corn with a Corn Planter and save your back. You can tackle a big field and get every hill with 2, 3 or 4 kernels planted at even depth and covered properly. You can suit the number of kernels to the land as you drive. You can change the Black Hawk to a drill. You can change it for mangolds. It plants exactly as needed for best crop, and will enable you to grow one-fifth more crop than you could produce by hand work. By all means use a planter, because it saves time and earns more money. Your corn is planted just right.

The Frost & Wood New American--It Fits Any Width of Corn, or it can do Field Cultivating



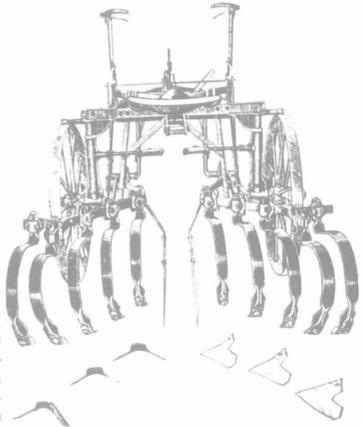
YOU can use this Corn Cultivator all the year round, either in your fields or in your corn. The stirrups on each section allow the operator to cultivate right up against the corn and to swing the section away from uneven hills. The high axle lets you cultivate very

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The moment corn and root cultivating season is over, add a centre section and wide, medium or narrow teeth, and this cultivator is good for field work. We also make an attachment for this cultivator for harvesting beans. Ask us about it.

The Cockshutt New Cultivator can Take Care of the narrowest Rows

THIS machine is practically all-steel, with a very high "arch" axle and low steel wheels. It even cultivates behind the wheels, and has guard plates for protecting the tender shoots when they first appear. It will cultivate every inch of your row crops that a machine can handle, even for rows as narrow as 28 inches. The dust-proof wheel bearings and removable bushings keep this machine in perfect condition for years. The "Cockshutt" has narrow, medium or wide points for every special kind of cultivating and weed-killing or mulching. Use it and help your root crops and corn to make local records.



Write us for larger illustration and full information, given in our free General Catalogue.

REMEMBER: We are always ready to give you full information on any farm implement you need. Write us.

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COCKSHUTT FLOW COMPANY LIMITED **BRANTFORD**

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