



Why Waste Your Time in Drudgery and Toil, When a GILSON "GOES LIKE SIXTY" ENGINE

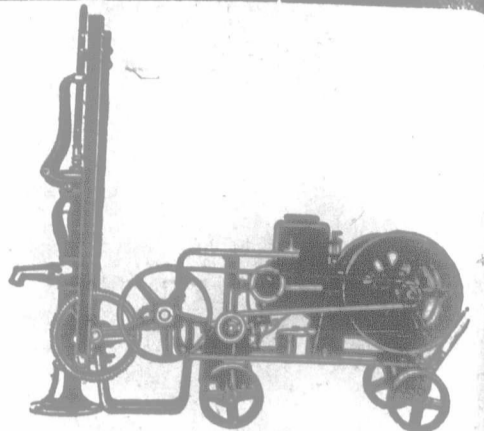
will do your work cheaper, faster and better. It will do all your pumping and will operate your cream separator, churn, washing machine, cutting-box, grinder, pulper, grindstone, etc., at trifling cost. It is a complete power house on wheels—equipped to do your work. It lends itself to more different jobs than any other engine made. It gives the exact speed required for each job—it saves investment for extras required with other engines.

The 1 1/2 and 3 h.-p. sizes consist of a powerful and efficient engine, mounted on truck, with line shaft, five interchangeable pulleys of various sizes, and a universal pump-jack for any pump—all ready for work. No other engine will give the service that the Gilson yields. It is properly equipped for 100% service.

Sizes 5, 6 and 8 h.-p. are either stationary or portable, and are fitted with a patented 5-Rim Friction Clutch pulley and high-tension magneto. No batteries required, easiest starting engines made. No pulling and tugging and cranking. A boy or girl can start them.

Send for complete descriptive catalogue and state what size most interests you. Agents wanted.

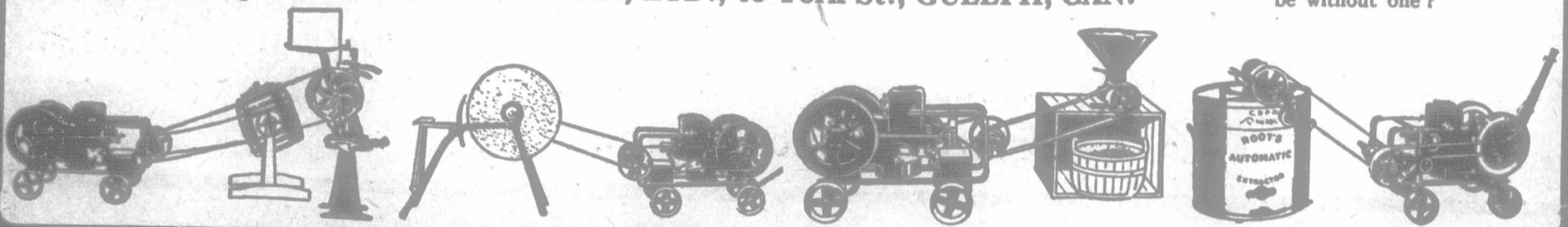
GILSON MFG. CO., LTD., 68 York St., GUELPH, CAN.



WATER

A Gilson Engine will pump 1,000 gals., or 35 bbls., in one hour for one cent. No need to be stingy with water then. Can you afford to be without one?

WATER
An abundance of water is one of the richest treasures on the farm. Without it neither man nor beast can attain fullest strength and vigor.



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 Wagon

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., Ltd.
Orillia, Ontario.

M. Moody & Sons Co., Terrebonne, Que.
Selling Agents for Province of Quebec.

GRAND TRUNK RAILWAY SYSTEM

HOMESEEKERS' EXCURSIONS

To MANITOBA, SASKATCHEWAN AND ALBERTA

Each TUESDAY until Oct. 28th, inclusive.
Winnipeg and Return - - - \$35.00
Edmonton and Return - - - 43.00

Proportionate low rates to other points.
Return limit two months.

Settlers' Excursions

To ALBERTA and SASKATCHEWAN

Every TUESDAY until April 29th inclusive, from stations in Ontario, Port Hope, Peterboro, and West, at very low rates.

Through coaches and Pullman Tourist Sleeping cars are operated to WINNIPEG without change, leaving Toronto 11.00 p.m., via Chicago and St. Paul on above dates.

The Grand Trunk Pacific Railway is the shortest and quickest route between Winnipeg-Saskatoon-Edmonton.

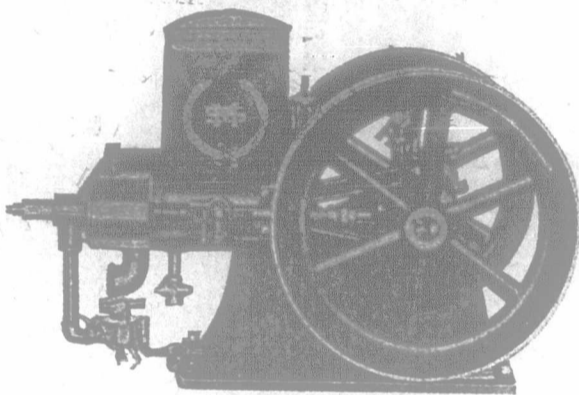
Berth Reservations and particulars from Grand Trunk agents.

STAMMERERS

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

The Arnott Institute, Berlin, Ontario.

THE ST. MARYS "KOAL-OIL-KING"



Gas, Gasoline and Coal Oil Engines are specially adapted for work on your farm.

The St. Marys is the only simple Engine. Easiest engine to start and operate. Anyone can run it. So simple that it can hardly get out of order. It has only one-third the number parts seen on other engines. Runs on one-third less fuel. Runs on gas, gasoline or Coal Oil. Gasoline is becoming higher in price all the time, so you will be money in pocket by having our Engine that runs on coal oil.

It is mounted on skids, ready to run. It will pump your water, grind your feed, saw your wood, run the cream separator, churn and washing machine by day and light your home with electricity by night.

All engines FULLY GUARANTEED and shipped ON 30 DAYS' FREE TRIAL to any Point in Canada. Write for further particulars of our 2 1/2, 4 and 7 horse-power engines.

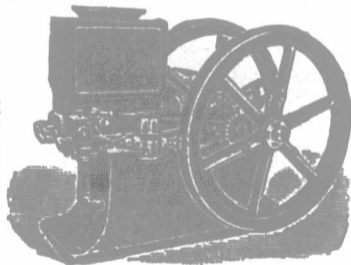
A. W. PARKS & SON

PETROLIA, ONT.

Why "MONARCHS" are Best

Our "red circle" folder explains the wonderful "Monarch" farm engine, part by part. This engine will saw, pump, grind, run cream separator, cut silage. Move it from place to place. Every part is made by experts, and made to last. Get our folder.

Send a Post Card to-day for the "red circle" folder and prices and terms on 1 1/2 to 35 horse-power sizes.



CANADIAN ENGINES, LIMITED, DUNNVILLE, ONT.

Sole Selling Agents in Eastern Canada

The FROST & WOOD CO., Ltd., Smith's Falls, Ont.
Montreal, Quebec, St. John, N. B.

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We offer, subject to sale, the following stock, which we guarantee to be true to name. No. 1 stock in every respect; 5 to 7 feet high. Price, f.o.b. Pointe Claire, Que., \$27.00 per 100.

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| 200 ALEXANDER | 500 BEN DAVIS | 600 STARKE |
| 200 BALDWIN | 500 DUCHESS | 600 SPY |
| 200 BAXTER | 500 FAMEUSE | 500 WEALTHY |
| | 200 YELLOW TRANSPARENT | |

Also complete list of ornamental shrubs and trees of all kinds.
WRITE TO-DAY

THE CANADIAN NURSERIES COMPANY, LIMITED
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Nurseries: POINTE CLAIRE, QUE.

Cunard Line

Canadian Service
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Special Interest to FARMERS' CLUBS

We secure "Help" for Farmers from the country districts of the British Isles. Requisitions must be filled up. Copies sent on application. Average time to get your "Help" about 6 weeks: No fee charged. Only regular fare on Ocean and Rail to pay. You need not be without "Help" this Summer or Fall if you send requirements early. Write for further particulars.

Cunard Steamship Co., Ltd.
114 King Street W, Toronto.

STUMP EXTRACTOR

If you are troubled with stumps, give our "Patent Samson Stump Extractor" a trial. It has now been in use in Europe for the past three years with the greatest success. By its assistance, two men will do the work of three men and a horse. It can also be used for felling trees.

WRITE US FOR DETAILS.

The Canadian Boving Co., Ltd.
164 Bay Street, TORONTO

MITCHELL SLIDE-EASY QUALITY TIES STYLE VARIETY



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, Ontario. Largest manufacturers of Concrete Machinery in Canada. 1

PATENTS procured everywhere
EGERTON R. CASE
Registered Attorney Dept. E, Temple Building,
Toronto. Booklets on request. 20 yrs. experience

For rapid, low-priced tile and silo-block machines that deliver the goods, write:
Wm. G. JOY, Napanee, Ontario
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YOUR TREES + AMERICAN SAW MILL = BIG PROFITS

Here are the prices lumber brought in New York last summer, per thousand feet—birch, \$18 to \$55; chestnut, \$19 to \$57; cypress, \$26 to \$60; maple, \$18 to \$50; oak, \$25 to \$42; pine, \$20 to \$42; spruce, \$22 to \$30. Ten 16-foot logs averaging 14 inches thick make 1000 feet of lumber. You can saw it for \$4 to \$5 per thousand with an "American" Saw Mill. Do you see the profits? Look over your trees and see what you have. Ask for our new book No. 23 which tells the whole story. Do it now, while you are interested. Address nearest office.

In the largest mill or on the farm the American is recognized as Standard.

AMERICAN SAW MILL MACHINERY CO. 113 Topo St., Hackensack, N. J.
Chicago Savannah 1884 Terminal Bldg., New York. New Orleans

FARMERS!

You want the most simple, durable and economical gasoline engine made. Then buy

The "New-Way" Air-Cooled Engine

Which "Goes and Goes Right" Always



Scores of thousands are making farmers money the world over.

The "New-Way" AIR-COOLED ENGINES

are now made in Canada, and the price is right. Write for information and Catalogue Dc 12.

The "New-Way" MOTOR COMPANY

OF CANADA, LIMITED

Welland Ontario

Pay the Price of the Best —No More—No Less

ECONOMY in buying a cream separator does not begin nor end with the price. You may easily pay too little and just as easily pay too much.

Learn the difference between gears that work without back lash and those that have it or develop it soon. Learn the importance of a self-adjusting bowl spindle bearing, and learn to know one when you see it. Discover the difference between brass and phosphor bronze as a material for bearings. Buy a separator with an oiling system that cannot fail you even for a few minutes of a run. When you find the separator that comes up to your specifications—one that with proper care will do good work for a long time—buy it. You will find it marked

I H C Cream Separator Dairymaid or Bluebell

I H C cream separators turn easily and they are easy to run because the working parts are accurately made and the bearings are sufficiently lubricated. The shafts and spindle are the strongest used in any separator. The shaft and spindle bearings are supported by the frame, but have no contact with it. The contact is between the steel spindles and phosphor bronze bushings. The gears are spirally cut so that there is no lost motion between them. They are entirely protected from grit and milk, and at the same time are easily accessible for cleaning.

See the I H C local agent and ask him to give you a demonstration of the efficiency of the machine as a skimmer and to go over with you and explain carefully all of its good, mechanical points. You can get catalogues and full information from him, or, write the nearest branch house.

International Harvester Company of Canada, Ltd
BRANCH HOUSES

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Send for our
Free Silo Book

A 50-page illustrated treatise on how to prepare and preserve silage, how to select a silo, how to feed. A book worth money to farmers

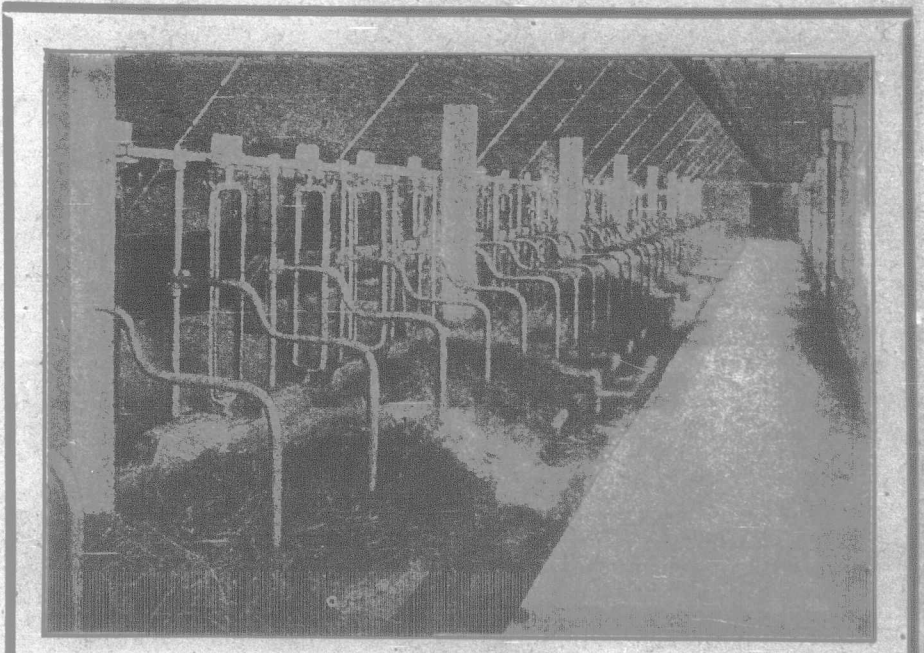
NATCO EVERLASTING SILO

The one silo that is absolutely permanent—whose construction is such that it cannot burn, cannot be blown down, will never shrink, crack or swell and that never needs repairs. Built of hollow vitrified clay blocks that keep silage sweet and palatable. The most attractive silo made. Can be built by any mason. The most economical silo in the end.

Professor Van Pelt

The famous cow judge, has an article in our Silo Book. So has Valancey E. Fuller and other authorities on feeding stock. Every stock owner should get this book and read it. Send for copy to-day, asking for Catalogue G.

NATIONAL FIRE PROOFING COMPANY OF CANADA, Limited
Traders' Bank Building
TORONTO, ONT.

Barn Equipment That Pays For Itself

BT Steel Stalls and Stanchions pay for themselves in a year by saving work and time in your stable, saving feed, preventing disease among your cows, and increasing your profits.

They save work and time by keeping your cows clean. By means of an Aligning Device all the cows are lined up evenly over the gutter, so no manure gets on the cattle-stand or on the bedding. No more scrubbing down the cows' flanks! No udders to wash before milking!

The BT Stalls are provided with divided Steel Mangers—each cow is fed separately. No overfeeding, no underfeeding. No cow can steal from another. None of the feed can be nosed out of the manger. The saving in feed amounts to a large item in the course of a year, and, in addition, a closer record can be kept of each cow.

The Steel Mangers are self-cleaning. As soon as the cows are fed, they can be raised, the mangers washed out, and all the cows watered at once in their stalls.

BT Sanitary Steel Cow Stalls

Stanchions, Calf Pens, Bull Pens, etc.

The greater cleanliness made possible in your stable by using BT Stalls, means healthier cows, greater milk production and less veterinary bills. The milk will be improved in quality and will bring you better prices.

Absolute comfort is provided for each cow when tied in the BT Stall and Stanchion. They can card themselves on either side, while standing or lying. They can lie down on either side; no weight on their necks. Accidents causing abortion, big knees, ruined udders are prevented.

These and many other advantages of BT Sanitary Stalls and Stanchions are fully described and illustrated in our Stall Book. It is free. Mail the coupon for it now.

Individual Barn Plan Service

When you write, enclose a rough pencil sketch of the floor plan of your barn, and we will make you an up-to-date plan for building or remodeling. Indicate inside dimensions of barn, number of cows to be housed, and number of box stalls. Also, we'll send you free our valuable book, "How to Build a Dairy Barn." Address:

BEATTY BROS., Limited, 581 Hill Street, FERGUS, ONT.

TWO FINE BOOKS FREE

BEATTY BROS., Limited, 581 Hill St., Fergus, Ont.

Please send me, without charge, your Stall Book, telling about Steel Cow Stalls, Stanchions, Box Stalls, etc. Also send me, free, your book, "How to Build a Dairy Barn."

Are you thinking of building or remodeling?.....

If so, when?.....

For how many cows?.....

Name.....

P.O..... Prov.....

Where Is It Made?

THE demand for gasoline engines is increasing by leaps and bounds. Progressive farmers all over Canada and the United States are now fully awake to the efficiency and economy of gasoline power. The leading engine factories are very busy indeed keeping pace with the demand.

Naturally, the attention of shrewd individuals has been attracted to the possibilities of exploiting this promising field. Many men with little experience are now turning out so-called gasoline engines in plants, if you can call them such, little better than sheds. They are simply in business to take advantage of the great and growing demand for gasoline engines.

Experienced and reputable gasoline engine manufacturers do not enjoy the idea of having their carefully-built, efficient engines judged on the performances of these inefficient products of the inexperienced. That is why we are uttering this warning: "Be sure you know where the engine you buy is made."

If it is made in a large, well-equipped factory by makers of long experience, you are pretty safe in buying it. It will be a good, reliable engine. Such an engine is the **BARRIE**. It is the product of one of Canada's foremost engine manufacturers.

If we could take you through the great plant wherein the **BARRIE ENGINE** is built, and show you how materials are tested for quality and strength; how accurately each part is machined and how beautifully polished and finished; how rigidly the parts are inspected and how completely the finished engine is tested; then you would be quite sure that the **BARRIE ENGINE** was one engine that was made right from start to finish.

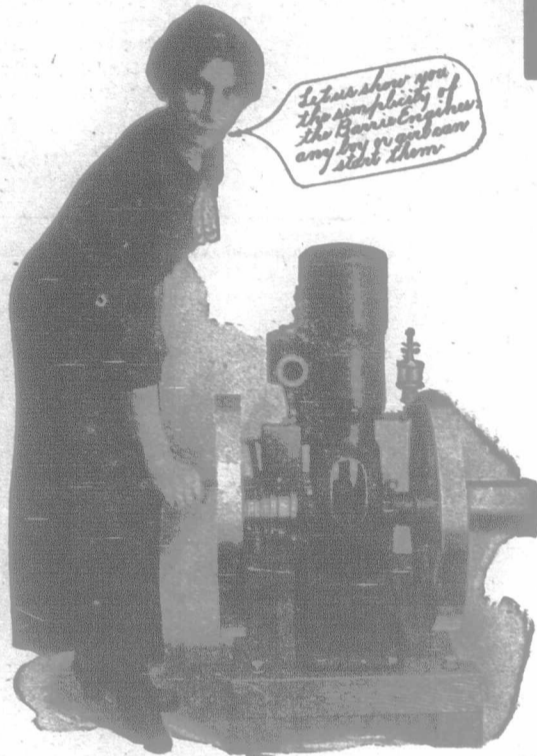
After you went home and tried a **BARRIE ENGINE** for a week or two you would know then the satisfaction there is in

owning an engine that is acknowledged to be one of the best built and efficient engines produced in Canada or the United States.

Don't you want to try a **BARRIE ENGINE** right away?

Of course you do. Then write us.

The **BARRIE ENGINE** is made in sizes from 2 to 400 h.-p., stationary and portable. For gasoline, distillate, natural gas and producer gas. Write for booklet giving complete description.



The Canada Producer & Gas Engine Co., Ltd.
BARRIE, ONTARIO, CANADA

Distributors: James Rae, Medicine Hat; Canada Machinery Agency, Montreal; McCusker Imp. Co., Regina; The Tudhope-Anderson Co., Ltd., Winnipeg, Calgary, Edmonton, Lethbridge, Saskatoon and Regina.

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"Quality Line"



Save \$30

VEHICLES AND HARNESS

NINETEENTH 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 COMPANY
Dept. "A," Brighton, Ontario.

CULTIVATE YOUR CORN AND ROOTS

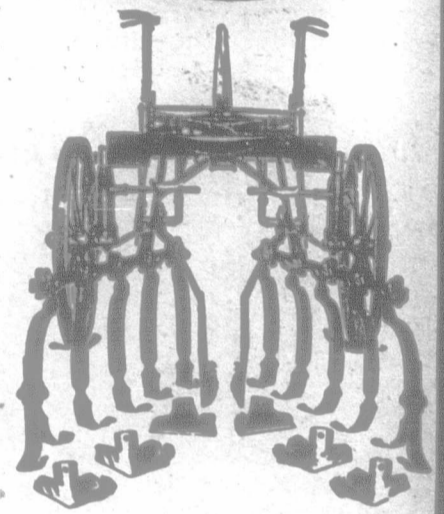


THE corn crop responds to cultivation more than any other. Corn demands 800 tons of water per acre for proper growth. Cultivation keeps the soil mulched, so it will absorb as much rain as possible. It also kills weeds, which rob the corn of water and soil nourishment. Cultivate frequently.

Roots and row crops also need cultivation, and respond almost as well as corn.

The easiest and quickest cultivation is done with our cultivators. The high-axle "Spring Tooth" implement cultivates down to 28-inch rows, and besides may be either rigidly adjusted or swung wide and narrow, when rows are crooked or irregular, without stopping the horses. Get full details from us.

SEND to-day for the "Cockshutt" Catalogue, asking especially for corn cultivators. If you handle any root crop whatever, a cultivator will save you weeks of work and get you bumper crops. Send a postal to-day.



THIS shows the "Spring Tooth" cultivator in all-steel, with the high variable axle, dust-proof wheels, interchangeable points, guard plates, and every device to do perfect cultivation until very late. In addition we have the "Western Parallel Gang" with relief-spring shovel-teeth and high axle. These cultivators can be fitted with a centre attachment, making them suitable for open field cultivation—two machines in one. Why not get details and equipment list.

COCKSHUTT PLOW CO. LIMITED
BRANTFORD, WINNIPEG

Sold in Eastern Ontario and Eastern Canada by

THE FROST & WOOD COMPANY LIMITED
Montreal SMITHS FALLS St. John, N. B.



Genasco

THE TRINIDAD-LAKE-ASPHALT
Ready Roofing

gives lasting protection to all your buildings.

The natural oils of Trinidad Lake asphalt keep life in Genasco through all kinds of weather on all kinds of roofs.

This makes them proof against rain, sun, wind, heat, cold, alkalis and acids. It is the economical roofing for every building on the farm.

Ask your dealer for Genasco. The **Kant-Leak Kleet** comes with every roll of smooth surface Genasco—does away with cement and prevents nail leaks.

The Barber Asphalt Paving Company Philadelphia

Largest producers of asphalt, and largest manufacturers of ready roofing in the world.

New York San Francisco Chicago

D. H. Howden & Co., Ltd., 250 York St., London, Ont.—The Canadian Asphalt Company, Ltd., Winnipeg, Man.

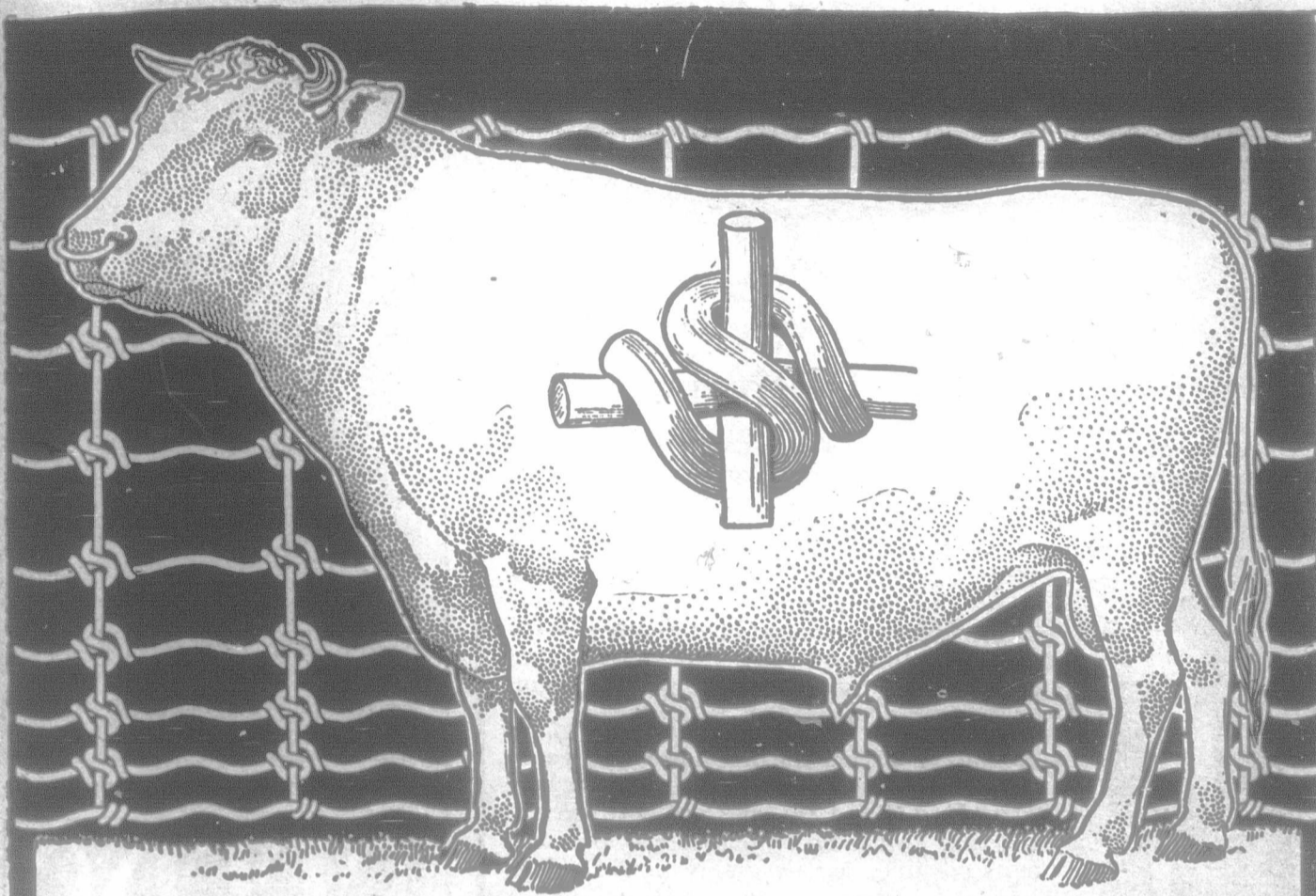


Central Nurseries Quality Stock

Apple, Pear, Plum, Cherry, Peach, Nut and Ornamental Trees in variety. Grape Vines, Berry Plants, **Herbert**, St. Regis, Himalaya and Cuthbert. Think of berries from July till October. Shade Trees, Evergreens, Cal. Privet, Hedge Shrubs and Roses. Just the kinds wanted. Send for our Priced Catalogue, and order quick for variety.

No agents. **A. G. HULL & SON, St. Catharines, Ont.**





Is Anything On Your Farm Stronger Than A Bull ?

YES! If your fences are "IDEAL" Woven Wire, made of large gauge No. 9 HARD STEEL wire, heavily galvanized and with the verticals and horizontals clamped together with the Ideal Lock—that CANNOT SLIP. Bull-strong; hog-tight; horse high—a REAL fence.

NO! If you have wire fences of the ordinary kind—fairly good for a few years, but with no reserve strength to stand hard usage—because poorer wire makes them, and stretching them taut takes the utmost of their little strength to start with.

All Large Gauge Number 9 Hard Steel Galvanized Wire

From top to bottom Ideal Fence is all the same—large gauge No. 9 hard steel wire, heavily galvanized and therefore rust-proof. Note lock and its uniform smooth curve—no sharp turns to weaken the strength of the lock and yet a most positive grip—in FIVE different places. This is the fence that has ample springiness, immense strength, and the ONE LOCK THAT'S GOOD. Drop us a card and get our catalog telling all about the many styles and merits of IDEAL FENCE. Sample lock comes with it. Write us today.

McGREGOR BANWELL FENCE COMPANY, LIMITED, WALKERVILLE, ONTARIO

15⁹⁵ AND UP-WARD

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 machine. 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.



For Spraying

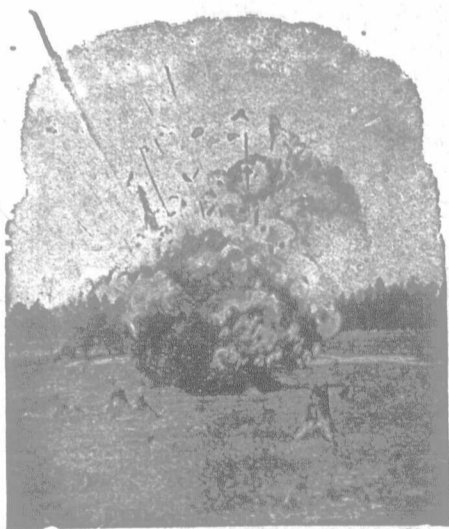
Fruit Trees, Shrubs, Bushes and Plants, there's nothing to equal



EUREKA COMPRESSED AIR FOUNTAIN SPRAYER

Requires but one pumping to empty entire contents of tank. Automatic lever valve stops flow of liquid while going from one plant to another. Easy, light, compact, tested to stand 5 times the pressure required to expel liquid. Two nozzles, with hose attachment for spraying small trees. Write for catalogue. THE EUREKA PLANTER CO. Limited, Woodstock, Ont.

C X L



STUMPING POWDER

Stumps Minimize Your Profits

How much of your fertile land is occupied and wasted by stumps and boulders. Why not blast them with

C X L STUMPING POWDER

The cheapest, quickest, best method known to-day for clearing land. Write at once for our Free Booklet.

Canadian Explosives, Limited
Montreal, Que. Victoria, B. C.

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Beautiful is the Job when Minerva Paint is used.

Smooth and even is the Minerva surface—free of bubbles, cracks and imperfections.

The color is positive and lasting. Minerva Paint enters every crevice and grain of the wood, insuring real protection against weather and decay.

It's the high quality that counts—the exacting selection of the finest and purest paint ingredients, the scientific grinding and mixing that makes Minerva Paint superior.

Is easy to apply, spreads evenly and dries quickly. Hides all blemishes.

MINERVA PURE PREPARED PAINT

Painting becomes a pleasure. For floors, inside or outside, Minerva Paint withstands the hard wear for years, and retains its unbroken surface.

If your dealer cannot supply you, write us:

FINCHIN, JOHNSON & CO.
(Canada) Limited
TORONTO ONT.

"It's so easy to paint with Minerva." E41



FARMERS, FRUIT, AND VEGETABLE GROWERS



WHY ARE YOU IMPORTING PHOSPHATE AND AMMONIA WHICH IS A BY-PRODUCT OFF YOUR FARMS OF WHICH YOU ARE EXPORTING MANY THOUSAND TONS ANNUALLY. BONES AND WHICH CONTAIN LARGE QUANTITIES OF PHOSPHORIC ACID AND AMMONIA

KINDLY ANSWER THE ABOVE

PURE BONE MEAL IS THE CHEAPEST FERTILIZER

THIS PLANT FOOD IS ALL FROM OUR CANADIAN SOILS AND SHOULD ALL GO BACK SEND FOR PRICES, ETC.

THE W.A. FREEMAN CO. LIMITED
HAMILTON, CANADA.

Gee! what a light!

Send for this handy **ELECTRIC FLASHLIGHT** Every Farmer needs it.

Press the Button and get a brilliant Electric Light. \$1.00 by mail, post free. Send to-day. CANADIAN CARBON CO., 66 West King St., TORONTO



QUALITY
AND
EFFICIENCY

ARE
MAIN ESSENTIALS IN A
PIANO
YOU GET THESE IN A

BELL PIANO

We take the time and pains to build them right.
There are many good features in the BELL never found in other makes.
Information in our (free) catalogue No. 40. Send for it.

The BELL PIANO & CO., Limited
QUELPS, ONTARIO

Milling on the farm

Without interfering with your other farm work, you can add a few thousand dollars a year to your income with the aid of a Midget roller flour mill.

Any man can learn to run it in two days, or, if your time will permit, you can do the work yourself.

But little room is needed as the Midget weighs but 3 tons. Although small it is a thoroughly equipped mill and the quality of its product is unsurpassed.

If there is no mill in your vicinity, here is your opportunity to get one started.

Write for free booklet of particulars. Address The Canadian Fairbanks-Morse Company, Limited, Montreal.

Buchanan's Swivel Carrier

For unloading Hay and all kinds of Grain.

For wood track, steel track, rod and cable track. Made entirely of malleable iron; no springs. Fitted with our patent deadlock. 25,000 of our Haying Machines in use, is the best guarantee that we build them right.

Write for catalogue of Carriers, Slings, Stackers etc.—and name of dealer near you who handles Buchanan's. M. T. Buchanan & Co., Ingersoll, Ont.

HAVE YOU EVER

Stopped to think of the remarkable advance made in the last fifteen years by Life Assurance Companies? The business man without Assurance to-day is practically alone in his class—a few years ago he was one amongst a hundred. Your question to yourself should be "Am I alone?" If so, protect your business, your family and your future. This protection is supplied by the

Federal Life Assurance Company

HEAD OFFICE: HAMILTON, ONT.

DE LAVAL CREAM SEPARATORS

No Excuse for any Cow Owner Being Without One

There is no reason why any cow owner who sells cream or makes butter should be without a cream separator, and there is no excuse why he should not have the best separator.

Any creameryman or experienced dairyman will tell you that a good cream separator will give you a great deal more and a great deal better butter than you can make with any gravity setting system, and equally, of course, more and better cream, if you are selling cream.



The DE LAVAL is acknowledged by creamerymen and the best posted dairymen the world over to be the "World's Standard," and the one and only separator that always accomplishes the best results possible, and always gives satisfaction.

You cannot make the excuse that you can't afford to buy a De Laval, because it will not only save its cost over any gravity setting in six months and any other separator in a year, but is sold either for cash or on such liberal terms that it will actually pay for itself.

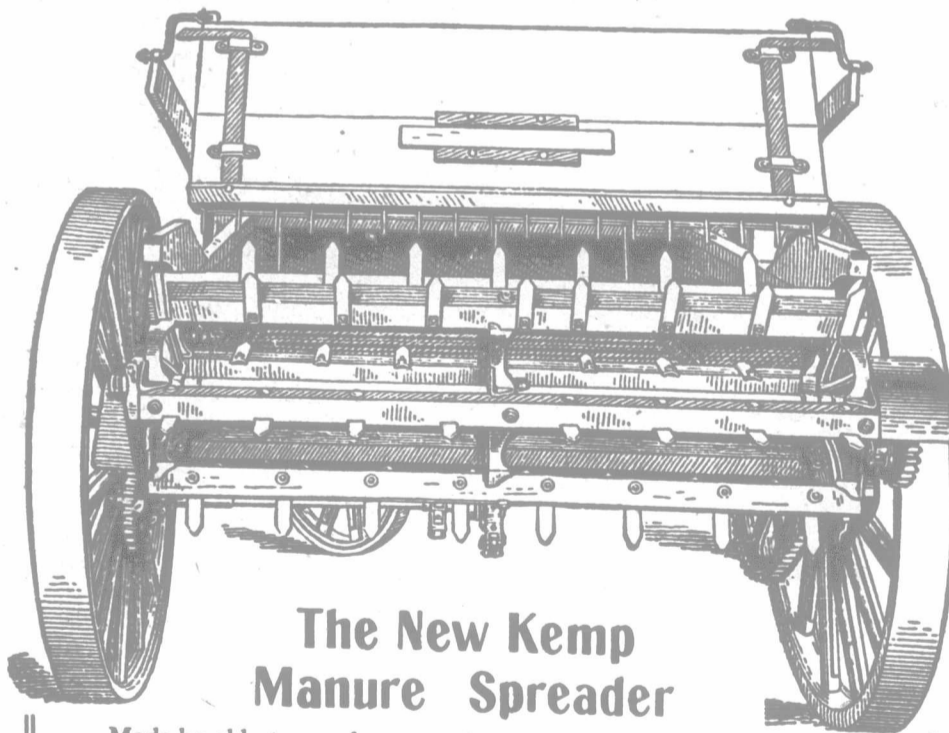
A little investigation will prove to you that the truth of the matter is that you really can't afford to make cream or butter without the use of a DE LAVAL cream separator.

The nearest De Laval local agent will be glad to demonstrate this to your own satisfaction, or you may write to us direct.

De Laval Dairy Supply Co., Ltd.

Montreal Peterboro Winnipeg Vancouver

Saving and Application of Manure



The New Kemp Manure Spreader

Made by oldest manufacturers of Manure Spreaders in the world.

Draft one horse lighter than any other Spreader built.

Strongest Spreader built.

Only Spreader equipped with J. S. Kemp's Patented Reversible, Self-Sharping, Graded, Flat Tooth.

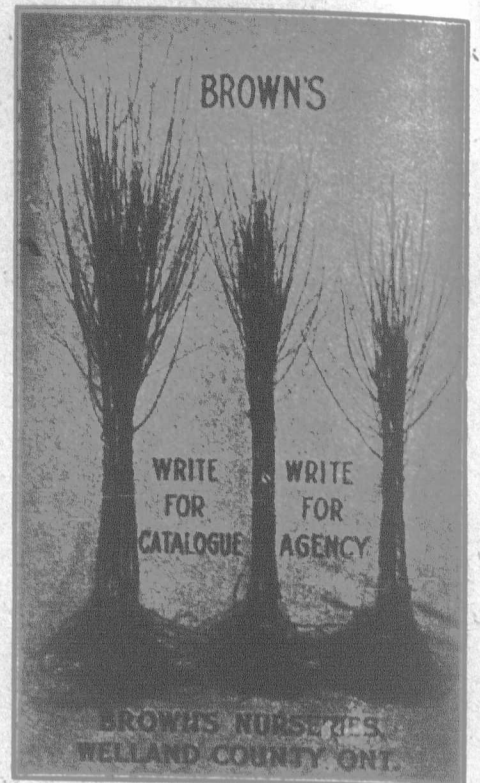
Handles all kinds of material found on the farm, even clear gum or rotted material.

This is the only Spreader that will do it satisfactorily.

Write to-day for catalogue and J. S. Kemp's article on Saving and Application of Manure.

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The Farmer's Advocate and Home Magazine

PERSEVERE AND SUCCEED

ESTABLISHED 1866

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Vol. XLVIII.

LONDON, ONTARIO, APRIL 24, 1913.

No. 1074

EDITORIAL.

Again we say, test the seed corn. Ear-test it if you can possibly spare the time.

Patches of bright new shingles on old roofs are a conspicuous feature of the rural landscape this year.

If there is not heavy damage by white grubs in many parts of Ontario this year, a great many close observers will be agreeably surprised.

Even spring fever cannot counteract the buoyancy of the present season, when all vegetation is upspringing and nearly all animal kind is bringing forth its young.

A little careful ditching to let off surface water may make a difference of two or three days in the seeding of a field and thirty or forty bushels in the yield.

"The Farmer's Advocate" has been the first important publication in Canada to press a vital discussion of the Canadian banking system and the need for bank inspection. Back us up.

There is poetry in all life. Many feel it who cannot put it in words. The most passionate poems are probably not yet written; they have only been experienced. You may be a poet though you have never penned a verse.

Strive as we may, our efforts will often be countered by conditions over which we have no control. The odds are enough at the best. All the more reason for leaving no stone unturned; no precautions neglected.

Have you written your member yet to urge a bank commission and the need of efficient bank inspection? Do not let seeding interfere with this pressing duty. Write at once, if only a post card. Let him know your stand.

There are those who hold that the function of an agricultural journal should be wholly directed along producing lines, but those who comprehend the farmer's real problems know that the greatest ones are commercial and economic.

A serious state of affairs has come to pass in Canada if vegetable-growers who wish to save money by co-operating in the purchase of seeds, may not do so without having obstacles thrown in their way by middlemen anxious to monopolize their trade.

In considering public questions, very much depends upon the point of view. For instance, those who regard the banking business from the standpoint of banking profits will see it at a totally different angle from those who regard it as a public-service institution.

By his courageous, candid, patient and well-reasoned advocacy of external bank inspection, Mr. McLeod has placed the people of Canada under a heavy debt of gratitude. This is none the less true because the necessity of the case points to a still more thorough-going measure than Mr. McLeod himself has proposed.

Organization.

Upon organization—the systematic union of individuals in a body whose officers, agents, and members work together for a common end—depends the very existence of most industrial enterprise. No firm can exist without being well organized; no scheme of any magnitude succeeds without an effective organization behind it. Everything from the public school ball team to the biggest commercial enterprise in the land has organization at its foundation if it succeeds. Organization is co-operation. If it is good for other business why is it not good for agriculture? If it is essential to the greatest success in other enterprise, why is it not essential to greatest success in farming? The business of farming, as carried on in this country, is the least efficiently organized of all our many industries. It is scarcely systematized at all, and yet many have made a good success of it. Those who have been most successful have carried system and organization out in connection with their own private business, but speaking of Canada's agriculture as a whole little union of individuals has been practiced.

Would organization be profitable? We have only to go back to last autumn, when a heavy crop of apples was marketed, to prove that it is profitable. Growers who have banded themselves together into associations and who are entitled to membership in these associations by virtue of the fact that they are caring for their orchards—pruning, spraying, cultivating, and packing nothing but the best of each grade of fruit—had little difficulty in disposing of their apples at very profitable prices—two to three dollars per barrel—while individual growers who also put up a Number-One pack had great difficulty, in many cases, in selling their apples at all, and when they did find a market the price obtained was more often from one dollar to one dollar and a half per barrel. This is only one of many instances of what organization means to the fruit-grower. It is effective in buying spraying and other necessary materials, and is a great lift in marketing.

Most farmers can produce quite satisfactorily, but few can market single-handed to advantage. No better demonstration of this can be noted than the method usually adopted in the disposition of farm produce—dairy butter and eggs. The producer takes them to the country grocer trading them out; he in turn disposes of them to the huckster who drives around and collects them; the huckster sells them to the wholesaler who turns them over to the retailer, and from the latter the consumer buys them. Surely a lack of marketing organization on the part of the producer! Egg-circles are beginning to solve this problem in some districts, being an effective type of selling organization. If farmers are to enjoy, as they should, the fruits of their labors, they must organize.

Farmers' clubs, fruit-growers' and vegetable-growers' organizations can do much in the way of purchasing supplies of seeds, fertilizers, etc., co-operatively. A good example of the conditions with which the agriculturist has to cope—conditions which very materially affect the net returns from his season's operations—is outlined in a letter from a prominent vegetable-grower in this issue. The man who works the land is "held up" both in purchasing supplies and marketing his crops, if he lets other people have the entire management of these two important

ends of his business. Profits depend largely upon good supplies bought at reasonable prices, and good produce marketed at reasonable prices, as nearly as possible direct to the consumer. Profits ranging around 300 per cent. and up to 650 per cent., which our correspondent shows in another column, to be the difference in the purchase price of some vegetable seeds in Europe and the sale price to the gardener in this country, are large enough to set people thinking. They are worth saving to the sower. Vegetable-growers have organized and are planning to make this saving. So far they have been successful, notwithstanding the fact that pressure has been brought to bear upon certain European seed-growing firms to sell to growers only through seed firms in this country. Not satisfied with a large margin between buying and selling price of the seed handled by them, it appears that some seedsmen desire to monopolize the trade. One person's money should be as good as another's, and any attempt to force trade into narrow channels controlled by a few firms and thus to curtail that freedom of purchasing and selling which all should enjoy, should be resisted and condemned. Organization is, according to those interested in the vegetable growers' association, sure to save thousands of dollars to the growers each season. The producer of the seed in Europe gets just as much, and the grower in Canada gets just as good and possibly better seed, it is claimed, by dealing direct. Organization helps the producer to control three-thirds of his business, viz., buying necessary supplies, growing and producing the crop, and placing it upon the market, whereas, under other conditions, the only third under his control is the labor end of production, the producer being a laborer for all classes of middlemen.

The one thing necessary to make organization a success is a co-operative spirit—a spirit of give and take—no jealousies, but each and everyone working for the good of the whole. The fate of many newly-planted orchards depends upon whether their owners are members of effective, active, fruit-growers' associations or not. Neglected orchards cannot survive in these days of insect and fungous pests, and many will surely be neglected if their owners do not fall in line with the co-operative movement, and get the incentive through good prices to care for them. While fruit-growing, vegetable-growing, and the marketing of farm produce are three of the best examples of the work which may be accomplished by a banding together, there are several other branches of the farming business which lend themselves readily to such a scheme. There is strength in organization.

How Constituents Can Shape Legislation.

Upon our recent visit to Ottawa nothing impressed us as more hopefully significant than the effect of personal messages addressed by constituents to their members of parliament. Your member at Ottawa does not hear the corner-grocery talk or the opinion upon public questions expressed in your home, and perhaps nothing is more difficult than for him to keep closely in touch with the views of the people back home. But each letter he receives makes an impression, because he knows that for every person who takes the trouble to write, ten people think the same without writing. "Some of these are to readers of 'The Farmer's Advocate'" remarked Archie Mc-

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL
IN THE DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

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

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries 12s.; in advance.
3. ADVERTISING RATES.—Single insertion, 25 cents per line, space. Contract rates furnished on application.
4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrearsages must be made as required by law.
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12. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
13. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, CANADA.

Coig with a twinkle as he strode along the corridor to the Parliamentary Post Office carrying a big bundle of long, fat envelopes containing replies to his constituents. Mr. McCoig is the member who pressed the case for duty-free ditching machines, and, by-the-way, it is generally expected that the Minister of Finance will deal with this item to the satisfaction of rural interests.

Still more gratifying was the effect of the flood of letters relative to Bank Act revision that poured in upon members of rural constituencies very largely as a result of Mr. McArthur's articles in "The Farmer's Advocate." The pressure of public opinion thus generated is undoubtedly responsible more than any other influence for the fact that the House of Commons Banking Committee is now hearing views from the representatives of the people as well as the financial interests. But this latter battle is not yet won; it is only begun; and unless the force of public opinion is renewed and increased it will bear no legislative fruit of any account. Some of the most expert corporation counsel in Canada are down at Ottawa, retained by the banks to watch this thing through and they have their minions on the floor of the House, although most of the members of the Banking Committee seem at present friendly to the public cause. But many ingenious arguments and subtle appeals will be made to bias their judgment and some of them will need stiffening from their constituents, while those who espouse the public cause unflinchingly will be heartened and helped by knowledge of the endorsement behind them. As yet the banking question is not a political issue. We hope it may not become so. It will not anyway, until the Committee has finished its hearings and reported to the House, after which the caucuses may line their members up into opposing camps. Between now and then is the time to mold parliamentary opinion and shape public policy. You may effectually help to govern this country in a practical, tangible way by writing your member right now, stating your own views on the question of bank inspection to secure depositors and shareholders, redress abuses and curb the money influence. Write to-day.

Nature's Diary.

By A. B. Kiugh, M. A.

There is a little bird which is very common just now at the edges of the woods and thickets and about out-buildings, a little bird with the head, neck, breast and back slate-colored, and under parts, below the breast, abruptly white. It has a whitish-colored bill, and when it flies the white outer tail feathers, in an otherwise gray tail, are very conspicuous. It is the slate-colored junco—a member of the sparrow family.

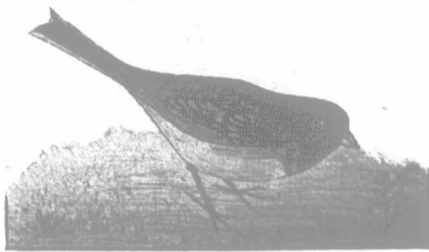
Some birds we can describe as beautiful, some as gay, but neat is the adjective which most aptly fits the junco.

The junco is an abundant species in Ontario during the spring and fall migrations. It is a very rare breeder in the Southern portions, but is a common summer resident in the North. A few remain in Southern Ontario throughout the winter.

Its call-note is a sharp "tsip," and its song is a pleasant trill very much like that of the chipping sparrow, but pitched a trifle lower.

In the middle States the junco is abundant in winter, and is known as the "snowbird"—a name appropriated in Canada by the snowflake.

In the summer the food of the junco consists of about half insects and half vegetable matter, the latter being largely seeds of weeds and wild plants, and such wild fruits as blueberries, black-



Slate-colored Junco.

berries, strawberries, and elderberries. In the winter it feeds almost exclusively upon weed seed.

The junco breeds in the woods, building its nest of strips of bark, grass and rootlets, lined with hair, on the ground. The eggs are from four to five in number, and are greenish-white, spotted and blotched with reddish-brown. The young birds show their relationship to the sparrows by having striped breasts, and hence resemble the parents but little.

A soft note sounds upon the spring air—"phoe-be—phree-u-wee—phoe-be"! It is our old friend the phoebe back in its haunts again. A most familiar bird is the phoebe, a bird which has adapted itself to the conditions of civilization. Originally the phoebe nested along cliffs and on rocks overhanging streams, and in the wider parts of the country such is still their nesting-site. Along the huge limestone cliffs which fringe Georgian Bay along the Bruce Peninsula, phoebes nest in abundance, and one may pass ten or a dozen pairs in a mile's walk along the base of the cliffs. But throughout the thickly settled regions the phoebes have found that a bridge, or a ledge over the door of an out-building is a good substitute for ledges of rock. And an ideal bird-neighbor it makes, as while it destroys numbers of injurious insects it does not touch a single agricultural product.

The phoebe builds its nest of vegetable matter mixed with mud, and lined with fine grass and feathers. It adds to this nest from year to year, until it becomes often quite a tall structure. One nest which was built in a box, was added to until there was barely room for the bird to squeeze in between the nest and the top of the box. I was wondering what the bird would do the next season, but unfortunately the female died before she had completed the second set of eggs for that season.

The marshes are no longer silent and desolate—their presiding spirit, the red-winged blackbird, has returned once more. He sits on a dead cat-tail stem—swells himself out—and says "kong-quee-ree." And his note is the promise of the activity of life in the marsh now not far distant.

This is the season when we can appreciate the economy of having had implements put away in good condition in the fall. A few of our own were unavoidably exposed for a time last summer, but so far as it was in the power of flesh and blood to accomplish it, we cared for them to the best of our knowledge. The plows, cultivators and drill disks, were cleaned and oiled as put away, with the result that the mold boards of the former scoured this spring the first time across the field. That saves time and horseflesh. The implements draw more easily, and do a better job.

Bank Commission and "the Ottawa Atmosphere."

Editor "The Farmer's Advocate.":

Your readers are much indebted for the excellent editorials in your issue of April 17th., dealing with our banking system. Some of the facts mentioned are indeed startling in their significance, and give us timely warning of the dangers ahead. It strikes me that the only solution of the problem which will meet the needs of the situation is the one advocated, viz., the appointment of an independent Bank Commission, modelled somewhat after our very useful Railway Commission. The Dominion Grange and Farmers' Association was one of the bodies which co-operated in urging for the establishment of the Railway Commission some years ago, and the wisdom of its action has been since demonstrated. At the last annual convention of the Dominion Grange the Bank Act came up for discussion, and a resolution was passed asking for a Royal Commission of investigation before any further extension of bank charters be made. Probably a permanent Bank Commission would be even more useful than the investigating commission which we recommended. At all events let something be done before the power of money fastens its grip upon the throat of the people, and chokes the life out of our boasted democracy. Continue in the good fight, and reward will come sometime, somewhere.

Adropos of Peter McArthur's impressions of Ottawa, permit me to emphasize at least one of the many good things which he says. I paid a visit to Ottawa this last winter and was deeply impressed with the subtle and strong influence of the "Ottawa atmosphere," particularly that of the Parliament Buildings. Our representatives have to withstand not only the influence of shrewd and powerful lobbyists, but the subtle and stronger influence of the power and authority and paraphernalia of government. This impresses itself upon one silently and constantly, and it is indeed a man of unusual independence and character who can withstand its influence. Mr. McArthur's suggestion that the people keep in touch with their representatives by writing to them, is a good one. I fear, however, that its efficacy will be very limited. The Constitutional "Optional Referendum" is, in my judgment, a much more effective and radical means of checking the action of our representatives than any other method now available by us. Under this provision all measures, except urgency measures (which must be passed by, say, a three-quarters vote of the whole house) remain in operation for a certain specific period after their formal enactment by parliament. If, during this period, there is lodged with parliament (or with the government) a petition of a certain size calling for a referendum upon the act in question, then that act remains suspended until a popular vote upon that specific act—either sanctions or repeals it. This gives the ultimate authority to the people who are not under the influence of the "Ottawa atmosphere", and at the same time leaves us with the advantages of our present legislation and governmental machinery. It would do much to solve satisfactorily the present disgraceful situation at the federal capital.

Brant Co., Ont.

W. C. GOOD.

Security from the Banks.

Editor "The Farmer's Advocate.":

We note with pleasure your article in "The Farmer's Advocate" of April 17th on the money influence in Canada. It is encouraging that a paper with the standing of "The Farmer's Advocate" has dared to state these facts so plainly, and we sincerely hope the general public will stand by you in this fight for the common good. If, as the facts stated and other facts besides tend to prove, there is an organized influence working with strength sufficient to formulate and place on the Statute Books laws in its own interest, it is up to the people while the Banking Committee of the House of Commons is in session to bring to their attention, through their representatives in the House, such facts as will give the public some protection when the new Bank Act comes in force. We need some kind of outside inspection of banks that will tend to prevent such wild speculation as has come of the recent disastrous bank failures. We should insist on a fund for redeeming bank notes, which will redeem the notes without interfering with depositors' money. We should also insist on a fund being laid aside for the protection of depositors. Banks have great privileges accorded to them, probably justly so, but is it asking anything unreasonable to insist on some security for the money entrusted to them? They like security from the individual when loaning him cash. Should they not give security to him when entrusting to cash them?

Middlesex Co., Ont.

W. WADDELI.

The Franchise of Canadian Banks.

"The return of the chartered banks of the Dominion of Canada, December 31st., 1912," shows that on that date the aggregate paid-up capital of the Canadian banks was \$114,881,914, with a reserve of \$108,840,007. This reserve is made up of profits which had not been divided, and of premium on stock sold above par.

The Bank Act allows a chartered bank to receive deposits to an unlimited amount. The deposits of Canadian origin amounted to \$1,052,031,215, made up as follows:—

Time or interest-bearing deposits...	\$632,641,340
Deposits without interest	379,777,219
Dominion Government deposits	15,354,196
Provincial Government deposits	24,258,460

It will be seen that the banks have succeeded in borrowing from the public over a billion dollars at a nominal rate of interest. It might appear that the banks are paying interest on \$632,641,340 to the outside public besides what they pay to the governments. A little reflection will dispel that illusion. In nearly all cases the bank only pays interest on the smallest balance in an account during the month. For instance, if on the first of the month a customer deposited \$3,000 and on the 26th withdrew \$2,500, he would only be allowed interest on \$500 during that month, and the bank would have the use of his \$2,500 for twenty-five days without interest. In the course of business this feature amounts to a very valuable profit to the banks, even though it is a convenience to the depositor to have his money in safe keeping, available when required. Without access to the actual accounts it is impossible to state exactly the sum on which the banks actually pay interest. It has been argued though, that having regard to the rules of the banks in the payment of interest, they do not pay interest on more than four hundred million dollars, and if that estimate is right then on the billion of the people's money with which they do business they do not pay on the gross amount more than one and one-quarter per cent. A great deal of careless speaking, and a good deal of disingenuous reasoning on this interest problem has been indulged in. Even so fair and public-spirited a gentleman as Mr. McLeod has almost misled the public into supposing that the bankers make merely 2 8-10 per cent. profit on their money. Every one of them but the Weyburn bank pays from six to eleven per cent. in actual dividends after they have carried large sums to reserve account, and after they have expended immense sums on bank premises beyond what they value these at in their assets. The plain, unvarnished truth is that on the money the shareholders furnish, banking pays a dividend of eight and ten per cent. besides enormously increasing the value of the shares by accessions to the reserve and further paying for bank premises worth millions more than appear in the returns, while the innocent public, which furnishes most of the real money in the business, has to be satisfied with about one and one-quarter per cent. on the average of all deposits. A little farther on we shall see how parliament protects this easily satisfied party—the depositor.

Another thing this return directs attention to is the circulation of bank notes. Section 61 of the old Bank Act provides that a bank may issue for the mere cost of printing, bank notes up to the full amount of the unimpaired paid-up capital. If for the purposes of this calculation the capital of the Sovereign bank be deducted—and it is out of business—then the paid-up capital of the bank is \$111,881,914, and under the authority of the statute just mentioned, the banks had circulation outstanding to the amount of \$110,020,492 or for all practical purposes the full statutory limit. This money is issued for the mere cost of printing, and is issued on the security of the unimpaired paid-up capital of the bank. They pay no tax to the government, although in most other countries the government derives considerable revenue from the taxation of this privilege or from some other form of profit-sharing. In Germany the sum the government realizes from the profit-sharing with the Imperial bank runs up towards \$10,000,000 a year. In France the government shares in the profits of banking. In Portugal, Spain, Austria, Switzerland, the United States and many other countries the government gets large revenue from the banks, while here we not only get no revenue but we give them every advantage. This profit from circulation is enormous. It enables them to get interest on an extra hundred odd millions without charge, and every note lost or destroyed is clear gain.

Nor is it only in the matter of letting them duplicate their capital by means of untaxed note issue that we are foolishly illogical. They issue their bank notes without any security but the sworn statement that they have a certain amount of paid-up capital; but the Dominion of Canada has so little faith in itself that when it issues its own bank notes it puts up a dollar of gold

for every dollar of paper money that it sends out. As if the paid-up capital of a bank were better security than the great country of which we are citizens!

It will be said that there is a redemption fund put up by the banks to guarantee circulation. There is. It amounted to a little over six million dollars to guarantee one hundred and ten million dollars of circulation, and the government generously pays the banks four per cent. interest on the amount of that redemption fund. But even that fund is safeguarded for the banks. In the last analysis the loss on circulation after the stockholder is cleaned out, as he usually is when a failure occurs, comes on the depositor. The redemption fund in the hands of the government takes care of the notes in circulation, but then it is recouped out of the assets of the bank as a preferred creditor while the depositor must wait and take his chances as an ordinary creditor, and if there is nothing left he gets nothing. In the case of the Farmers' bank, it was found that the only real assets the bank had were the depositor's money. Out of that the notes are being redeemed, and it was said by Mr. Clarkson at Ottawa that there would not be one dollar left for the depositors unless from the Keely mine. The depositors are the men who to-day, the country over, are furnishing the bulk of the working capital for the Canadian banks, but the Bank Act from end to end gives them no special protection.

The billion of money upon which the captains of industry and financiers do business is gathered by our system of branch banks from every town and city, every village and cross-roads, many times in small sums from the young and the old, the healthy and the weak, and carried to the head offices of the big banks and there used as shall be ordered by a board of directors composed of what are called the big men of the big cities. The privilege of collecting money and establishing branches all over the country for the purpose of so collecting is conferred by the Bank Act. And the power conferred is exclusive. Sections 156 and 157 say that any person not authorized by the act, who uses the word "bank," "banking company," "banking house," "banking association", or "banking institution", shall be punished by a fine up to \$1,000, or imprisonment up to five years, or both.

The interests which control the banks are not even the owners of all the one-hundred-odd mil-

they are partners." The footing shows that bank directors and their firms were indebted to the Canadian banks in the sum of \$10,536,994. These were loans voted to themselves. It would seem to be pretty fair financing to invest half a million or even treble that in qualifying as directors, and thereby get a chance to borrow over ten millions. But that is not all. This return speaks only of firms. Everyone knows that big business is not done by partnership firms now but by joint-stock companies. So that this return will not include loans to joint-stock companies in which directors may be interested. If, then, personal and firm loans amounted to over ten million dollars, is it not fair to say that the real loans to directors and the big companies in which they are interested amounted to several times the amount shown in the return?

Is it likely that in times of financial stress the outside public—the business public—can get a fair proportion of loans in places away from the head offices of the banks, while the trustees of the people's savings—the directors—are allowed to vote loans to themselves and thus deny them to others? Under a branch-bank system centralization naturally results, but if we are to bear the evils of centralization because of the acknowledged advantages of the system, then is it not the more important that parliament make provision to reduce the evils to a minimum? It is not fair that exclusive and profitable privileges should be given without every safeguard being employed and some compensations exacted.

In all countries special privilege granted to a few has resulted disastrously to the many. If they have a money trust in New York which is the result of the greed and the capacity for organization of a few clever men, how do we hope to escape its results here when we create something like a trust by act of parliament?

What the Bank Act did not do, the act incorporating the Bankers' Association completed.

HORSES.

National breeding studs and national stallion depots under the control and supervision of the Government are features of Hungary's horse-breeding industry. Mature stallions are purchased from breeders for the State on the approval of a first-class horse judge. Three hundred and fifty young colts are purchased each year by the Government, kept until three years of age and sold at reasonable prices to districts needing good sires.

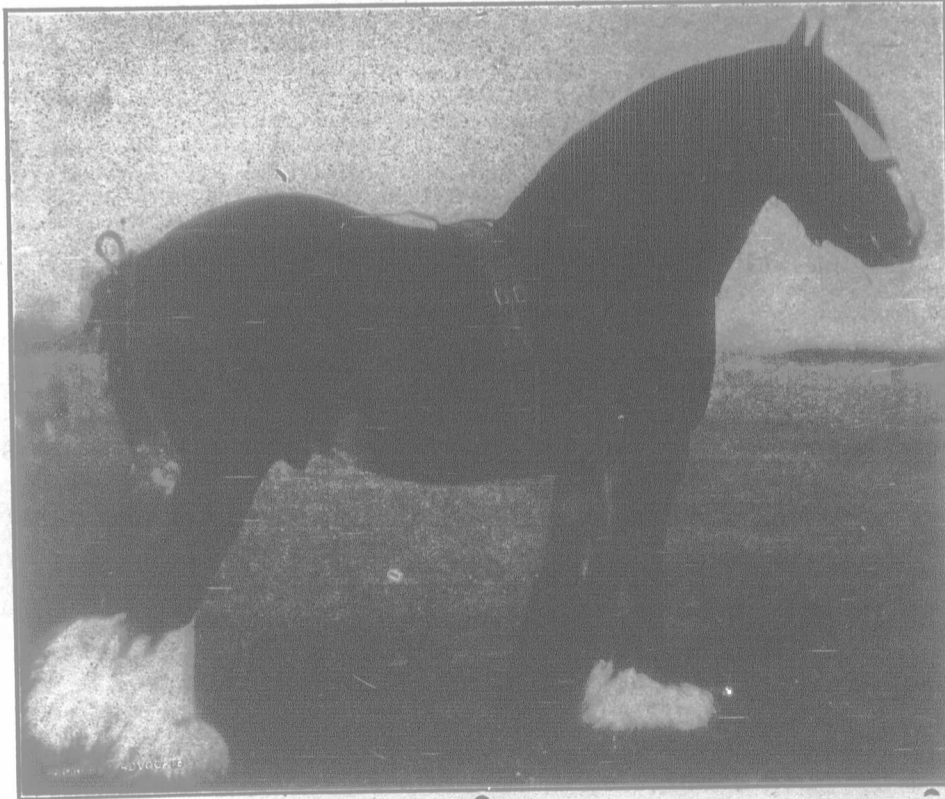
"Instead of the average farm-horse weighing from 1,200 to 1,400 pounds and worth from one hundred to one hundred and fifty dollars, we should have more horses on our farms weighing from 1,600 to 1,700 pounds and worth from two hundred to three hundred and fifty dollars each, to say nothing of the great opportunities there are for the breeding of pure-bred horses." This was the statement

of L. P. Martiny, of Wisconsin, in reference to his State. How well it applies to most districts in Canada. It can be overcome by more systematic breeding to heavy-draft stallions.

Cost of Raising Horses.

Reports have been received from about ten thousand correspondents of the Bureau of Statistics of the United States Department of Agriculture upon the cost of raising colts on farms to the age of three years. The average for the United States is found to be \$104.06; or, if we deduct the value of work done by the horse before he has passed his third year, namely \$7.52, the net cost is \$96.54; this is 70.9 per cent. of the selling value of such horses, \$136.17.

The cost varies widely by States, from an average of \$69.50 for New Mexico, \$71.59 for



Primley Bellivor.

Winner of first prize in the four-year-old class at the London Shire Show, 1913.

lions of bank stock. A very large proportion of that must be held by men and women throughout the country as an investment. It would be found on the last analysis that even of the bank stock only a part is owned by the men who dominate the financial situation. The qualification for the bank directors runs from the holding of \$3,000 stock in a bank of one million paid-up capital to \$5,000 for the large banks.

Does it pay to be a director? A bank must have five directors according to law. The sum of \$575,000 will qualify five directors for each of the banks named in the return above mentioned.

One might suppose that these directors would be like other trustees forbidden to deal in the trust funds, but the rules of ordinary business life do not apply to bankers. The return to the government has a column headed: "Aggregate amount of loans to directors and firms of which

Wyoming, and \$82.47 for Texas, to \$156.60 for Rhode Island, \$149.48 for Connecticut, and \$141.80 for Massachusetts.

Itemized, the cost is made up as follows: Service fee, \$12.95; value of time lost by mare in foaling, \$10.06; breaking to halter, \$2.22; veterinary service, \$2.04; care and shelter, first year \$4.98, second year \$5.86, third year \$6.35; cost of grain fed, first year \$4.98, second year \$7.14, third year \$9.56; hay, first year \$4.14, second year \$6.61, third year \$8.48; pasture, first year \$2.56, second year \$5.41, third year \$8.21; other costs, \$5.01; total \$104.06.

The total cost for all feed is \$56.30, being \$21.68 for grain, \$19.23 for hay, \$14.18 for pasture, and \$1.21 for other feeds. The total cost for care and shelter is \$16.69. Of the total cost, 54 per cent. is charged to feeds, 16 per cent. to care and shelter, and 30 per cent. to other items as enumerated above.

As more than half the cost of raising a three-year-old horse on the farm is chargeable to feeds, it is readily observed how important is the influence of variation in prices of feed-stuffs upon such cost.

Horse-Raising as a Side-Line for Fruit-Growers.

Editor "The Farmer's Advocate.":

Up to the present the orchardists here have been paying very little attention to other phases of agriculture than the growing of tree fruits, such as peaches, apples, plums, cherries, etc. Marketing conditions have largely been responsible for this, also the fact that clean cultivation between the trees has been the custom adhered to in order that the trees might be forced to early bearing. Finding that too much clean cultivation has been promoting the spread of "black spot" they have begun the use of cover crops such as clover, timothy and alfalfa, raising colts upon the hay.

Many of the orchardists these last two years have devoted part of their orchard space to raising tomatoes, and requiring considerable horse work in the cultivation have invested in brood mares with the intention of raising colts and wintering them on alfalfa raised on their lot.

Last year we kept two mares, and have raised two foals sired by a valuable Thoroughbred. While we do not believe the light horses will prove most profitable, because they cater to such a very limited market, still our mares were small and with only the choice between a Thoroughbred or a Hackney sire, we thought speed to be preferable. This year, however, there is to be a splendid Percheron here, and as a heavy horse can be sold in any market, this fact has led us to decide in the future to raise stock sired by Percherons, providing our venture proves profitable.

This year we weaned the two foals above mentioned in September, and as we had cut some clover grown between the tree rows they fed at a stack of this at will until December 1st., at which time we "halter broke" them and commenced to feed them. We had no way of gauging the amount of clover they had eaten from the stack, as we were also feeding both mares from it. We have kept close track of the feed from December 1st. to March 31st., and find that during that time with hay, at \$23.50 per ton and oats at \$35.00 per ton, each foal has cost us \$15 plus \$20 service fee.

April 1st. they go to pasture where they can stay till Nov. 30th. without cost, and next winter we can place them in the hands of a rancher who charges \$6 per month for stack feeding on alfalfa.

On this basis it will cost us about \$90 to raise each foal to three years of age, at which time, bar accident, we should be able to market them at from \$165 to \$250, according to their weight, speed, etc. The general price paid here for animals of the style into which they promise to develop, is about \$200.

We worked the two brood mares right up to the day of foaling, principally at cultivation and delivery work with some plowing, only losing about ten days before they were back in harness. Both foals are fine, sturdy animals, and one promises to be an exceptionally fine mare.

This year one of the mares is with foal to a Hackney, as he was the only horse available. The other we sent away to a rancher's and is with foal to a Percheron. This spring we will use a Percheron only, and as that has always been our ideal, we hope we shall be able to keep to this class of sire.

We have come to the conclusion from observation, reading, and the opinion of horsemen here that it does not pay to frequently change from one breed to another; that a heavy horse need never hunt far for a market, while the lighter breeds often do. Besides this, a poor animal from a light breed is practically a loss, while a poor animal from a heavy breed is al-

most always worth at least his cost of raising, merely on account of his weight, if for no other reason.

A rancher here told us of his experience in the changing of sires. He and his neighbors had been for some years breeding Clydesdales, having bred up from cayuses (wild western ponies) until they had some fillies almost fit for registration. A horseman came in with a Thoroughbred sire and persuaded many of the ranchers to go over to the Thoroughbred. One man said that by figuring out his actual loss that he "dropped at least \$2,500 in that one year", he had neither speed nor weight in the stock he got, and a very unshapely bunch of colts.

It is doubtful if many orchardists here in this valley could make it pay to raise colts to a workable age unless they are willing to take the chance of loosing them, and turn them out to roam over the mountains as many of the ranchers do, but they could put them through one winter and leave themselves a good profit. We are situated differently from most orchardists, having a pre-emption of 320 acres above the water line (land that can not be irrigated profitably) upon which to range our stock so it costs nothing for pasture. With hay and oats at the price they are I doubt if it would pay to raise them on a fruit lot for three years, for the hay that it would be necessary to feed them could be sold for the same price as it must be bought for, so that one must charge it up against the colts at this price.

Oat hay is used here to a very great extent and is a good diet, selling baled at \$22, and timothy at from \$24 to \$28. The figure quoted above is the average we paid for oat and timothy hay this winter. Next winter we expect to have enough hay on the lot to winter the two mares and their colts, as we intend to devote only half our lot to small fruits and vegetables.

In our list of costs we are not charging up the rope halters the colts chewed to amuse themselves, nor the saddle cinch one of them made a meal of, for which I had to pay the harness maker \$1.00 to replace, nor yet the shaft loops on a set of harness that one of them devoured one afternoon, and we got a bill for same a few days later for the new pair. We couldn't put a price on the mare's mane; but one of the little scamps chewed that for a few days since she couldn't get at the blankets a second time. Such things as these we charged up to experience, and now tie them with chains which they can't eat, but even then they taught us that we had to have a swivel on these or they would twist them up and break them. We thought we had "put them through their paces" when we came to halter break them, but looking back over the incidents perhaps some of the laugh is on us.

We had some very valuable experience at halter breaking, one of them gave in with about fifteen minutes coaxing, but the other at the end of five hours good stiff fighting was still unconquered, and we had to put her through another three hours the next day before she would lead.

However, the venture looks good, and we will keep at it till it proves less profitable than other side lines in the orchard business.

British Columbia.

WALTER WRIGHT.

Clipping to Prevent Sore Shoulders.

No doubt many horses will suffer from sore shoulders ere the spring and early summer work is over. Any hints as to methods of prevention and cure are valuable to all those who work horses. A writer in "The Farmer's Advocate" and "Home Journal", Winnipeg, Man., recommends clipping all the hair from the shoulders. This is his experience:

"Some years ago I had trouble every spring with horses getting sore shoulders, especially colts and horses that had not been worked all winter. No matter how much I cleaned them it seemed impossible to get all the dust out of the hair, and as soon as the horse started to sweat the old hair would loosen up and become matted with dust and sweat, and a scalded shoulder was the result.

"After some experience of that kind, I tried washing the horses' shoulders with salt and water every night for a few days before work started, and while this helped some, it did not prove a complete remedy, as the old hair would come loose and gather in little wads under the collar. At last I decided that if the shoulders were clipped it would end the trouble, so I got a pair of hand clippers and clipped the shoulders a couple of weeks before work started.

"That ended the trouble, and for the last six years I have never had a horse with a sore shoulder except one I bought three years ago that had a bad sore on the point of each shoulder when I got him. I fitted him with collar and felt sweat-pad and cut holes in the pad to fit over the sores, and in a few weeks had them healed without leaving a scar. I rubbed in a little vaseline on the sores every night, and

wiped them off with a soft rag in the morning. The horse has never had a sore since, although there is a calloused spot under the skin on each shoulder that will swell up as big as an egg if he is worked for half a day with a bare collar.

"I find it a good plan, when buying new collars, to get a good snug fit with the collar buckled out wide, and when the horse is put to work and begins to shrink the collar can be gradually tightened up. It does not seem to make much difference whether bare leather, cloth-faced or collar and sweat-pads are used, as long as they fit well.

"A collar to fit properly should come close to the sides of the neck with just room to shove your fingers in between the neck and collar at the bottom. For a horse that has a very thick neck and gets sore at the top of the shoulders, I take a collar and after oiling it well to make the leather pliable I fit it on a block of wood that will spread it in the right shape, buckle up tight and leave for a couple of days when it will keep that shape."

Care of the Stallion During the Stud Season.

The potency of a stallion is largely dependent upon his care, not only during the stud season, but also between seasons. The stallion that is regularly worked or driven, and kept in only moderate condition between seasons makes a more successful sire than the one that spends his time in idleness, notwithstanding the care and attention he may receive in other ways.

Thoughtful and observant breeders have noticed that the strength and vitality of the foal when born, is, to a great extent, in proportion to the strength and vitality of the parents at the time of service. Hence, the produce of a stallion that, either from want of exercise and over-feeding, or under-feeding, or as the result of over-work, disease, accidents or other causes, is deficient in muscular, respiratory, nervous or sexual energy cannot reasonably be expected to be as satisfactory as that of one in whom all these organs are vigorous. Probably the weakest point in horse-breeding in this country is the shortness of the "stud season," it being practically but two months, May and June. During this period most breeders breed their mares and it is not unusual to hear a stallioner boast that his stallion was bred to 125 or 150 mares. In some cases the statement may be correct, but if a record were kept, it would, (in most cases,) be observed that a small percentage of the mares have conceived, while if the season were extended to four months the percentage would be much greater. These conditions obtain principally in sections where the number of popular stallions is not in proportion to the number of breeding mares. In sections where the stables of extensive breeders or importers are situated, owners always have a number of sires in the stud. The season may be said to be continuous to breeders who are willing to take their mares to the establishment to be bred. Breeding stallions should be kept in only moderate condition and, as stated, should be given regular work or exercise. Stallions kept in show condition seldom prove as potent as those in only fair condition.

The sire that stands for service at his own stable if in a town or city, seldom proves sure, but if in the country he is usually turned out into a large paddock for a few hours daily, and, especially during the season, will take sufficient voluntary exercise to keep him in proper physical condition.

But we wish to speak especially of the stallion that is on a given weekly route, spending certain hours of certain days at certain points. In such cases, the horse is usually in charge of a hired groom or stallioner, whose chief ambition is to keep him looking as well as possible, and to breed him to a great number of mares. Under such conditions the health of the horse is in greater danger than that of the one which remains at home. There is a greater or less change in the quality, and sometimes in the kind of food and water. The groom cannot always get what he wants to feed and he knows that the horse should have to eat. The stallion en route gets sufficient exercise (in some cases too much.) He should be well fed, especially on grain, with only a reasonable quantity of hay, especially in the morning and at noon, but should be given all he will eat at night. The grain ration should be oats. On general principles we prefer rolled oats, but as it will doubtless be impossible to get them in many cases, it will be better to feed whole oats in order to avoid changes. In addition to oats he should be given a little linseed meal or a feed of dampened bran at least twice weekly, or a regular addition of a little bran in his oats, and as grass can usually be obtained he should be allowed to crop a little each day. While hay and oats are depended upon to produce the necessary energy the additions mentioned are needed to avoid digestive trouble. Water conditions are

usually such that it can be given frequently, and the horse should not be stinted to water three times daily. He should be given water both before and after meals, and when convenient between meals, and especially should he be watered after the evening feed when he is generally "fixed up" for the night. Of course, all food and water should be of first-class quality, or at least of fair quality. It is wiser to allow him to go hungry or thirsty for a few hours than to allow him to eat food or drink water of decidedly poor quality. The former will cause some temporary suffering, while the latter is very liable to cause serious digestive trouble. All practising veterinarians have noticed that stallions on the route are much more liable to digestive diseases than those which stand at home, and they have also noticed that such cases are very hard to treat and frequently end fatally. These facts are largely due to mistaken kindness on the part of the groom, who overfeeds, or gives food of poor quality to travel him from stand to stand on a hot day too soon after a hearty meal. Sexual excitement, frequent changes in food and water, and travelling in hot weather tend to weaken the digestive organs and predisposing to disease of them, hence the groom should recognize the danger and endeavor to avoid exciting causes, even if by doing so his horse should fail in condition. As in horses in general such diseases are more frequently caused by over-feeding than by under-feeding.

The satisfactory regulation of the number of mares to which a sire should be bred in a given time, is probably the most difficult question for the groom to arrange. If stallions were limited to two services daily, there would be a larger percentage of foals and much fewer return services. We know that it is hard for a groom to refuse a mare because his horse has bred twice during the day, and provided he has been without service for a day or two he may be excused for breeding him to four mares in a day, with an interval of at least three hours between services. The average groom considers that one hour between services is sufficient, and this may take place indefinitely, sometimes well on into the night, but if he values the reputation of the horse as a sire he must recognize that even a stallion has his limits, and that breeding him to too many mares in a limited time, while it affords grounds for present boasting, cannot fail to eventually injure his reputation. Under such conditions a horse frequently refuses to serve and this is a great humiliation to the groom.

In other cases a horse that is not over-worked is very slow. The veterinarian is quite familiar with such tales of woe from grooms, who want drugs that will act as stimulants to the generative organs (called aphrodisiacs). The reputable practitioner refuses to accommodate him, as while drugs of this nature will cause the stallion to apparently perform the functions of a sire he will not reproduce, and the practice is doing an injustice to the owners of the mares, who otherwise would seek the services of another horse. In addition to this, the repeated administration of aphrodisiacs has a tendency to exhaust the organs from over-stimulation, and produce permanent impotency. Unfortunately, some grooms know the drugs which act this way and use them without consulting their employers or their veterinarians, and cases are not uncommon where over-doses or too often repeated doses have done serious harm. WHIP.

LIVE STOCK.

No flock-master should neglect to dock all his lambs, nor should he neglect to castrate all males not intended for breeding purposes.

Experiments carried on at the Central Experiment Farm, Ottawa, indicate that feed flour may be fed to swine as a substitute for oats and barley with good results.

"It is an undisputed fact that the manure of sheep is much richer than that of other live stock with the exception of that of chickens, and furthermore, they themselves spread their manure more evenly on the land than any manure spreader can do that has as yet been invented. A good heavy crop of grain, corn or vegetables may be expected when a coat of sheep manure has been applied to the land."—Frank Kleinheinz.

"Keep enough stock of some kind to consume the products of the farm on the farm; keep enough, but not more than you can keep well. Keep the best. Do not think you must raise everything; things that do not pay are best left to someone else." This is a bit of excellent advice given by a well-known Farmers' Institute lecturer of Wisconsin. It applies to Wisconsin and everywhere else where stock-farming or mixed farming are carried on.

A correspondent discussing sheep on the grain farm in our Western contemporary "The Farmer's Advocate and Home Journal," of Winnipeg, states that, as far as his experience goes, they have no disadvantages, he considering them the "backbone" of his grain farm. On his farm of 260 acres he produced, previous to getting a flock of sheep, 2,000 bushels of wheat per year, since purchasing a flock he has been able to produce 2,000 bushels of wheat each year, and has the sheep profits besides. Another writer on the same subject says: "The man with a flock of sheep on his farm is on the way to the true goal of every good farmer—more crops and better crops."

Care of the Brood Sow and Her Litter.

Editor "The Farmer's Advocate.":

A great deal of the success in pig rearing depends on the care and management of the brood sow before and after her farrowing period. Improperly fed sows have weak litters, and they make poor mothers. If the sow is properly fed and handled before and after farrowing, the difficulties that occur at this time should be reduced to a minimum. In feeding the pregnant sow, it is necessary to remember that a ration must be provided that will grow muscle, bone and tissue besides maintaining her bodily needs. Young brood sows require a ration containing more protein and mineral matter than older ones because they are still developing, and in addition to foetal growth they have to provide material for the growth of their body. Highly concentrated food such as corn should be avoided, and only fed in limited quantities. A light grain ration consisting of equal parts of corn, oats, barley and shorts does well. In addition to the grain they should receive a considerable amount of roots, as roots tend to aid digestion and assimilation. Alfalfa and clover hay are excellent, being much relished besides supplying protein.

A properly balanced ration is necessary for the sow, but she will not be in the most perfect health unless along with it she receives abundance of exercise. Every brood sow should have a yard to run in, and the barnyard on the average farm is perhaps the most satisfactory. Given access to the barnyard, the brood sow is quite contented and will move about freely. A small sleeping house may be provided, or a small corner closed off from an open shed will serve the purpose very well.

As farrowing time approaches, the sow requires special attention. The farrowing pen should be made ready, and at least a week before farrowing the sow should be moved to her new quarters. This gives her time to become accustomed to her new surroundings, and become acquainted with her attendant. She should now be fed lightly. Too liberal feeding at this period tends towards an excessive flow of milk at farrowing time the result being a caked and inflamed udder, the mother is irritable and thus more liable to injure her litter. The ration may be adjusted by reducing the amounts of grain, and increasing the nitrogenous roughage. Introduce bran into the grain ration. The increase in bulky foods satisfies the appetite and supplies the much needed protein.

Provided the sow is in perfect health there will be little difficulty at farrowing time, and she will require comparatively little attention further than to see that the young pigs are able to take their first meal, and that the amount of straw in the bed is limited and clean. A plank guard should be placed six inches to eight inches from the floor around the side of the pen to keep the mother from lying on the little pigs. After farrowing the sow should be left quiet for at least twenty-four hours. No food should be given,

only an occasional drink of water that has had the chill removed from it. The second day a very light slop may be given, and from then on the feed gradually increased. Young sows may be placed on full feed in two weeks, older sows may be delayed longer. There is always a danger at this period of producing an oversupply of milk by over feeding. As the little pigs reach the age of from two to three weeks this danger is removed, and the sow may be placed on a full ration.

It should be remembered that at this period the food must be of a highly developing nature. The food must develop the bone, muscle and tissue of the young pigs through the agency of their mother.

At the age of three to four weeks the young pigs begin to eat a little of their mother's food, and as the mother's milk does not increase they should be encouraged to eat either with their mother or by themselves. A separate trough in which is placed a thin slop of skim milk, shorts and low-grade wheat flour is excellent.

At the age of six weeks the young pigs should have learned to eat for themselves, and may be weaned. This is the critical period in the young pig's life, and the change must be made cautiously and gradually. Remove them from their mother for a few hours every day, lengthening the period each time until in a few days they are removed entirely.

The sow should now be removed out of hearing, and in a few days she will dry up completely. Increase the amount of skim milk and meal for the little pigs to make up for the loss of the dam's milk. They will require to be fed three or four times a day for a couple of months. Pigs at this age require a high protein ration with considerable mineral matter. Some water should be added to the skim milk, and small amounts of tankage or animal meal will aid mineral matter to the meal ration of shorts and wheat flour. Skilled feeding at this period, combined with clean quarters, fresh air and exercise, go a long way to the production of cheap pork at six months of age.

Macdonald College, P. Q. A. A. MacMILLAN.

Big Pigs and Young.

Editor "The Farmer's Advocate.":

Seeing that your columns are open for discussion on the pig-feeding question, my experience may be of interest. I notice that some of the feeders who have written feed chop dry, and would not think of feeding it any other way. I fed some in this way years ago, but gave it up, because I considered that the pigs wasted too much. One of the writers said he had pigs weigh 250 pounds at seven months of age, and thought he was doing pretty well. I nearly always get my hogs to weigh 250 pounds between six and seven months of age, and one lot sold recently, three in number, tipped the scales at 1,090, an average of 363 pounds at seven and a half months of age. These pigs were not fed any dry meal. They were fed three times a day, morning, one-third oats and two-thirds barley chop ground together, soaked from the night before; at noon, corn in ear, and at night chop again soaked from the morning. These pigs were not shut up in a pen that had an upstairs sleeping place, but had plenty of room in two pens eight feet by twelve feet. They were along with nine others, and all fed out of the same trough. Middlesex Co., Ont. ROBERT WEBSTER.

[Note.—These contributions are becoming more a battle of weight at a certain age than outlines of feeding methods. Few correspondents have given any figures showing how much feed of the kind they were feeding it takes to make a hundredweight of pork, and few have outlined the amounts of feed required by pigs of various ages.—Editor.]



Full and Contented.

A roadside scene in P. E. I. The road is not the best place to pasture the cattle, but they keep down some weeds and unsightly herbage.

A Pig Feeder from Early Life.

Editor "The Farmer's Advocate.":

"The Farmer's Advocate" has asked for experience in hog feeding, and as I have been on the job since I was about ten years old, perhaps, I may have learned something good enough to pass along. The reason I started so soon to find out what the pig's nature demanded was because my father was away feeding the two-legged race on latin and other roots, and putting the curl on the tail of the little fellow in the pen fell to me. My first recollection of hog feeding is seeing my grandfather with a wooden yoke, across his shoulders, on which hung two pails filled with boiled peas from a huge cooler hanging in the stone chimney of the old house. That yoke set me thinking, is the farmer merely a beast of burden too tired to think, and letting others tell him that the manure from the hog-pen was profit enough for him, and that the feed he grew cost nothing? My father had taught me differently, telling me that next to the gospel ministry farming was the noblest profession in life, living near to nature. But to return to the hog, those boiled peas with a liberal admixture of wheat bran for the breeding stock was a balanced ration that in my humble opinion has never been excelled. But the older generation is gone, and with them the boiled peas. Peas are hard to harvest, and this year the price is far above the hog. Beans being so scarce, the pea has to take their place as human food. Next to boiling we tried soaking whole grain, but this did not prove very satisfactory, as much of the grain was undigested. Then came ground provender with the suspicion that when the farmers' grain fell through the hole in the floor of the mill only about half of it came above the ground again, and the old story of the simple boy was much in evidence. The story is this: A miller asked a simple Scotch boy, "Jimmie, dae you ken anything?" "O aye," says Jimmie. "Weel Jimmie, what do you ken?" "I ken the miller has braw pigs," and "Jimmie, what do you ken?" "I dinna ken at wha's expense they are fed."

Then came the day of the farmers doing their own grinding and this forced the mills to grind for so much a bag, and then to keep greedy farmers from bringing peas in salt bags to be ground, the rate was changed to so much per hundredweight, generally six cents. This works well. And now what to feed? Many farmers think if they have the feed it will pay to feed hogs, but would never think of buying hogs and buying feed, forgetting that the grain in their own granary is worth the market price. Others go to the opposite extreme and pay a dollar and a half to two dollars for shorts and low-grade flour, when No. 1 wheat is selling for less money, and last year some were feeding oats worth nearly two cents per pound. The remedy is for farmers to use brains, pad and pencil more, find out what mixture makes a balanced ration, and buy the cheapest if it is not grown at home.

We charge our hogs with home-grown grain at market price, so that we know exactly whether "piggy pays the rint" or not. The money-making feed this year has been corn and shorts, equal parts. So much for the feed, and now how to feed it. In this day of dear labor, throw away your grandfather's yokes and quit carrying pig feed anywhere from twenty to one hundred yards. Either bring the hogs to the feed, or have the feed near the hogs. Often water could be piped into the feed passage into a tank or barrel. We solved this problem by boring a fourteen-inch hole in the clay till we got water close to the pen, as out floors are all cement there is no soakage into the well. For curbing we put a sewer pipe about eight feet long to keep the surface clay from falling in. An iron pump completes the job, and does not cost much. A large box or bin for provender in the feed passage close to the trough, and a man can feed twenty hogs in less time than he could feed two by the old system or want of system.

And now for the trough, we used to use a plank trough in a rather dark pen floored with plank. There were a lot of fat rats running around, but the hogs never seemed satisfied. I took a lantern and investigated, finding a rat-hole cut through floor and trough piping the feed to the rats below. Who says rats don't reason? Next we tried the so-called steel troughs, only to find that they rusted out quickly if not kept in constant use. The ideal trough is cement, as the hogs cannot overturn it nor eat it out. We made ours as follows: The bottom board between pen and feed passage happened to be six inches high, so we set another board parallel with this fourteen inches back in the feed

passage. As the floor was cement we just filled the corners of this box with cement, forming a round-bottomed trough six inches deep and twelve inches wide the whole width of the pen. We just left the box there and placed another six-inch board on edge of trough next the feed passage, making a convenient height on which to rest pail emptying in feed. Then we hinged eighteen inches more of partition to swing up when we want hogs to feed, and fasten down with short board across trough while putting in feed. The upright stays which keep the trough in place keep this swinging front from rising too high, and the trough is thus closed in except the side where hogs feed. This kind of trough has many advantages, hogs can not root out feed, cover can be adjusted any height to keep little pigs from standing in trough, as soon as one feed is done another may be put in trough and kept till wanted, a farmer can feed his hogs without soiling his clothes, or a child of five years' old can feed them, as all he has to do is pull out the little board across trough and hang up the chain. The hogs do the rest. For hogs over two hundred pounds the swinging front would need to be a little higher.

As the bacon hog is our specialty, what follows as to feed applies to him. Our experience has been, the less room a hog has the quicker he grows, and we would like to suggest that some of the experimental farms do some crate fattening of hogs as well as chickens. We want no pasture runs for bacon hogs. Our aim is to sell a bunch of hogs weighing two hundred pounds each every six months, some have done better, but this is a good average. Take the little pigs five or six weeks old, and, if they have not been taught how to feed, throw a little whole wheat in the pen, and put some milk warm from the cow in the trough. After they have learned to eat well, feed skim milk or buttermilk with a little ground wheat or barley or buckwheat, and you will have no crippled pigs.

How often to feed is mostly habit, we like to feed four times till they are about three months old all they will eat clean, then three times, a couple of months longer, and the last month twice if often enough if they are getting heavy feed like corn or peas, with a feed of roots at noon, and also all the hay chaff or clover hay they want. If the milk is scarce a good feed is ground corn and shorts equal parts, a pail of water to a pail of meal mixed in trough. No slop for us any more or dry feed. We used to give drink first and then feed dry meal till we killed some hogs that way, as some pigs will not drink much then gorge themselves with the dry meal, and, as Prof. G. E. Day has pointed out, carry mouthfuls of meal and scatter it as they run to look for something better. The above is for winter feed; for summer some green clover, peas, corn and roots fed in the pen will cheapen the ration.

And now a word about profit, prices and packers. At present prices, nine cents live weight to the farmer, he makes, at present, prices of feed about five cents per hog per day for care, rough feed, as hay, roots, milk, etc., and yet some people think hogs are too high. Farming is the only business I know in which someone else fixes the price of the finished product regardless of the cost.

We have done our share of the cattle trade but have not dealt in hogs, but our opinion is that if the packers don't want their plants idle half the time they will have to plan some measure of co-operation with the farmers, say eight cents the year around, and I think the increased production would keep the price from going higher, as Ontario is particularly suited to produce the best bacon at a fair price. To this they may object that they can not control the export price, but as they already control the quickly-growing home market they could use the export as a slaughter market if necessary.

Lanark Co., Ont.

J. W. ROSE.

Shorthorn Record of Performance Established.

The Dominion Shorthorn Breeders' Association has virtually completed arrangements for the official inspection and registration of Shorthorn cows and heifers entered for official test. The standards of production entitling to record are practically fixed, but have to be approved before being printed and distributed. They are not high, as it was thought best not to start too high. Any breeder having a registered Shorthorn cow which he wishes to enter for record of performance test, should send the name and number of his cow to W. G. Pettit, Secretary Dominion Shorthorn Breeders' Association. Visits of inspection will be made the same as for other breeds of cattle, so that any animals not entered will be eligible for the record, providing their production equals or exceeds the minimum of milk and butter fat set for mature cows and heifers of different ages.

Founding a Herd.

Whether the breeder commences with grade cattle or pure-breds it is necessary that he exercise good judgment in purchasing the cattle which are to be the foundation breeding stock of the herd. This is more particularly true of pure-breds than grades, because the buyer must study pedigree as well as individuality. In the case of the pure-bred it makes little difference how good the pedigree may be if it is not a good individual it is not good enough for founding a herd, and no matter how typical the conformation may be if the pedigree is questionable in any respect the animal does not fill the bill and should not be placed in the herd.

But given that the animal and pedigree are all that could be desired, what is the best animal to buy? An Old Country contemporary recently recommended yearling heifers because they are usually not over-fat having grown rapidly, have generally never been bred, and so are at least free from abortion. These are points in favor of the yearling which, very often, due to her early age and comparatively low condition and uncertainty as to breeding ability sells at a reasonable price, but there is an uncertainty about even the yearling. She may never breed.

The calf is even a more uncertain proposition. One can scarcely guess her outcome.

The two-year-old heifer bred and showing signs of being safe in calf looks good to most buyers and is a reasonably safe buy, providing she is of the right kind. Abortion and the chance of her being a poor breeder are the only gambles in her case, but a two-year-old heifer not in calf, especially if she be very fat, is not so attractive. Of course, if she has never been bred, there is good chance that she will breed all right, but if she has been served one or more times and has not conceived there is a great chance that she will not be a breeder.

Three-year-olds which have never had a calf are not usually very sure, and the buyer takes a big chance with them, but cows or heifers of this age which have produced a living calf or are carrying a calf, providing all other conditions are satisfactory, are all right.

One of the best of all ages is the young cow which has had two or three calves, breeding regularly every year and producing the right kind of offspring. Bought with calf at foot, or just before parturition, such a cow is an excellent beginning for a herd. Tried and proven right there is no great element of chance in her purchase. The buyer is not buying a "pig in a poke." There are profitable and unprofitable animals in all ages, but the cow which has proven her worth, is a comparatively sure proposition, providing she is not too old. Of course, such often sell for higher prices than younger things, but in the big sales of pure-bred stock, the highest prices are very often paid for young things in very high show-yard condition. In founding a herd the average man should avoid these. They cost too much money for him, and are valuable to established breeders more as an advertisement than for their actual breeding worth. They are bought to win prizes and bring their owner's herd before the public. The man founding a herd has no established herd to advertise, and is in need of breeders rather than show-fitted stock. Do not gather from this that the beginner should not buy good things. He should get the best, but very often the mother of one of these high-priced show-yard propositions, again in calf, or with calf at foot, may be had for one-quarter or one-half the price her highly-fitted heifers bring. What she has done once she should be able to do again, and the fact that she can produce the good ones, and is producing them, should be the dominant factor which should cause the man in search of foundation stock to take her. By all means buy good stock, but good stock does not necessarily mean that it be loaded down with fat. Yearling heifers in good breeding condition, two-year-olds or three year-olds well-gone in calf, or older cows with calves at foot, or safe in calf, are all good propositions for the man in search of female foundation stock, but none are better than the tried and proven cow if she can be bought. Very often it is difficult to get the breeders to part with such animals, but whatever age is bought, always aim to see that the chances of the reproductive organs being injured by over-feed, or by disease, are at a minimum, and never buy cattle which are very much too fat.

"Ready-to-wear" roads are quite justifiably advocated by a correspondent of "The Farmer's Advocate," who says: "Scientific road-making will not stop short of a smooth surface, a finished job, a ready-to-wear road." Many a jaded horse and weary driver, many a farmer and back-aching farmer's wife, will "amen" the proposition to compact stone and gravel roads by other means than narrow vehicle tires.

THE FARM.

How a Simcoe County Farmer Grows Clover.

Editor "The Farmer's Advocate":

With us clover is the basis of all our farming operations, and is by all odds the most important, if not, the most valuable crop we grow. This is true for three reasons: First, it yields a large amount of excellent stock food, without which it would be impossible to feed cattle and sheep to any profit; Second, the roots and stubble and the whole crop, where we plow it down, adds to the humus and the nitrogen in the soil, and in this way increase the yield of other crops grown; Third, it reduces the amount of cultivation required to keep the land clean, by occupying the soil after other crops have been removed, and thus preventing weeds from getting a start. These three advantages of the use of clover are so well understood that they need no explanation.

We follow a regular four-year rotation, as follows: first year, clover; second year, oats; third year, corn, roots and peas or rape; fourth year, barley and wheat seeded down. We make a variation in this rotation where circumstances warrant it, by seeding the second year with the oats in preparation for corn. The land thus seeded is manured during the winter if possible, and the clover allowed to grow till about May 20th when it is turned down with the manure, the land worked fine on top and planted with corn. This makes a very excellent preparation for corn particularly on heavy-clay land, and assists greatly in building up the soil and enriching it, as well as improving its physical condition.

In a regular way we seed down with fall wheat and barley. These are the best grain crops to seed with because they are got off the land early, and so allow the clover a good chance to grow a good top before winter sets in. The mixture we use is six lbs. red clover, one lb. alsike and two lbs. timothy per acre, except in the case of clover that we intended for seed, when the alsike is omitted. My experience is that this is quite enough seed where the land is in good condition, and will produce a better crop than where more seed is used. It is quite possible to seed too thickly even with clover, and I have seen instances where the plants appeared to be too thick, and were spindly and short in consequence. Of course, if your land is poor or in other respects out of condition, it would be wise to use a greater quantity of seed: I like a little alsike and timothy with the red clover, because the mixture makes finer and sweeter hay than where red clover alone is used, and also because the alsike and timothy are more resistant to frost than red clover, and where unfavorable winter or spring weather kills the red clover in patches these remain to hold the land.

In seeding with fall wheat we sow broadcast as soon as the ground is dry enough, and follow with a stroke of the harrow. We used to sow the timothy with the wheat in the fall, and broadcast the clover before the frost was out of the ground and even on the snow. This gave good catches of clover and timothy, but, of course, it was not possible to harrow the wheat in the spring. The harrowing is undoubtedly good for the wheat, so we sow later and harrow the seed in.

In seeding with oats or barley we sow as early as possible in the spring having the ground in as fine tilth as possible, and sowing in front of the discs following by a stroke with the harrows. The oats are sown at the rate of six pecks per acre, and the barley five pecks. We get good catches with both grains.

I do not approve of pasturing the young clover closely in the fall, or with heavy animals at all. The hoofs of cattle destroy more plants than their teeth, and I never allow them on the young clover at all. If there is a good growth of top I pasture with lambs, but not closely. Some claim that lambs or sheep will bite the crown out of the clover plant. My experience is that they will not do so unless they have first eaten all the leaves. They will not injure the clover as long as it is not pastured too closely, and they are too light to injure it by tramping. Perhaps the chief injury from lambs is due to the habit they have of making beaten paths around the edge of the field, but this is inconsiderable.

We have had but one failure to get a catch in the last twelve years. That was, I think, 1906, when a drouth and hot weather after harvest burned the young plants up.

Simcoe Co., Ont.

E. C. DRURY.

Lightning and Lightning Rods.

Prof. W. H. Day, of the Department of Physics, of the Ontario Agricultural College, has been collecting reports on the damage done by lightning for the past eleven years, and has found that of all buildings reported struck 55 per cent. are burned, whereas, of buildings properly rodded, only one in six was burned or a little over 16 per cent. Thus it is seen that an unrodded building if struck is more than three times as likely to be burned as a rodded one struck.

Considerable work was done during 1912 in connection with various mutual fire insurance companies in Ontario to prove that lightning rods have a very important function in the prevention of strokes. Eight of these companies were all that were able to furnish reports complete in every particular. Although the first six companies insured 5,613 barns, the number rodded being 1,538, which makes 27.4 per cent. twelve barns were burned, among which there was not one that was rodded. These same companies had 72 barns damaged, of which one was rodded. Five companies insured 4,023 houses, the number rodded being 592, which makes 14.7 per cent. Three houses burned, of which none were rodded, and thirty-four were damaged of which one was rodded. The last two companies insured 1,008 barns and houses combined, the number rodded being 122, making 12.8 per cent. These two companies had four buildings burned and ten damaged, with not a rodded one amongst them. Taking the whole eight companies together they insured 10,644 buildings, the number rodded being 2,252, which makes 21.1 per cent. As these companies renew their risks every three years, the total number of rodded and unrodded buildings insured is probably about three times the figures just given. They had nineteen buildings burned of which one was rodded. Adding the burned and damaged buildings together we see that these companies had 135 buildings struck by lightning, of which only two were rodded, which makes 1.5 per cent.

Of the buildings insured by these companies last year 21.1 per cent. were rodded. This may be taken to represent fairly accurately the percentage of rodded buildings in the territory covered by these eight companies. If the rods had no effect one way or the other, we would expect that 11.1 per cent. of the buildings struck would have rods on them. For every 79 unrodded buildings struck, we would expect also to find 21 rodded ones struck; and for 133 unrodded 34 rodded ones would be due to be struck, but only two were actually struck. Are we not justified in saying that in all human probability the rods prevented strokes on 32 out of 34 rodded buildings?

Or, looking at it another way, out of every 7,000 unrodded buildings insured by these eight companies 37 were struck by lightning, while out of every 7,000 rodded ones only 2 were struck. Are we not therefore justified in saying that unrodded farm buildings are more than 18 times as likely to be struck by lightning as rodded ones? These reports covered all kinds of rods in use in Ontario. From this we are led to believe that lightning rods are a potent factor in the prevention of strokes.

These points are taken from an address delivered by Prof. Day before the Mutual Fire Underwriters, and while dealing with it he again emphasized a number of points in the construction of lightning rods, which readers constructing such would do well to note.

1.—Ground Wires: For an ordinary building not an "L" or "T" two ground wires could be used, preferably at corners diagonally opposite from each other. These ground wires should be sunk far enough into the earth that they are always in perpetual moisture. On an "L" or "T"-shaped building there should be three ground wires, in other words there should be no "dead ends" in the system. The owner should be present and personally see that the ground wires are actually put down not less than eight feet in ordinary soil, and more in light soils.

2.—Cable: Beginning at one "ground" the wire should extend up the corner, make a gradual turn at the eaves, go up the edge of the roof to the peak, along the peak to the other end, down the edge of the roof to the eave, and down the corner to the other "ground." All turns should be rounded rather than angular.

3.—Points: At intervals along the ridge uprights should be placed with points that will not corrode. On these uprights ornamental devices of one kind or another, such as bright balls, are frequently placed. It has been stated by three different companies manufacturing rods in Ontario that these fixtures are only ornamental, and that they are of no use in telling whether a building has been struck by lightning or not.

4.—Attachment: The rods should be in metallic connection with the building. Metal clips, which surround the rod and may be nailed to the building, are used. It is considered best

practice to have these clips so made that they hold the rod about one inch out from the building. The reason for this is that if the rods are placed so that they lie flat against the building there is danger of inflammable material such as straw, chaff, etc., collecting between the rod and the building. Should the rod become highly heated with a flash, this inflammable material would be likely to catch fire. With the rods held out about one inch there is not much likelihood of this occurring. This method of attachment is in direct opposition to that practiced when lightning rods were first used. It was then considered desirable to insulate the rods from the building by glass or earthenware insulators. In a thunderstorm the entire outer surface of the building is charged by electricity, and by having the rods in metal connection with the building the charge is conducted by the metal to the rods, and thence to the point where it leaks off and neutralizes the opposite charge existing in the cloud, thus preventing strokes. When rods were first introduced their preventive function was overlooked, and consequently insulators were advised.

5.—Material: For a long time copper was considered the only material for lightning rods, the reason being that copper conducts a steady current of electricity six times as well as iron, the only other material then considered a competitor. However, between the years 1888 and 1892 Sir Oliver Lodge carried on an investigation of the phenomena of lightning, and to his surprise, as well as to that of many scientists and the whole lightning-rod fraternity, he found that an iron will carry off a sudden rush of electricity better than a copper of the same size. Every discharge or current of electricity induces an opposite current along the same path. This is known as "self-induction." This self-induction acts as a resistance to the current. While iron has greater resistance to a steady current than copper, yet the self-induction in the iron is much less than in copper in case of a flash of lightning or an electric spark. Basing his judgment on this fact, Lodge considered and stated that, in his opinion, the day of copper lightning rods was done, although he added, as a rider, that in cities and towns where coal was burned, he thought the iron rods would not prove durable owing to the action of the fumes upon the zinc coating of the galvanized wire. I am inclined to think that even in the country the question of durability is an important one. Galvanizing is sometimes poorly done, and even if well done corrosion takes place wherever the rods are cut, e.g., at the ends or wherever the rods are scratched. The same does not apply to copper wire.

But it seems to me that in this judgment Lodge paid attention almost entirely to one duty of lightning rod, namely, to carry off the flash in case the building is struck. Judging from the reports above presented. We have seen the lightning rod has another and a greater duty to perform, namely, the prevention of strokes from occurring. To prevent a stroke there must be a gradual flow of electricity along the rod to the point and into the air. Now for steady current copper is six times as good a conductor as iron, hence, for preventing strokes copper is the best. Taking into consideration the question of durability, I am inclined to believe that, on the whole, copper is a somewhat better material for rods than is iron. However, there is little doubt that a building rodded with iron rods is protected in a very large measure, as indicated by the fact that our reports cover all kinds of rods.

6.—Metallic Bodies in Buildings: Lightning-rod companies here vary somewhat in practice. Some connect all metallic bodies to the lightning rods, others do not. I am inclined to think the former is a better practice. If the metal body is a long one like a steel track it would probably be best to attach it to the system at both ends.

7.—Systems: All the cables on a building should be connected in one system. Sometimes it is found that on a "T"-shaped building, for instance, the rods on the one part are not connected with those on the other part. Numerous instances are reported where damage has occurred between these two systems, the lightning striking the one system and part of it jumping across to the other. Consequently, divided systems should be scrupulously avoided.

Does Not Harrow after Drilling.

Is it best to harrow a grain field after drilling? John Hunter, the well-known stockman of Lambton County, Ont., believes not, and, discussing the point in our office the other day, assigned reasons based on many years' observation and trial. When the land is not harrowed the grain is, of course, in a shallow furrow made by the drill disk or hoe. It comes through more quickly and uniformly than if harrowed. Then in the case of fall wheat the gradual weathering down of the ridges between the rows

fills a certain amount of silt around the roots, and in a measure repairs the injury by any heaving which may have taken place. Even with spring grain the working down of the ridges helps to mulch and protect the roots, he believes. Mr. Hunter always sows his grass and clover seed ahead of the drill. He much prefers the disk drill. He never likes to roll his grain fields after sowing without harrowing immediately to create a dust mulch.

Effect of Cold Storage on Prices.

Cold storage in relation to prices is the subject of a recently issued bulletin prepared by George K. Holmes, Chief of the Division of Production and Distribution, Bureau of Statistics, U. S. Department of Agriculture. This is supplementary to a former bulletin in which business features of cold storage were treated. The products embraced in the treatment of this bulletin are fresh beef, mutton, and pork, and dressed poultry, butter, and eggs. Wholesale prices were ascertained as far back as 1880, and the whole period of 31 years covered by the price statistics is divided into two primary periods at 1893, the approximate time at which cold storage had grown to be important in its influence upon consumption.

In a grand summary of results of the investigation of changes in public levels, the conclusion is expressed that "the general, but not invariable, rise of prices to a higher level, when prices are expressed in cents, readily appears; and also an almost invariable tendency toward a higher price level when prices are treated as index numbers, when the last period of years, extending from 1902 to 1911, is compared with the first period."

"Another important topic of this report relates to the tendency toward, or away from, uniformity of prices throughout the year because of the introduction of cold storage. There is a general tendency toward uniformity of prices for four of the commodities mentioned, and there was a contrary tendency for fresh beef and fresh pork. It is, therefore, apparent that the contention of the cold-storage interests that cold storage has counted for uniformity of prices is largely true, but it is not true for all commodities nor for all comparisons of years and periods of years."

Reinforcing Barn Approach.

Editor "The Farmer's Advocate.":

I noticed a question asked, in a recent issue, about building an approach to a barn with cement. I expect the enquirer intends putting roots under the cement. He has asked how many railroad rails he will require. As far as railroad rails are concerned it is not necessary to put them in. I built an approach something like the one that is meant in question, nine feet four inches high at barn, and eight feet at dirt, and sixteen feet long, and twenty-two feet wide. I put on the top of the approach with cement eleven inches thick in centre and eight inches at outside, and all I used for reinforcement was five half-inch rods sixteen feet long and about nine rods of coiled wire, and my approach or root house is standing all right. I think it will carry almost anything. It will carry a twenty-two horse-power engine while it is up to draw the separator out of the barn, and a twelve horse-power gasoline engine stood on it for a day and a half threshing timothy, and it never so much as trembled. I consider that railroad rails are all right, but they would have cost me twenty-eight dollars, so I have saved that much. I consider my root cellar cost me about thirty-one dollars all told. If any of your readers wish to get any further particulars in connection with this, I will be pleased to give them if possible. I put a coat of coal tar on the top to keep the rain out. Rain water soaked through before I took this precaution.

Perth Co., Ont.

G. R. URQUHART.

Special Preparation for Level or Clayey Lands for Corn.

Where either heavy-clay land or level land not underdrained is to be used for corn, it is not infrequently advisable to make special preparation by plowing and working in a special way.

The land should be plowed in nicely rounded ridges exactly ten feet six inches from centre to centre. All necessary cultivation should be so done as to preserve the rounding surface of the ridges, and the dead furrows should be kept clean and should open into a well-kept ditch, thus insuring good drainage.

In planting, the first row should be run down the middle of the ridge and two others on the same ridge, one on each side forty-two inches away. Thus the rows on the whole field will be uniformly three feet six inches apart, and always clear of dead furrows.—[From a paper by J. H. Griedale.]

Use of Gasoline Power.

Editor "The Farmer's Advocate.":

Up-to-date farmers throughout the Dominion are at last awakening to the fact that to run their farms economically they must have a cheaper and more reliable means of power than hired help, becoming more difficult to obtain, or the slow moving horse.—With hay at \$18 per ton and oats at 60 cents per bushel, a team of horses is an expensive item in the upkeep of a farm, especially if they are idle two or three days out of every week, and besides a horse will only work a certain number of hours each week, but whether working or idle they will have to be fed, and feed this year means more money than ever to the farmer, whether he sells it or converts it into beef or pork.

Owing to the above conditions, farm power is becoming more expensive and costly, and it behooves every progressive farmer to find a cheaper and more reliable means of power. This is found in the gasoline engine. Already on the larger farms the gasoline engine has found a place of its own, and on some of the more progressive farms there are from four to eight engines, ranging in size from the small two-horse power, for use around the dairy, for pumping water, washing, sawing wood and other small jobs, to the massive forty-horse power tractor, which in spring is used to do the plowing and cultivating, and at harvest to haul a string of binders, and afterwards to do the threshing, and run the ensilage cutter.—But it is not of the gasoline engine on the large farm that I wish to deal, but rather of its usefulness to the man who tills a comparatively small amount of land. Herein lies its chief recommendation that it may be used equally as well on the small farm as on the large one. Almost any farmer, no matter what the product of the farm may be, can find a profitable use for gasoline-engine power. A small engine can be used to advantage on the small farm, while on the large farm, use will be found for several.

When a farmer begins to consider seriously the purchase of an engine he will often ask two questions "what size will I buy?" and "what will this size cost me?" These questions he may answer for himself by enquiring first of some manufacturer of farming implements as to the amount of power required to run the machines he intends to use. Then when he has an idea of the amount of power he will need, he can ask some reliable engine-maker the cost of an engine of suitable power. For the average sized farm a six-horse engine will supply power enough to run the forge, a work-shop, drill, etc., for the repair of his tools and implements, a churn, separator, butter-worker, pump, and wood-saw and also a very important outfit on the farm, namely, the electric generating plant, for supplying light for farm buildings and house, and power for washing machine or heat for toaster and flat-iron. And thus the gasoline engine gives the farmer privileges and conveniences of the city, besides the use of electricity for heating and lighting purposes, which will help in eliminating the risk of fire.

The cost of a gasoline engine varies somewhat with the attachments and equipment furnished. Ordinarily an engine will cost about \$60 per horse-power for small-sized engines. The portable outfits cost about one-fifth more, and a sawing outfit will cost about \$50 more than a portable gear, but the portable type is the most satisfactory to use as it can be moved easily from place to place as required. But if there are a large number of small jobs to be performed about the farm it is better to purchase two small engines.

In using the engine about the dairy it is best to use a line-shaft large enough to accommodate belts from the separator, churn, butter-maker and pump. By using pulleys of the right sizes the correct speed for each may be obtained, this is a most essential point to bear in mind when setting up the engines, as a few revolutions per minute, more or less, will make a large difference in the satisfactory running of fine-gear machines such as the separator.

In the barn the engine will do most satisfactory work in operating the thresher, fanners, grinders, root-pulper, cutting-box and bone-cutter. It is best to have such machines as will be convenient to operate at once connected on the line-shaft, that is as many as the horse-power of the engine will run without overloading it. The normal speed of an engine is the velocity or number of revolutions of the fly-wheel per minute that will best enable it to carry its full-rated load constantly. Supposing for instance that your engine will carry a six horse-power load of 380 r. p. m., with the greatest fuel

economy, you get more power with increased speed, but it requires more fuel, and unless the value areas are large enough, the economy will not be as good. The normal rating by manufacturers should be the best speed for greatest fuel economy.

It is true that at a higher speed more power may be developed, but it will not be in keeping with the increased amount of fuel used. You may get more work out of a poor horse by feeding him with plenty of fancy selected food, but he won't last long, whereas with a better horse you can get the same work done on more plain and less expensive food and he will last longer.

An engine used for sawing cord-wood, grinding grain, and cutting ensilage, must be built rigid and strong. For wood-cutting the outfit may be mounted on wheels for the sake of easier transportation. Of course the amount done will depend on the kind of wood sawn, soft wood will be easier sawn than hard wood, and more will be cut if the sticks are small. A three horse-power outfit will keep two or three men busy and will saw soft wood up to 7 inches in diameter. For feed and ensilage cutters, the power required varies greatly with the size and make of the cutter and the height to which the fodder is to be elevated and whether a blower or carrier is to be used. Self-feeding cutters with carriers and twelve-inch knives will require from six to eight horse-power. If a blower-type of machine is used the power will have to be increased about 50 per cent. A great deal of care should be exercised in the selection of an engine for grinding purposes, especially to make sure of having sufficient power, as feed-grinding is a steady drag, being one of the hardest kinds of work. Each horse-power will grind from two to five bushels per hour of corn, depending upon the amount of moisture in the grain, the make of the mill, and the fineness to which the grain is to be ground.

In running the dynamo it is best to have it connected to a line-shaft, so it may run while the engine is doing other work. The new Tungsten lamp lately put on the market is the best to use as it gives better light with a smaller consumption of fuel, and besides is thoroughly safe and steady when burning.

In the barn the engine will perform a large number of jobs better and in less time than if done by hand. Here also it is best to use a line-shaft and have as many machines running at once as the power of the engine will warrant. The threshing mill may be run at once, and the farmer will find his grain of better quality and cleaner than if done by hand.

It is in the dairy that the farmer will find his engine most useful as it will be used morning and evening to furnish the power for running the separator, and during the week it will be found indispensable for running the churn, butter-worker and pump. Near the dairy a small building for the housing of the dynamo and storage battery will be found necessary. It should be so situated that when the engine is used for the dairy machines, it may also be used for the dynamo, thus doing away with the extra cost of fuel used when dynamo is run separately.

In conclusion I wish to say that whenever it is possible the farmer who grows grain, or converts his milk into butter on his farm, should at the earliest opportunity purchase an engine of reliable make, suited to his requirements, which, of course, will vary according to conditions mentioned above.

Cape Breton, N.S.

JOHN H. MacDONALD.

Clay Tile vs. Cement Tile.

Editor "The Farmer's Advocate.":

The article entitled "Investigations re Cement Tile," in your issue of April 10th is, I believe, entirely true. I have made experiments with clay-tile, the same as stated in the article, some time ago and found about the same results.

There are people in this locality believing that a cement tile does not drain because it sucks no water as clay-tile does. This is a mistake. The water never goes through a tile in any considerable quantity. It must find its way through the joints. Anybody can understand that water, standing on the surface seeks every way possible to escape to a lower level; if it cannot flow over the surface it makes its way into the ground. If soil is undrained the water soon fills it, and consequently it cannot become dry and fit for seeding in the spring, with the other surface lying on a higher level. If on the other hand, soil is drained, the water makes its way through the joints of the tile and runs to the outlet, the joints of the tile acting the same way as a leak in a pail or cask. That it is immaterial whether clay or cement tile are used for farm draining purposes is my belief.

Waterloo Co., Ont.

SUBSCRIBER.

Plant food requires to be digested just as much as does animal food, and the soil is, in reality, the stomach of the plant.

Ready-to-Wear Roads.

Editor "The Farmer's Advocate.":

It is an indication of a healthful public spirit that the attention of the country is so earnestly directed to the good-roads proposition as it is at the present time. Everybody wants good roads. The man who is going to run for office and the man who walks out to vote for him, are all alike in their claim for a road that will facilitate progress. Whether a man rides a mule or an auto, good roads are an essential to success in making a conquest of distance. Good roads are a good thing, and good roads we must have. There is no getting around it, we must get at it with pick and shovel and teams, and place load after load of gravel and stone upon the road. That apparently is the way to make good roads—first make them well nigh impassable, trusting that time and tires will do all that remains to be done. That is making good roads as you go along. Unfortunately, however, the purpose of driving is generally something very different from packing gravel. Making roads good by this wear and tare process is not as good as it looks, though the look part is far from being considered favorable. What is wanted is ready-to-wear roads. We have ready-to-wear clothing and ready-to-wear boots and ready-to-wear hats and caps. What are we thinking about that we are content with anything short of ready-to-wear roads. He is a poor tailor who said; "your coat will come to you" and he is a poor road-maker who says "the road will come to you." No doubt it will, seeing you cannot keep away from it. It is so that with present road-making machinery ready-to-wear roads are not practicable. Let the inventive genius of the country be turned in this direction to evolve some method of packing road material that will be within the reach, from a financial point of view, of every municipality. It may be more expensive to make ready-to-wear roads, and it may not be. The initial outlay does not count the cost from both ends of the job. Suppose one hundred farmers go over a certain piece of road every day and it takes ten minutes more time every trip on account of fresh gravel unpacked, how much will that mean in a week or a month? When a person begins to figure up the time lost simply because roads are not ready-to-wear, the item of expense may be counter-balanced one hundred times. Wearing the roads into passable form wears out the buggy and wears the horses feet. It wears a woman's nerves and wears out a man's patience. It wears an automobile worse than anything it is true; but just now we are making an appeal to the farmer and would be very sorry indeed to prejudice the case by any unfortunate remarks however popular they might be in other circles.

Packing gravel with inch tires and horse's hoofs is a very unsatisfactory piece of work, and it is a slow piece of work especially in a dry season. It extends quite often through the summer months. Fresh gravel is a great big obstacle to pleasure driving at the very season when people are seized with the impulse to go somewhere.

Our fathers and grand-fathers made roads by putting on fresh gravel and then getting on top of it. Yes, but they got on the top of it with the heavy wagon which has been very much displaced by the lighter rigs. We are not to suppose either that they had crushed stone to deal with and they got on top of it with their bare feet or rubber tires.

A few years ago crushed stone of a coarse type was used freely on the roads in the vicinity of the writer, and of course, the people using the roads, tried to avoid coming in contact with the unpackable material, and for two or three years in succession there were many places where the King's highway was relegated to the ditch. Crushed stone and fresh gravel are both splendid material for good road-making, but the system of getting it in shape is what is wrong. We are making good roads by a bad process.

The heavy road-roller may be too ponderous for some roads and too expensive for some localities, but that is not saying that ready-to-wear roads are out of the question. Scientific road-making is not to be side-tracked until it suits the big road-roller to come our way. Scientific road-making will not stop short of a smooth surface; a finished job—a ready-to-wear road.

Bruce Co., Ont.

R. DEZELL.

Did Your Silo Blow Down?

A subscriber to "The Farmer's Advocate," recently called at this office asking if we heard of any concrete silos being blown down during the hurricane which visited Western Ontario on Good Friday. Several stave silos went down before the eighty-mile gale. Have any of our readers heard of a cement silo giving way before the wind?

THE DAIRY.

Export Trade and Prices.

One of the disadvantages of centralized creameries is that they break up the local industries, and the producer loses personal contact with the manager of the plant, observed J. A. Ruddick, Dominion Dairy and Cold Storage Commissioner, in recent conversation with a member of "The Farmer's Advocate" staff. He did not mean, he explained, that all the makers at centralized plants lost contact with the patrons in this way, but there was a tendency to do so.

Changed conditions are coming over the dairy business in Canada, and these new conditions must be met. It doesn't mean a decline necessarily. Home consumption is increasing, and prices have risen. United States producers have got more for their dairy products ever since they lost the export trade. Domestic prices have been maintained very often above an export basis. At many factories convenient to shipping points, there will be a demand springing up for butter, cream, etc., and it will be worth considering the chances thus arising. The new Government station at Finch, Ont., is a combined cheese factory and creamery, and it lately received an attractive offer for cream two or three days a week, during hot weather, from the Ottawa City Dairy, which wishes to supplement its regular supply on these days of special demand. This indicates the opportunities that will be, and are opening to various factories.

weeks. The first milk or colostrum of the mother acts as a laxative and stimulates the digestive organs, and if fed in small quantities three or four times per day, the calf's stomach gradually assumes a working capacity. After the first two weeks twice per day is often enough to feed, and at this period a gradual change from whole milk to skim milk should commence. When the calf is between four and five weeks old, it may be taking little of the whole milk and mostly skim milk. At this age grain should be added to substitute the fat of the whole milk. A combination that has proven its value is one composed of nine parts oatmeal, or oatmeal siftings (ground oats with the hulls sifted out) and one part oilmeal. This should be fed in small quantities at first and gradually increased until the calf is taking one-half pound per day, when it is two months old, in sixteen to eighteen pounds of skim milk. At the end of two and a half months three-quarters of a pound per day in twenty pounds of skim milk, and at three and a half months one pound per day in twenty pounds of skim milk. After this age the skim milk should not be increased above twenty pounds unless the calf is unusually large and growthy, when twenty-five will usually be the limit. The grain may be increased until the calf is taking one and a half pounds per day at five months, which will suffice until it is six months of age, when the grain will be changed if the skim milk is taken off.

Other combinations of grain may be used, but all should possess the requisite of being easily digested and palatable. They should also be of

a balanced nature to produce a part of the flesh-producing elements. In considering these requirements we find the combination of oatmeal and oilmeal within the bounds. Cornmeal with oilmeal has also been advised, but more care must be used in feeding cornmeal to young calves since it is of a heat-producing nature, and, hence, more liable to cause indigestion or constipation.

At six months of age the skim milk is usually taken from the ration, although it may be still used with good results for ten or twelve weeks. As soon as the feeds change the calf must depend upon dry roughage and grain, and should be taught to use them before the direct change is needed. At four and a half to five months

old, a small quantity of whole oats and bran should be fed in equal quantities by weight. Gradually increase the quantity until the calf is taking one pound per day at six months. After removing the skim milk, the grain fed should be made up of one part corn meal, two parts oats and two parts bran. Feed one and a half to two pounds per day until the calf is eight months old, when the rough fodders will gradually maintain it alone.

At three or four weeks of age the calf usually begins to take a small part of rough foods, such as hay. If a small quantity is left within reach it will help itself at leisure, and will gradually develop and strengthen the digestive system. When three to four months old, roots should be added to the ration unless a calf is on pasture.

Besides adopting a reliable feeding system there are other considerations of importance to be noted before success is insured. Among the most prominent are cleanliness and regularity of feeding. Many of the ailments of which calves are heir can be avoided if the stalls, mangers and pails are kept in a clean state. Also the milk should be fed in a sweet condition, and at regular hours each day. Then the question often arises as to whether it is advisable to feed two or three times per day, and if we note the systems and results we find more depending on the permanent adoption of one system rather than any advantage existing in one over the other.

The question of fall or spring calves is usually important. The calf dropped in the fall has the advantage of being born in a season when care is forthcoming above his spring-born brother. The disadvantages of winter feeding and cold weather are more than offset by the hot weather and trouble coming from flies. For the calf under six months it does not make much dif-



On Good Terms. Scottish milkmaids and their favorite cows.

Raising Dairy Calves.

Editor "The Farmer's Advocate.":

The success of the dairy farmer depends, to no slight extent, upon the careful rearing of the calves. The careful dairyman sees in every heifer calf the possibility of a cow that will not only replace a discarded member of his herd, but help to raise the average production. By properly choosing the sire and by carefully raising the calves, the dairyman who is compelled to start with a herd of ordinary quality, may, within a few years, raise the average production of his herd to a marked extent. But, if careless breeding and raising of the calf is not avoided, the resulting herd will be of low producing quality.

The dairy calf is almost always raised by hand, and, as a rule, on a ration largely made up of skim milk instead of whole milk. In sections where the cream is sold and the skim milk is available, calves can be raised that are equally as good as those nursed by the mothers. The poor results which sometimes accompany skim milk feeding are due to faulty methods and not because the cream, which has been taken out, is indispensable to the normal development of the calf. The casein and albumin are the valuable growth-making materials of the milk, and these still remain in skim milk. The fat or cream, removed by separation, can be substituted in a cheap form by adding grains.

As soon as the calf is dropped it should be removed from the mother unless it is of assistance in allaying inflammation in the udder, when it might be allowed to remain for one or two days. Start feeding it eight to ten pounds of the mother's milk for the first ten days or two

ference whether the roughage be grass or hay. In fact less gain is often had from grass on account of the offsetting influences of heat and flies. During the second six months grass usually gives the best results, and if all is taken into account the system of winter raising calves, or at least during the late winter and early spring months, is of the most important consideration.

Dept. of Agri., P. E. I. W. J. REID.

POULTRY.

Raising Geese.

Editor "The Farmer's Advocate.":

Raising geese is one of the most neglected branches of the poultry business in New Brunswick, and why it should be so is hard to tell, as they are more easily and cheaply raised than any other poultry on the farm.

Ten years ago a dressed goose usually sold at from fifty cents to eighty cents, and now the supply is not equal to the demand at two dollars to two dollars and a quarter each, and still it is a fact that there are less geese raised in this Province yearly. One farmer will say, "they are too destructive to crops," another will say, "they need too much running after as no fence will keep them, and besides I tried them one year and had no luck, I guess they are awfully hard to raise anyway," and so on.

I have raised geese ever since I began farming, and have found it to be one of the most profitable branches of the poultry business, even years ago when the prices for poultry were not half as good as at the present time. And the past five years the income from our geese has been unusually good. One year with another I have generally had good luck, and I have resolved to tell others how I care for them summer and winter, and perhaps it will help to serve this branch of the poultry business, not only in New Brunswick but throughout Canada.

The first thing to consider is the breed. I have found the Embden, or a cross between the Embden and the Chinese or African geese to be the best, as they are hardier, good layers, and their feathers are much superior to the Toulouse geese, although they are not so large. But this does not matter as they always sell by the piece never by weight. I allow two females to each male bird in the mating season, and am always careful to have them unrelated. Those over one year old are the best for breeding purposes, from that age up to twenty-five or thirty years. One lady, a neighbor of mine, kept a goose until she was thirty-five years old, but she laid a very small number of eggs each year the last five years.

The best time to select breeding stock is in November, before they are fattened for market. The goose should have a small short bill, a short neck but rather deep through the body, also small legs and feet, and a coarse voice. The gander should have a long neck, larger feet and legs and longer bill than the goose. The body should be rather flat and he will carry himself proudly. His voice should be sharp and shrill. During the winter a shed or pen with a little dry straw occasionally is all that is required, no matter how cold. They should be fed only twice each day until the first of March, with any kind of grain, vegetables or a small mash. About the first of March an extra feed should be given, and they should be allowed to run out at will all winter. The nests should be prepared in good time, flat on the floor in a dry warm place. They usually lay every other day. If the first layings are small it is a good plan to set them under hens, and make the old geese lay again, which they will do in two weeks. Before setting the geese it is wise to put some papers on the floor under the nests to guard against the cold, then place some horse manure or saw-dust, this will also make it warm and give the necessary moisture in the nests. Then lastly, after shaping the nest, put on the straw and feathers that the goose has prepared, they will then fix it to suit themselves and can be given the eggs a few hours later. Food should be placed where they can get it when they come out, and they should be allowed to go to the brook to drink and dampen their feathers, especially near hatching time, as it tends to soften the shells.

When they are about ready to hatch, which will be four weeks, the eggs should be placed in slightly warmed water daily, you can easily tell what eggs have live goslings in as they will move in the water, those that don't move can be taken from the nest, as they are either rotten or the goslings are dead. Be sure though, to try them two or three times in the water before removing them for bad ones. After they are all done hatching, give each gosling a little sweet cream and put the goose and her family in a sunny place on the ground where the grass is green as

they will not bear confinement very long. If you have some hatched with hens, after the youngsters are strong give them all to the goose, she will welcome them, and they will all gladly leave the poor hen to go with her. They grow much better and are less trouble. It is well to feed them for a while with a little corn-meal mixed and allowed to soak a couple of hours before feeding time, just a little is all that is required, they will not eat much. They can be turned out to pasture any time, a swampy place or a marsh is best. If fencing is scarce, poultry netting is cheap, don't be afraid of buying some, it is not necessary to have it over three feet high, and once put up it is there for years. If there is danger of foxes, or other wild animals, and the pasture is far from the house, it will be necessary to have a house on it to enclose them at nights. After any crops that they are likely to damage, are gathered in in the fall, they should be allowed free range, and if there is plenty of grain stubble, apples or half rotten potatoes laying around, not fit for anything else, the geese will eat them and fatten very quickly. If not enough of this kind of feed, carrots, turnips, or in fact any food can be thrown to them, and they will soon be ready for market. The best time to sell is from the first of December till Christmas, to get the big prices. Feathers are always in great demand, and range in price from fifty-five cents to sixty-five cents per pound. The old geese can be picked, three times during the summer and early fall. If anyone starting in to raise geese will follow the above method, using judgment as occasion requires, they will be well repaid for the little time and trouble required.

but it is starting a losing game to provide one male with two or three hens, though I seldom keep more than six or eight hens for breeders on account of accommodation. I never kill or sell the gobbler in the late spring as he keeps away hawks and crows and often hovers an early brood while a hen is sitting on her second hatch, (from which I make a small profit contrary to the advice of some printed instructions.) In fact, so much depends upon the disposition and stay-at-home propensities of the gobbler, that I prefer to keep him for two or three years, a good tempered, sensible (though some people will object to "intelligent" as applied to turkeys) gobbler or his progeny, in spite of the prohibition against in-breeding. I have read on good authority that one ought to get a tom unrelated to the flock if he cost \$25. By all means do so, if you are raising for fancy prize stock, but I am raising for market. I seldom have a weak bird and in the last ten years have lost no large numbers except from voracious hogs running at large.

Twelve years ago I fancied that the brown turkeys had a tendency to wander more than others, and I learned of a white Holland gobbler for sale, so staid and decorous that he gave the neighbors no trouble, so I purchased him. It is very unscientific to cross-breed, but I got the desired qualities, and our turkeys are truly handsome. They taste just as good as pure-bred poultry, but if I were raising breeders for sale or show purposes I'd never mix breeds.

Another thing I discovered that when a certain woman moved out of my life, who was always scaring my turkeys, constantly shoeing them and flirting her apron at them, they stayed

on the 100-acre farm. Turkeys are always moving, so what if they call at the back door three times a day for a pan of milk? They won't stay five minutes, and if you don't want them inside the lawn-fence, put their skim milk, butter-milk or clean water outside. I have clipped one wing to keep them from flying over fences, but if they are kept tame by kind treatment they will stay within the confines of your own premises.

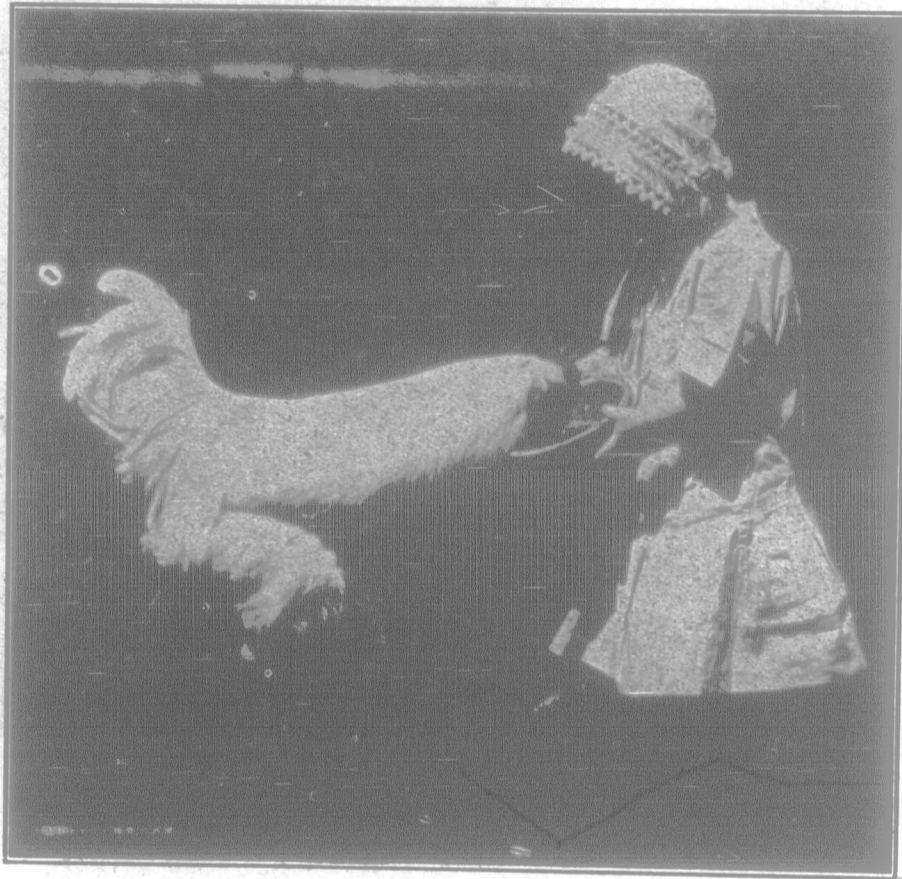
Arabian turkey-keepers put up a pole which the turkeys are taught to regard as the limit of their run, but mine are more self-assertive than that. They must have a large run with access to a hay field, wheat stubble, old orchards, etc. If the turkey-yard be enclosed the same run should not be used more than two or three years in succession. I think that will remove one cause of many drooping and drooping off.

When I started to learn turkey-raising I pampered them more

than I do now. I chopped a tray of young black-seed onions that I thinned from a large patch daily. Of course they relished them and gobbled them as I held the tray. They thrived as well last year and never tasted onions but twice. Twice one year I was ill during the season for feeding turkeys, and three days after each occasion 15 to 20 died. Why? The maid who fed them, mixed their feed in a sloppy state and gave them twice as much as they needed. Either mistake was enough to kill them. More turkeys are killed by over-feeding than any other cause. It is preferable to give them their freedom and the mother instinct will provide the food, rather than kill them with ignorant over-doing for the pleasure of seeing them gorge themselves.

I know a woman who clears a \$100 a year on turkeys who insists on letting them "seek what they may devour" on their 400-acre farm. She hunts them up occasionally, but declares she never feeds them. This plan certainly results in the "survival of the fittest." She sells them alive early in the fall. I derive so much enjoyment from turkey-raising that I could not endure that method, but I quote it merely to show that young turkeys are fed to death.

I have found that the ideal feed for the first two or three weeks of a turkey's life is a dripping pan of Johnny cake for 25 turkeys daily, it is made of coarse corn-meal, or sifted ground-feed, salt, buttermilk and soda well baked. I don't have sick turkeys, except those exposed to rain storms, (I dry them behind the stove and give them a wee dose of sling,) or I would mix the medicine in this cake. I sometimes add ginger



Two Pets.

Buy your boy or girl a pair of geese next fall if you can't bother with them yourself, and let them start in and learn from personal experience the profit that can be derived from them.

N. B. POUSTRAMAN.
[Note.—Most of the geese sold in Ontario are sold not by the piece but by the pound, the fairest way.—Editor.]

Some Views on Turkeys.

Editor "The Farmer's Advocate.":

Replying in part to Mrs. A. McD. I may state that I have had long and varied experience with turkeys and have read scientific literature on that topic with deep interest for years. I have learned much and have much more to learn. I'll confess that my practice in rearing turkeys does not always fit in with the theoretical views I have imbibed, but I have made money my way. "That's all that's necessary," will be said. But I wish to be fair. I believe if I had the capital and time to indulge in scientific turkey-raising I could make three times as much. Then comes the question how to raise them successfully regardless of the initial cost, or how to start turkey-raising with comparatively no outlay? Either subject requires its own peculiar treatment. I practice the latter. I have bold views that I could cope with the former situation sensibly and ultimately successfully regarding the money-end of the investment.

To begin with, it is said that one tom will be sufficient to keep with a flock of twenty females,

or cayenne in chilly weather. It may do no good, but it has done no harm. I often change the diet to waste bread and crusts dipped in milk and squeezed dry, but bread is expensive when you are counting cost. After three weeks of age the young ones thrive well on cracked wheat once a day, insects, milk, some apples or tomatoes and all the grass they can eat. Turkeys die when reared on the "intensive" plan. Close quarters or constant confinement makes them unhealthy; if one must shut them up in strawberry time, they must run out evenings, but woe to that berry-patch if you don't herd them away from it! I never kept a hen over that had not a clear recollection of the location of the berry-patch.

Speaking of healthy birds, reminds me that many people buy the late birds or small birds for breeders, because they get them cheaper. What a foolish thing to do! Keep the largest, or at least the strongest, the most intelligent (if you have observation enough to discern them by their mothering qualities) and the birds of best conformation for breeders. Never keep a crooked-breasted hen, for, while I think it is primarily caused by being crowded against the roost, or being crushed under the mother, some claim it is hereditary. I can cite cases where people inherit defects caused in their parents by accident so I infer that turkeys can.

To accommodate people who heard of our stay-at-home breed we have sold stock now and then, though I prefer to market them in large lots, and I have known four to die after going to their new homes. Carelessness during transit, putting them under crates, shutting them up in cramped or damp quarters or lack of knowledge as to feed-ration, caused their death, for no one but a faddist, or an Arab, with his fawn and white pets, would suggest that home-sickness could affect turkeys, or would attribute affection to them. I have no success hatching turkeys' eggs under hens, though some claim they have with Plymouth Rock adopted mothers. Half my hens pecked them to death. I do not mean turkey-hens.

Mrs. McD. asks about the treatment of ailing birds. Would it not be a good plan to wring the first sufferer's neck, box it up and ship to the nearest experimental station for information, in the meantime killing and burying other afflicted ones to prevent contagion? A more economic or less busy person would advise the isolation of the affected birds. That would mean the purchase of more poultry fencing and gate, providing shelter and loss of time nursing the invalids, said time being more valuable to me than the lives of several turkeys. These sick birds seldom get strong and fat. I should not care to eat them and it reduces the profits lamentably to buy bread for sick turkeys all the fall and perhaps lose them in the end, or lose the confidence of one's customers by selling inferior poultry.

In conclusion, I know of no stock for sale in this country. I hope soon to read the supposed cause of "spotted liver" in your educative columns.

Prince Edward Co., Ont.

A. LOWDER.

HORTICULTURE.

Western and Northern Apple Markets.

Fruit-growers in Ontario, British Columbia and Nova Scotia are all alike interested in the capacity of the market in Western Canada for apples, and from time to time estimates of varying degrees of accuracy have been made of the total quantity received annually by the provinces of Manitoba, Saskatchewan and Alberta. Last summer the Dominion fruit inspectors assigned to these three provinces were instructed to take notes as to the quantity of apples shipped into their several districts and make a report to Ottawa at the end of the season. The total quantity of apples marketed in these provinces for the season of 1912 was approximately 495,000 barrels, of which Ontario supplied 238,000, British Columbia 75,000, Nova Scotia 18,000 and the United States 164,000. The exact quantity imported from the United States was ascertained by reference to the Canadian customs.

In addition to the prairie provinces there is a large and growing market in Northern and New Ontario which will afford an outlet for increasing quantities of Ontario apples. If we consider the present population of Fort William, Port Arthur, Sault Ste. Marie, North Bay, Sudbury, the Cobalt district, etc., says Mr. Ruddick, we shall find that 60,000 barrels is a conservative estimate for the quantity of apples marketed in this section during the past season. The proportion of the above total supplied by the United States would probably not exceed ten per cent.

A Valuable New Strawberry.

Editor "The Farmer's Advocate."

With the advent of spring, the question of what variety to plant is a very important one, and worthy of our best consideration. With regard to varieties of strawberries, their name is legion, and their qualities good, bad and indifferent. Of no kind of fruit are there so many new varieties introduced as of strawberries. I have tested over a hundred varieties myself, and of all the new varieties introduced in the last two decades very few indeed have been of exceptional merit. I doubt if any of them would measure up to the old Wilson's Albany, as a shipper, canner, cropper, and all round berry. Probably the Williams comes the nearest to it of any of those introduced in many years. There are many varieties that are recommended as very fine in appearance and quality and so they are. But when you pick the rows over about three times they are done. We used to get seven or eight good pickings from the old Wilson and Crescent even when the weather was dry. However among the new varieties, I have found one which I consider is well worthy of trial by every grower of strawberries. It is named the Three W's and is now listed by most nurserymen and others offering strawberry plants for sale. I would like to know if others who have tried it have had the same experience with it as I have. If so, I believe it will prove one of the best introduced in many years. The plant is healthy, vigorous and exceptionally free from rust. The blossom is perfect, and the fruit carries its size well to the end of the season. Uniformity in size is one of its special qualities. The plant is hardy and stands the winter well. Another special feature is its ability to withstand drouth and heat, as its behaviour in the exceptionally dry, hot season of 1911 amply proved.

Simcoe Co., Ont.

G. C. CASTON.

In Restraint of Trade.

Editor "The Farmer's Advocate."

Re the co-operative purchasing of seeds, etc., by the Ontario Vegetable Grower's Association, I beg to say that for some few years, the Ottawa and St. Thomas branches particularly, have been buying some of their supplies, co-operatively with very satisfactory results. Some of the other branches have also been buying in a small way. Three years ago the Ottawa branch by corresponding with the growers in Europe, whence the Canadian seed dealers bought their supplies, elicited the information that we were paying excessively large profits to the dealers, and we decided to make a try at buying direct ourselves. We had, though, no intentions of going extensively into this co-operative purchasing. We bought in Denmark a quantity of cauliflower, cabbage and root seed, and when it arrived we were surprised that the cauliflower seed for which we had previously paid \$2.00 per ounce and up, cost us, when bought direct, only 80 cents per ounce, and other lines were proportionately low. But the most important thing about it was that the seed gave us a stronger germination, and better crop than we had been getting before, in fact the finest crops we ever had.

We were encouraged to try again next season, but a few days after we had sent away our orders, we were informed by a friend of mine that we were not going to be able to get our seed from these people that year. On inquiring the reason, we were told that the agent of the Danish firm had called on some of the Canadian dealers who had previously had our trade, but that he was ordered out of the stores, and told that as his firm had been selling to the growers, he could go and sell to the growers, as they would buy no more from him, and that in order to get the trade of these dealers again, he had got an agreement from his firm that no more seed would be supplied to the growers.

Last year we sent a few orders to a German firm and got the very highest quality seed, at prices similar to what we had paid the Danish firm, and this firm solicited our business again this season. On December 26th. I sent them a large number of orders, and on February 2nd. these orders were returned to me by the Steele Briggs Co., of Toronto, who requested the privilege of filling them, and in the same mail, I received a letter from the German firm announcing that they had sent our orders "to their old and valued customers, the Steele Briggs Co., who bought annually, very large quantities of seed from them," and they requested us to have them fill our orders. The President of the Steele Briggs Co. denied that they had interfered with our purchasing from the German or the Danish firm, but I cannot understand, if this is true, why the orders were sent to them. Why did the German firm not send the orders back to us, or to some other Canadian firm, all of whom buy from them?

However, needless to say, we did not buy from Steele Briggs, but sent our orders back to another European firm, which has filled them.

As a result of this mix up, the Ontario Vegetable Growers' Association decided to discontinue buying from Canadian seed dealers, who bought seed in Germany at such prices, and sold at such prices as below. Parsnip seed bought in Germany for 10 cents a pound, sold in Canada for 75 cents a pound; carrots bought for 45 cents a pound, sold for \$1.75 a pound; beets bought at 38 cents a pound, sold for \$1.75; cauliflower bought for 62 cents per ounce, sold for \$2.35 per oz.; cabbage bought for 75 cents per pound, sold for \$2.80 per pound, etc. Our Association accordingly decided that they had as good a right to buy wholesale as had the dealers, and accordingly appointed a purchasing agent, who will visit the large seed growers, and buy the requirements of the members direct from the producers, thus saving very large profits made by the dealers. This co-operative purchasing will spread to the buying of spray materials, fertilizers, berry boxes, fruit baskets, boxes, twine, etc. Arrangements have already been made for the supply of many lines for the spring of 1914, and the vegetable growers expect to save many thousands of dollars, as well as getting fresher and better seed, purer and truer to name. Since his appointment the purchasing agent has been flooded with applications for trade in the various lines in which the Association are interested.

Carleton Co., Ont.

W. J. KERR.

FARM BULLETIN.

A Little Work, Play and Sleep.

Editor "The Farmer's Advocate."

You have a short editorial in last week's issue o' yer paper that agrees wi' my ideas o' the subject sae weel that I canna' but tell ye aboot it, an' at the same time pit in a word or twa o' ma ain juiust by the way o' emphasis. What ye had tae say was aboot limiting the length o' the day's work on the farm, an' when ye say that the mon wha tries to dae mair than a reasonable amount o' labor in a given time is defeating his ain purpose, ye're telling the truth for aince, I ken o' farmers that will be night-hawking aboot the barns wi' a lantern aifter decent people are in their beds, an' wha keep this habit up year in an' year oot, an' wha are sae far frae bein' ahead wi' their work that they are generally finishin' up their spring seedin' when their neighbors are thinking o' gettin' ready tae begin' the hayin', an' then they will be hayin' and harvestin' till the snow flies in the fall. It's the auld law of compensation at work again. Gin ye drive a horse too hard to-day he'll hang back in the traces to-morrow an' ye hae gained naething in the end. Ap' wi' mon himsel' it's worse, for his mind gets tired as weel as his body an' he gets intae a condition where he can neither plan his work nor carry it oot tae advantage. But it's no' the farmer himsel' that I'm sae muckle interested in the noo. They're no' a' sae industrious that we heed tae gie them mair than an occasional warnin' aboot overwork an' sae on. It's the farmer's wife I'll be thinkin' mair aboot when the question o' lang oors comes up. The wumman on the farm, whether she be the sister or daughter or wife o' the owner o' the ranch, is, in nine cases oot o' ten, the one that kens mair aboot wark afore daylight an' aifter dark than onybody else. An' moister o' the time they will be takin' for granted that it's na mair than their duty tae keep goin' as lang as they can pit ane foot ahead o' the ither, an' the auld chap generally seems tae take it for granted too.

Noo there's no kind o' need for this way o' livin' among the inhabitants o' this fairly civilized country, an' the sooner we change oor ways the better for us and for those that will be runnin' things aifter we hae moved on tae the next station. I hae read some place or ither that the day should be divided intae three equal parts, eight oors for wark, eight oors for sleep, an' eight oors for play. Gin we use the word "recreation" instead o' "play," I'm thinkin' it will sound mair reasonable tae some o' us auld chaps that are gettin' a wee bit stiff in the joints, an' it will include too, a guid mony things that ye can hardly bring under the head o' play.

Noo in the first place comes "work." We a' ken that ony able-bodied mon or wumman that will na' wark should be shot. This breed o' humanity are a nuisance tae society an' should be classed wi' sheep-ticks, potato-bugs an' sic like things that live off the labor of ither. To my way o' thinkin', wark is aboot the only thing that maks life tolerable. It's the best way o' puttin' in the time that I ken aboot, an' gin ye dae it weel, ye get an amount of satisfaction frae it that ye will na' get frae onything else. But it's like mony anither thing, ye may get mair o' it than is guid for ye. It's richt here that ye should mak' use o' what common sense ye doubtless hae, and draw the line where the stopping-place ought tae be. Enough's enough, an' ye'll

get no credit in the end for daein' onything mair.

Then the next eight oors was to be for "sleep." It seems to be enough for ony mon or wumman, but I guess na doot we need that much gin we did the fair thing by the wark.

An' last there's the eight oors for "recreation." Here's where a whole lot o' us miss oor opportunities, an' when we fail to get oot o' life the best o' what it has tae offer us, what guid is it tae a body tae be born intae this world, an' grow intae youth an' manhood an' auld age wi' no ither idea in his mind but tae wark sae that he may eat and then eat an' sleep sae that he may wark. It was expected that we would develop our minds as weel as oor bodies, an' we can only dae this by gettin' awa' frae physical toil for a wee bit ilka day an' takin' time tae think or read the thoughts o' some better thinker than oorselfes. How can we expect tae ken the best line o' action tae follow oot, gin we dinna tak time tae think about it. It's what we are an' no' what we hae that will stick tae us when we get oor movin' orders at the last, an' I'm thinking it's up to us tae see that we dinna' hae to tak' the trip empty-handed.

Noo it was for the ladies that I intended tae preach the day, but I'm thinkin' I hae run a wee bit off the track. Gin there's ony person in the world that needs the eight oors recreation it's the farmer's wife, or ony wumman that has to dae what generally falls tae her share in the farm-work. Maist o' them hae got the habit o' slavin' at ane thing or anither from the time they git up in the mornin' until they go to bed at night. They dinna quit when it comes dark, but will be sewin' or knittin' or darnin' till the last minute.

There's one way ye can always mak' a wumman mad, an' that is tae tell her that gin she wad manage better she would na' be sae rushed wi' wark. Noo, I ken weel that there's some things that in the nature o' things hae got tae be done ilka day, but at the same time there's a hale lot o' cleanin' an' scrubbin' gaein' on in some farm-houses* that results in mighty little but the wearin' oot o' the wood-work an' the scrubbin'-brush. An' generally ye can tell a place o' this kind by the worn-oot look o' the wumman hersel'. I ken o' one young hoose-keeper that had it sae bad that she cleaned hoose three times in four months, an' tae the casual observer things didna' look muckle different at the end than they did at the beginning.

Gin a wumman mak's up her mind that she will take a pairt o' the time at least for "recreation" an' that she will not mak' a washin' machine or a knittin'-machine oot o' hersel' she can generally accomplish it I'm thinkin'. Men soon come to tak' a wumman's line o' action for granted an' gin she works a' the time they winna' be satisfied wi' onything else in the course o' a few weeks. But let her hae her time for her duties aboot the hoose and her time for puttin' on a decent dress an' takin' a wee spare from cookin' an' sweepin' an' a' the rest o' it, an' I'll warrant that she'll get mair respect an' juist as muckle pay as if she wore her finger-nails off makin' money for the auld mon. It can be done, this gettin' awa' frae business, for I've seen it tried. I'm no' goin' to say that it was a' due tae guid management, but it was done some way or ither, an' the wimmen wha did it were guid hoose-keepers, an' guid companions as weel, for the men that were lucky enough tae marry them.

The chances for a happy life for a mon or a wumman are as guid on the farm as onywhere on airth, gin they pay attention tae nature's first law and avoid extremes. Gaein' too far in either direction brings us tae no end o' trouble. A wee bit o' wark an' a wee bit o' play mixed up in the richt proportions an' taken ilka day, is the best medicine tae insure a lang an' happy life, an' it's not a patent medicine either. Ye can aye mix it yoursel' as ye go along.

SANDY FRASER.

Good Cheer and Helpfulness.

Editor "The Farmer's Advocate." :

If there is any reader of "The Farmer's Advocate" who does not read the letters by Peter McArthur, he is missing something good. Outside of some valuable information which we usually get from them, those, like that of Apl. 3rd, should make anyone with any sense of humor at all, feel good through at least one spell of gloomy weather, and I am sure, there are many like myself, who fully appreciate them.

I discontinued "The Farmer's Advocate" at the time it started as a weekly at \$1.50 per annum, and have been sorry since that I missed those years up to last June. I calculate it would be worth the money to anyone, even if he were not a farmer at all. I have old "Advocates" around the hoose yet that my father received from 1800 up into the 80's. They are very interesting to me yet.

Frontenac Co., Ont.

A. C. ABBOTT.

Spare the Birds.

Editor "The Farmer's Advocate." :

In looking over the interesting pages of "The Farmer's Advocate," I came across a well-written article, by A. R. Johnston, of Essex Co., Ont., on "Preservation of Quail," and I wondered why more people do not give this very important question a more serious thought. Not only should the quail be preserved, but all our beautiful and grand songsters as well as weed-destroyers should have man's kindest and most gentle attention, for they are his close friends. But alas! what do we see?—young men and older ones, also, who through lack of thought, more than anything else, take their guns and dogs and away they go to the bush, destroying the innocent little red squirrels or the woodpeckers, or in fact any living thing to be seen is shot for the mere pleasure of killing. Is it not a pity that these woods which used to ring with bird songs are now becoming quiet and lonesome?

How grand it is to you who have a feeling for birds, to have the harsh "caw" of the crow in the bright March morning, or the dreamy call of the mid-day songster in the hot summer days, or it may be the sound of the snipe in the growing dusk, as he flies about through the air, unseen yet distinctly heard. The birds are our cheer as we fall asleep and also as we waken in the morning. Can we, do you think, very well do without them?

Of course, there are one or two destructive species of hawks, but make sure that you destroy the destructive and that only. Why not let the robin eat a few cherries, does he not easily repay us by eating insects, etc? The kingbird, considered a very destructive bird, has been found more beneficial than otherwise. Owls eat mice, rats, and other destructive creatures; woodpeckers keep the trees free, to a certain extent, of various worms, and quails, etc., devour the weed-seeds that we all so much dread. Why then turn upon them?

Apart from man, birds have to contend with cats, storms, weasels, skunks, etc., and many are in this way destroyed annually. A good method in a case where a nest is built low, and subject to cats' visits, is to put a sheet of tin about the tree trunk, and thus hinder the cat from climbing and devouring the contents of the nest. Many people also erect bird houses an their premises, or feed birds in the cold weather. Indeed, there are a great many ways of aiding our feathered friends to exist, and they will easily repay us, for our so-called trouble.

I am sure if we make a study of the birds we will find them wonderful creatures, capable of exercising thought, and understanding things in flight and building that we could well wonder at.

Bruce Co., Ont.

FARMER'S SON.

The Old-fashioned Local Fair.

Editor "The Farmer's Advocate." :

Since reading Mr. McArthur's article on fall fairs of long ago I could not get rid of the subject, it seemed to trend me back to childhood days, and I saw no way to get rid of my thoughts but write them down. I was taught from the time I first remember anything to think of the little fairs of long ago as among the big events of the year, surpassing in importance our Sunday school picnic. My father came from England in the time of the little old log cabin and the blazed trails, he brought with him a wonderful amount of ambition to become a great stock farmer and mighty little hard cash to build it up with, only English grit and a strong right arm, but every spring the family saved denying themselves that he might send those precious dollars down to some Eastern dealer for a fine young Cotswold lamb to improve his already fine flock of sheep. Or we saved, what was to my childish fancy, a small fortune, and sent for a beautiful Shorthorn heifer; in those days the prices father paid was considered extravagant by his neighbors. But when fall came and we would see those beautiful lambs, how proud we were! Then father would begin to get ready for the fair in good earnest. Those fine Shorthorns would have to be brushed till their coats would shine like silk, they were always kept trim but this was extra. That flock of sheep must have an extra allowance of oats so no one could stand a chance of beating him. We children would have felt badly had he been beaten, for we were very sure there was no better in Canada. But competition did not stop with father. Mother must do her share. Like father she planned in the spring by sowing choice flower seeds early so as to have perfect blossoms in the fall, such fine pansies and elegant coxcombs, such beautiful bouquets of mixed flowers, and her everlasting flowers were a wonder to her neighbors who never bothered to raise a flower. No matter how precious was her time she could always find time to look after her flowers, but she, too, must make a crock of butter to show,

and also her beautiful prints. How they were made was only known to the intimate few, and they looked more like great golden chrysanthemums than anything I could tell you. Then a few days before the fair, what a hurrying began! Baking galore, pies, cheese, cakes to fill the pantry. Father would kill a lamb, for were not all his old friends from far and near coming to spend a few happy days with us? How we children would be busy picking fowl, for nothing was too good for them; there was no locking up the hoose and getting away as soon as possible for fear someone came for dinner, as I know some people do now, and then the morning of the fair when the boys had taken the stock, and we, in all the finery we could muster, were in the grand new democrat with half the neighbors' children included, no four tickets and member's ticket. In those days every body was your family that was with you. How proud you felt as you sneaked around among the exhibits and saw how many red tickets you had on your things, and at night when you went home very tired and happy, father and mother gave you all the tickets and you nailed them somewhere in sight in the granary.

Now, for solid enjoyment give me the small fair. Who says it was not the small fair which has had much to do with the large one? It is there we meet old friends and make new ones. It is there we talk over the days of the past and plans of the future. The large fairs are very enlightening but not home-like. How many friends do you meet in a crowd of a hundred thousand? Can you wonder I must do my little share at our own little fair brought up on a diet of fair? I am trying to bring up my children on the same principle, for therein lie great possibilities.

Essex Co., Ont.

WOMAN FARMER.

"The Young Canadian Yeomanry."

Editor "The Farmer's Advocate." :

The slogan "back to the farm" has failed to stop the procession of boys and girls from farm to town and city. Additions to and modifications of the public school programme to meet rural conditions have failed. Every device which has been tried has failed, and the procession still goes on, and the problem of maintaining a proper balance between rural and urban population becomes more complex.

The future well-being of Canada demands that a solution for this problem be found. Before a remedy can be found the causes of the rush to the urban centers must be known. Evidently these causes are of two kinds, one, the attractive forces of urban life, the other, the repelling forces of rural life.

The last thirty years has been a period of marked industrial change and development. It has been a period of great material prosperity. The work which was formerly done by the hand of the skilled workman is now largely done by highly specialized and more or less automatic machinery. Little skill or strength is required to operate these machines. A very large number of the young men and young women who are placed in charge of these machines are drawn from rural districts.

The rapid development of trade demands a large office staff. The introduction of the telephone and telegraph, affords many openings. Canada's great industrial and commercial activity requires a very large number of bright young people in the various departments of labor. To supply these bright young people is a good drain on the rural population.

Very little preparation is needed to fit a bright, active, intelligent farm boy or girl for many of these positions. A few months' attendance at some college enables them to secure a diploma or other tangible guarantee of training.

The large manufacturing, transportation, financial and other concerns are calling loudly for help. They are offering a wage that enables the boy or girl to dress fairly well, pay board and have a small amount for amusement. In these urban centres there are many organizations of a social, literary, religious, musical, and athletic character. Some of these appeal to the young people and they soon form a circle of friends. They have regular hours of labor and considerable leisure time. They feel a certain amount of pride in being connected with some large firm, although their position may not be a very important one.

On nearly every Canadian farm where the parents regard farming as a dignified and honorable occupation their children like life on the farm until they are influenced against rural life by some outside cause. In many homes, however, the parents create a feeling of unrest and discontent in the minds of their children. They speak disparagingly of rural life. They speak loudly in praise of those who have gone to the city. They forget however, to speak well of their own children, who are just as clever, bright, intelligent and industrious as their city friends. Lack of approval and appreciation of the efforts

of the boys and the girls on the farm is the strongest repelling force in the rural communities.

It is not likely that the attractions of town and city life will be lessened. It is not desirable that they should be. It is very desirable however, that rural conditions should be changed. These conditions can be changed but not easily. A greater pride in rural life and rural occupations must be created. The farmer must receive a larger share of the price the consumer pays for the farm product. Farm operations must be changed so that every month has some profitable employment. The farmers must be trained in methods of organization and co-operation so that they can compete successfully with the organized interests with which they do business.

The formation of a national organization which might be called "The Young Canadian Yeomanry" could be made a big factor in bringing about the required changes in rural life. Such an organization would stimulate the imagination and ambition of the boys and girls. It would arouse public interest in and permit of proper recognition of their efforts in school studies in farm operations and in special agricultural knowledge. It would give them early training in organization and co-operation. It would admit of ample means of competition in any department of rural activity. It would unite more closely the home and the school. It would bring the boys and girls back to school during the winter months several years longer than at present.

The details of the organization would require too much space, but the following brief outline gives an idea of its character and scope.

The boys would be divided into three grades, the Alerts, the Brawnies and the Stalwarts. The name Alert is intended to represent the bright, active, wide-awake farm lads of ten or twelve years who would qualify under the following headings, viz., school studies, farm work, and special agricultural knowledge.

The Brawnies would represent the lads who are just beginning to feel the strength and courage of young manhood and who have qualified for Alerts. To qualify for Brawnie standing would require higher and wider knowledge in school studies, in farm operations and in special agricultural knowledge.

The Stalwarts would include the young men who are just beginning to take an active part in directing farm operations. This grade would be open to any Brawnie who would qualify with the highest requirements under the same headings as the Alerts and Brawnies.

The public schools would give all the education necessary under the first heading. The farm would give all the training required in manual farm operations. The agricultural knowledge would be given by the schools, which are being improved in this part of the work, by specially prepared leaflets, and by correspondence to supplement these.

A suitable badge or pin would be given to mark the standing of every boy qualifying either as Alert, Brawnie or Stalwart. A cheap, neat, natty suit to be worn on suitable occasions would be selected. That the boys might make a creditable appearance on special occasions they would require enough drill to enable them to form in squads and to march well.

Kent Co., Ont. J. H. SMITH, I.P.S.

Prince Edward Island Notes.

Editor "The Farmer's Advocate."

At this writing, April 12th, it is looking very spring-like. The snow has all gone long since, and the frost is out to a considerable depth. The rain-fall since the first of March has been unusually heavy and the country roads have suffered terrible wash-outs that are almost impassable. Many of the smaller bridges are carried away and the fields in the hilly parts of the country are considerably torn up with the freshets.

It looks now as if the clover had wintered safely and is past the danger period.

The summer steamers have been running since April 8th. Much earlier than usual.

Considerable produce is already moving, and prices are good for all farm products, except potatoes, which are very low. Carcass pork has been selling for 12c., the highest price ever paid here. There seems to be a scarcity of little pigs which are selling for about double former prices. Fat cattle are selling for 7c. per pound for the best. There is a brisk demand for horses, and large numbers are being shipped.

The Horse Show, held in Charlottetown, last month, was a grand success. The exhibits were numerous and of high quality in both the heavy and light classes.

Everything is receiving more attention from the Government than formerly. The authorities have come to a recognition of the fact that the success of our agricultural industry means prosperity for the island, and the members of our Department of Agriculture, are doing their best to help and encourage the farmers. A new de-

parture here, is the establishing of Women's Institutes. Mrs. Dunbrack, of New Brunswick, has been employed by our Provincial Department of Agriculture to work up the matter and has already spent a month holding meetings all over the Island in the interests of Women's Institutes. Quite a number have already been organized, and our farmers' wives and daughters are quite enthusiastic over this new departure, which, we believe, will be a power in popularizing agriculture and making farm-life more attractive to all of our people.

The proposed new American tariff on farm products is giving our farmers a more hopeful feeling, and they are looking for larger and more profitable markets from the large free list that the democrats are substituting for high protection in food products. W. S.

The Maritime Horse Show.

Editor "The Farmer's Advocate."

The fourth Maritime Horse Show, held at Amherst, April 9th, 10th, and 11th was a great success, the weather being ideal, and the roads not so very bad. The attendance, both from city and country, was considerably larger than at any previous show. In many classes the quality of the exhibits showed improvement, while in quite a number the first prizes went to the same horses which won last year, thus showing that there is not very much new blood coming in superior to the old stock. The exhibits were brought into the ring in rather better condition than usual, and as an interesting and pleasing entertainment this show would be hard to improve upon. The Maritime Provinces are undoubtedly benefited very largely by this show as it encourages and stimulates the importation and breeding of a better class of horses, making horse-breeding much more profitable.

Judging began on Wednesday afternoon, the first class called being Standard-bred mares with four entries. "Dina Hartshorn" owned by D. R. Sutherland of Pictou, was an outstanding winner with "Helen Gracie" owned by F. S. Locke, Amherst, second and "Lady Buzz Fuzz" owned by Cecil Coats, Nappan, 3rd and Mr. McMonagle, of Sussex, 4th with "Inheritus".

The class for the special prize offered by the

Provinces almost equal to those imported from Scotland. The three-year-old stallions "Bob McGregor," owned by Wm. O'Brien, Windsor, and "Tom Brown," owned by Geo. E. Fisher, of Chatham, were a credit to any breeder and should make valuable additions to Maritime horse-stock.

Percherons were not largely represented but some of those forward were of good quality. The aged stallion class had two entries, first place going to "Roderique," owned by the Roderique Horse Co., Petitcodiac, N. B.

Hackneys did not put up a large show but the quality was excellent and the beautiful showing made by "Model Performer" and "Cock o' the North," from the stables of R. A. Snowball, brought round after round of applause from the large crowd of spectators. Mr Snowball's Hackney mare "Langton Lilly" was alone in her class but she is a model of a high-class carriage horse. Standard-breds were well represented. "King Dodds," shown by Dodd Dwyre, of Pictou, N. S., who won first place last year was beaten this year by "Major Todd," owned by Hammond Kelly, of Charlottetown, P. E. I.

Thoroughbreds were represented by the stallion "Bindemere," owned by Geo. M. Holmes, Amherst, and the mare "Annie Smith," by the same owner.

The show of Roadsters was very large and brought out many good things. In the class 15-2 and over, D. R. Sutherland got first on the beautiful and speedy mare "Dina Hartshorn," and J. C. Purdy second on "Susie Wilks."

The grade classes for agricultural, general-purpose and heavy-draft were well filled and brought out many useful animals showing a marked improvement, especially among Clydesdale grades, over the first show of three years ago.

The attendance throughout was the largest to date and the management deserve congratulations upon the general success of the show.

C. H. BLACK.

Cold Storage.

The "economics of cold storage" is covered by a recently issued United States bulletin, prepared by Geo. K. Holmes, of the Bureau of Statistics. The information was collected from a large number of cold-storage warehouses situated in all parts of the country and the commodities represented are fresh beef, mutton and pork, dressed poultry, butter and eggs.

AVERAGE LENGTH OF STORAGE

The fresh beef received into cold-storage during the year beginning May, 1909, was kept there on the average for 2.28 months; the fresh mutton 4.45 months; the fresh pork 0.88 of 1 month; and the butter 4.43 months. The dressed poultry received during the year beginning March, 1909, was kept on the average 2.42 months; the eggs 5.91 months.

COSTS OF STORAGE

For the average length of time in cold-storage, as ascertained in this investigation, the actual costs of storage are: For fresh beef, 0.997 of 1 cent per pound; fresh mutton, 1.564 cents per pound; fresh pork, 0.350 of 1 cent per pound; for dressed poultry, 1.079 cents per pound; for butter, 2.582 cents per pound; for eggs, 8.505 cents a dozen.

FRACTION OF PRODUCTION STORED

The investigation endeavors to arrive at some tentative conclusions with regard to the percentage of the national production that enters into cold-



Look after these."

storage during the year. The results of estimates and computations make it appear that 3.1 per cent of a year's production of fresh beef, commercial slaughter goes into cold storage; 4.1 per cent of the commercial slaughter, of mutton; and 11.5 per cent of the commercial slaughter of pork. Of the farm and factory production of butter during the year, 9.6 per cent goes into cold-storage, and of the farm and non-farm production of eggs, 15 per cent.

VALUE OF COMMODITIES STORED

The wholesale value of the fresh beef received into cold storage is estimated to be \$15,000,000; of the fresh mutton \$1,600,000; of the fresh pork \$18,000,000; of the butter \$40,000,000; and of the eggs \$64,000,000. The total wholesale value of these commodities received into cold storage during the year is \$138,000,000 at prices of the year ending October, 1911.

At Home.

By Peter McArthur. ||| ||| |||

The orchard has been given its first dose of lime-sulphur spray and every bug, microbe and injurious pest on the farm is at present holding its nose and hoping that the wind will change. I don't blame them for holding their noses. Had it not been that handling the nozzles require the use of both hands I would have held my nose myself, for there are times when the lime-sulphur mixture gives off an odor that is sufficiently like that of rotten eggs, to deceive even an experienced nose. This is really the first time that I have tackled the job. Last spring I merely rode on the wagon and watched Professor Clement and Mr. Buchanan do the work. It looked really harder than I found it myself. The wind was just right. In fact it was not a wind at all but just a drift of the air from the north, and as we cut the tops off the trees when pruning them last year it was only in a few cases that we found it necessary to do the spraying from a wagon. I remember that last summer some neighbors who visited the orchard thought that spraying was too scientific a job for an ordinary farmer to tackle, but I fail to see that it is a bit more scientific than cleaning out the stables, when once you get at it. And there is another difference this year. As a popular song says, "Everybody's Doing it." A neglected orchard is getting to be a rare sight in this part of the country. Mr. Whale has given a series of demonstrations, two fruit growers' associations have been organized and the outlook for the apple industry in this district is encouraging. If we get a stand of fruit this year I hope to investigate the possibilities of box-packing, for I am inclined to believe that boxes will supersede barrels in the apple trade before many years have passed.

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After getting back on the farm and settling down to the old routine I can hardly believe that Ottawa and Ekfrid are on the same map. Ottawa seems very far away, and the matters that were of interest there are almost incredible out here. But before forgetting about the little trip it may amuse you to know that I have discovered three distinct brands of politics during the past couple of weeks. In Ottawa I found our representatives a thoroughly genial, good-natured class of men, and as they assembled in the committee rooms, or walked, chatting, through the corridors, it seemed impossible that these pleasant gentlemen had any important differences of opinion about anything. Honestly when you saw them together it was impossible to tell the members of one party from the members of another! Nor could you discern any line of party cleavage by their attitude in the Banking Committee, though I had my eyes open all the time. In fact after meeting them and having a good time with them my attitude towards our representatives is much the same as that of the man who declined to have anything to say about the future state, because he had friends in both places. And when they talked politics it was of a different kind from what I had been hearing around home. Instead of talking about what this or that party wanted or intended to do they talked about the attitude of the railroads and the banks and Sir Jingo McBore, and Sir Philabeg McSpornan towards the various questions that were occupying the attention of the parliament. They seemed to be profoundly worried about the probable course of these big interests in case the debate should turn either in one way or the other. I was very forcibly impressed by the fact that beyond and above parliament there is another power, the power of big business, that must be reckoned with in connection with legislation. There is a sort of higher politics in Ottawa that we seldom get a hint of in the papers, and that few of us would believe even if it were explained to us.

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In Toronto, I found another kind of politics. The men I met were all Liberals or Conservatives. They assembled in their clubs without any distinction of party, and discussed matters of State as if they depended on the politics of the parties to which they gave their allegiance. Their politics was of the kind that we get in the newspapers, and sounded very profound and authoritative. When in Toronto, I could almost find it in my heart to be a party man myself, but I didn't stay long enough to decide which party I would favor. When I got back to the country things were different. I heard no more about the big interests, or the Liberals and Conservatives. Everybody was either a Grit or a Tory, and he had opinions that were iron-bound and copper-bottomed, and riveted up the back and front. When political questions were being discussed it was in no uncertain tones, and almost everyone had opinions that in moments of excitement could be heard at a distance of half a mile. As I always get hoarse when I try to talk loudly I

did not take part in any of the discussions even though the matters of State were being settled with irrevocable finality. Instead I hurried home and got ready to spray the orchard.

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Now just a word about the Bank Act. I am not going to venture a prophecy, but for your amusement I am going to set down how the situation looks to me in the light of the three kinds of politics in which I have seen it set forth. Unless the pressure of the naval question makes it necessary to have the revision of the Bank Act postponed and to have the present charters extended for another year, the Act that is now before Parliament will probably go through substantially as it stands. Moreover, it will not go through as a strictly party measure. There are many ridings where feeling against the present banking system runs high, and the representatives of the people from these ridings will be compelled by local pressure to vote against the act. If it should be found that this might endanger a good majority quite a number of members of the opposition may be expected to vote in its support. In fact, if the interests involved can have their way they will probably have the vote so split up that the revised Bank Act will look to be almost non-partisan. This piece of legislation belongs to the higher sphere of politics which may be called business politics as distinguished from party politics. I have already given this explanation to friends who have asked for my views and when they asked further how I felt about it after having argued so much for a different kind of act, I could find nothing to say beyond the old catch word "go it while you're young." There's a day coming when all these things will be straightened out and I am willing to wait. If however, the present charters are extended for another year and the people of the country become sufficiently alive to their own interests to bring the necessary pressure to bear on their representatives the result may be entirely different. But even as matters stand, no one who is interested should neglect to get in touch with his representative on the question. If it is not to be entirely a party measure the vote of your representative will count whichever party he belongs to.

Grain Yields and Holdings.

According to reports made by correspondents of the Census and Statistics Office at the end of March, 92 per cent of last year's wheat crop in Canada, i. e., 183,611,000 bushels out of the total estimated production of 199,286,000 bushels proved to be merchantable quality. In the Maritime provinces, Quebec and Ontario the proportions were smaller than this, but in the three Northwest provinces of Manitoba, Saskatchewan and Alberta, where the bulk of the wheat crop is produced, the percentage of merchantable quality was, in each case, about 98.

It is estimated that about 22 per cent of the total wheat crop in Canada, viz., 44,668,000 bushels remained in farmer's hands on March 31, as compared with 27 per cent representing 58,129,000 bushels of the crop of 1911 which remained in farmer's hands on March 31, 1912.

Oats, the estimated yield of which was last year 361,733,000 bushels, was of merchantable quality to the extent of 91 per cent, or 328,483,000 bushels, and the quantity remaining in farmers' hands was 44.22 per cent, or 159,948,000 bushels as compared with last year's figures of 89 per cent merchantable, or 310,074,000 bushels, and 44.18 per cent or 153,846,000 bushels in farmers' hands on March 31, 1912.

Of the total barley crop of 44,014,000 bushels it is estimated that 87 per cent, or 38,299,000 bushels were of merchantable quality, and that 35 per cent, or 15,404,000 bushels remaining in the hands of farmers at the end of March. The corresponding figures for last year were 90.26 per cent, or 36,683,000 bushels merchantable, and 32.56 per cent, of 13,235,000 bushels in farmers' hands on March 31, 1912. The bulk of the barley crop is produced in Ontario and Manitoba. In the former province 12,001,000 bushels, or 81 per cent, and in the latter 13,416,000 bushels, or 90 per cent was of merchantable quality.

The merchantable yield of corn for husking was 76 per cent of the total crop, of buckwheat 81 per cent, of flaxseed 89 per cent, of potatoes 78 per cent, of turnips and other roots 90 per cent, and of hay and clover 81 per cent. The quantities on hand on March 31, were: Corn 3,969,000 bushels, flaxseed 5,803,000 bushels, potatoes 35,097,000 bushels, turnips and other roots 18,884,000 bushels, and hay and clover 3,444,000 tons.

As a general rule live stock wintered well and their average condition for all Canada expressed in a percentage of 100, representing a healthy and thrifty state was for horses 95, milch cows 93, other cattle 91, sheep 95 and swine 94. In the Maritime provinces, Quebec and Ontario, the winter proved excessively mild; and, with an abundance of fodder, all descriptions of farm live stock came well through. In the Northwest provinces live stock did well on the whole; but in many localities cattle suffered through the lack of prairie hay, which was spoiled by last year's heavy rains. Many deaths among young pigs were attributed to the cold farrowing season. The winter proved long and cold in Manitoba and Saskatchewan, but was unusually mild and open in Alberta.

Prof. W. J. Kennedy, in charge of the Iowa State College, Agricultural Extension Department, urges that Iowa needs a State-wide system of farmers' clubs, with say, twelve families to the unit. Such a system, he believes, would furnish the basis for solving present-day problems such as the question of increasing crop production, maintenance of soil fertility, securing of better methods of transportation and marketing of crops, improvement of rural schools and the up-building of rural churches. The necessary organization, he contends very truly, must be more or less volunteer as forced methods will not succeed.

Some interesting tests, showing the per cent of moisture in corn, were made at a Western Ohio corn show held the middle of February. An ear of corn that was about three years old and had been kept all that time in dry places, showed a moisture content of 10 per cent. Another ear that had been picked for seed and stored on a rack in a corn-crib, where it had a circulation of air on all sides with a splendid chance for drying out, showed 20 per cent of moisture. The results of the tests were somewhat surprising to those attending the show.

A ministerial order has been passed that during the period of three months from the sixteenth day of April the importation or introduction into Canada of any hay, straw, fodder, food-stuffs or litter accompanying horses from Continental Europe is prohibited.

Some Seed Problems.

High-priced seed is not a good thing for the country generally. Those who have seed to sell get some profit, and it may stimulate some districts, which could grow their own seed, to try. On the whole, however, high-priced seed is a great drawback as many farmers feel they cannot afford to seed down half the land they would like, and then it encourages the traffic in lower grades of seed and often very impure seed. Experience in the seed inspection work this year gives abundant evidence. Seed dealers are carrying light stocks. Timothy seed, as every one knows, was abnormally high last year. For instance, one dealer said he had paid \$13.00 a year ago for a bag of timothy seed from a farmer which he sold this spring for \$3.50. This was the experience of a number of dealers who held timothy seed over. Those who held any clover seed fared much better, as prices for clover have advanced somewhat over last year's prices.

During the last season the hay crop was a good one, and a large percentage of farmers kept enough timothy to supply their own needs, and many of them grew a considerable quantity for sale. Much of this seed is good, and most of it could be made legally salable if only proper screens were used in cleaning it for market. Many samples have been turned down when sent to the seed branch for analysis, when they were comparatively or entirely free of noxious weed seeds, but contained more than 400 seeds per ounce of such seeds as pale plantain, sheep sorrel, wormseed mustard and cinquefoil. All these weed seeds are smaller than timothy seed, and by using a screen 28 by 28 or 30 by 30 nearly all these weed seeds would be taken out. These screens may be seen and tested at the offices of many of the District Representatives in agriculture, and eventually may be seen in all of them. Other screens for cleaning seed grain, clover and alsike seeds may also be seen. It is to be regretted that so many farmers are still at the mercy of the seed dealers in that they do not examine the seed for themselves—and many of them, if they did, would be none the wiser—but take the salesman's word for it that it is O. K., when very few of those handling seed know what they have got to sell in the way of weed-seed impurities. Take a concrete instance. I recently visited the store of a man who has been handling seeds most of his life, in a seed-producing district, where he has bought and sold seed to the wholesale trade, and was supposed to set aside some of the best lots for retail. He supposed he had a gilt-edged lot of alsike that he was offering to farmers whose seed he probably expected to buy. The seed looked well, but the analysis revealed the presence of about 560 catchfly seeds to the ounce. This is only one case out of several I might cite.

It is to the credit of the seed merchants that they are living up very closely to the law in the grading and marking of their seeds. Even the lower grades are comparatively free from noxious weed seeds. They are low grades more because they are mixed seed, off in color, and very uneven in size.

A good many seed dealers are very careful, too, of what they sell when locally grown. They get reports on their samples and label the goods accordingly. It occasionally happens, however, that what they are selling doesn't conform to the sample they have and the test they have obtained from the Seed Branch at Ottawa. There have been some cases of that kind discovered this spring, and no doubt some prosecutions are bound to follow. Some of the irregularities are the aftermath of high-priced seeds. Another evil that prevails more than usual this

year is the selling of seed by one farmer to another without either, in many cases, knowing what the seed contains. An analysis of some of it would reveal some surprises to both seller and buyer. To illustrate: I examined a quantity of seed which was grown year before last on a farm, and this seed had been used back on the farm a year ago last spring. Easily 10 per cent. or more of it would be weed seeds, mostly foxtail, lady's thumb or buckhorn. Yet the owner of the seed had an impression that it was pretty respectable seed.

Farmers should avail themselves of the services of the Seed Branch to have their seeds tested free of charge when they offer any for sale to their neighbors or to local seed dealers who retail it out for seeding purposes. Anyone is liable to a fine for selling in this way a lower grade of seed than No. 3, which allows the sale of no less than 400 weed seeds per ounce which figures out no less than 1/4 ounce of weed seeds in red clover. Surely this is license enough when 80 per cent. of them may be noxious. Plenty of red clover seed, if of local growth should be sown this year to ensure a good stand as much of the seed is of low vitality. When, with good seed, by applying 11 pounds clover seed to the acre there will be only one plant to about 25 square inches, it will be seen that 15 pounds of Ontario-grown seed per acre will be none too much to sow this season. T. G. RAYNOR.

The Little Red Schoolhouse.

Editor "The Farmer's Advocate."

"Spring is coming, spring is coming,
For the swallows tell me so."

How quickly the seasons fly away. Before we realize it winter is gone and spring almost here. Now, I would like to ask my brother farmers is it not possible for us, each in his own locality, to do something that will help the little red schoolhouse to a broader and better influence?

We know the story of when the ruler of Germany was in despair, because his nation seemed to be going to the wall, how the "wise man" came to him and told him, what you want your nation to be, put the idea in your schools. So Germany started her technical schools, and her goods forced their way into the markets of the world, the brand "made in Germany" coming to be known as a guarantee of excellence.

Germany started universal military training and instruction in her schools, and soon became a great military power.

Ontario, with as great agricultural resources as any state or province in the world, has, instead of educating her young people to develop her resources systematically, taught them to turn their backs on farm life and flock in crowds to the cities. The public schools for a third of a century have seemed to have only one aim, get the pupils to pass the entrance, and get them out of and away from the public schools. We see the result to-day. During the last ten years rural parts of Old Ontario have lost 100,000 of their population. Surely there must be something seriously wrong, when excellent farms, cleared with so much toil by our forefathers, are being deserted by the hundreds and used as cattle runs, while our boys and girls crowd the cities.

You say the government sends out institute lecturers and publish bulletins, sends out graduates of the Macdonald Institute and does everything to interest the people in country life.

It is quite true that the government spends money and efforts to this end, but the money is, in most part, wasted, because their efforts are

misdirected. The trouble is we have been obsessed with the idea that we cannot teach a boy or girl anything unless we shut them up in a building, and make them busy themselves with a book, slate or blackboard. Then, having wasted the most precious years, we get violently busy with the men and women, and let loose such a flood of literature and lecturers of both sexes, that farmers have fled in terror to town and cities or to the West.

The Department of Education has got into a rut, and seems to be over busy at present trying to retain teachers enough in Ontario. The County Inspectors seem, most of them, to have lost any vision of better things that they may have started out with. Our teachers, I believe, would like to do something, if they were allowed to act as national and intelligent beings, and not as insignificant cogs in a great machine.

Now, trustee, ratepayer or parent, get busy. Tell your teacher to forget that such a thing as an entrance examination existed. If you are fortunate enough to have a District Representative of the Department of Agriculture, get him to help. If your inspector—I emphasize the "if"—is an intelligent and trained lover of nature, get his help. Now have a real school garden. If your teacher is not specially trained, you can find persons who will take turns and give in turn instruction at least one afternoon a week. Get a nature lover who knows the flowers and birds, and have the children out in the woods and the fields at least one afternoon a week. A prominent Toronto lawyer has, during the past two years, given prizes for the best flower gardens in Peel County. There are many wealthy men who would be pleased to give prizes for the best school gardens.

Then what mysteries nature has all around us! Have experts to come occasionally and explain these to the children. For instance, the value of protein as a food. Twelve per cent. in bran, eleven per cent. in alfalfa hay. Soil not capable of growing alfalfa without the proper bacteria. Show them one of the hundreds of phials being sent from the laboratory of the Ontario Agricultural College to treat the seed in all parts of the province, and enable the plants to feed on the nitrogen in the air. Then take up the relation of insects and flowers, the fertilization of the blossoms of apple trees, strawberries and clover.

Thousands of our people are alarmed about the high cost of living, in a province where living should be the cheapest in the world. Our farms are becoming deserted. Let us see if we cannot do something to unfold to the boys and girls the beauty, the mystery and nobility of the great farming profession. Peel Co., Ont. ROY ROY.

The House of Commons Committee on Banking and Commerce has concluded hearing and questioning the witnesses invited to appear before it, and give their views concerning the proposed Bank Act and the various amending clauses thereto which have been moved by different members of the House. It is a new and encouraging development that witnesses outside the domain of banking and commerce should have been invited as well as bank presidents. The conduct of the enquiry has been exemplary in respect to courtesy and opportunity for frank expression of opinion, and, whatever the effect of the hearing upon present legislation, it is satisfactory that a good example has been set and the case of the public has been placed on official record.

Gossip.

Imprecation, the sensational Percheron stallion, grand champion of the International Live-stock Exposition, Chicago, Ill., in 1911 and 1912, is dead. He was imported by J. Crouch & Sons, and owned, at the time of his death, by T. G. Plant, of Massachusetts.

The representative of the Holstein-Friesian Association of Canada to the Toronto Exposition Board, has asked that Board to reconsider the grants to the various breeds of cattle at the coming exhibition, which have been made as follows: Holstein, \$1,200; Shorthorn, \$2,000; Ayrshire, \$1,200; Hereford, \$1,150; Aberdeen-Angus, \$950; Jersey, \$900; Guernsey, \$500; Galloway, \$500. Holstein-breeders are disappointed, as they claim their breed last year had more registrations and more transfers than any other cattle breed society, and

that their financial condition is stronger than that of any of the other cattle-breeders' associations, notwithstanding the fact that the Shorthorn Association is strongest numerically. Holstein men claim that they have proven their right to receive a prize list as liberal as that offered to any other breed.

Spring is here, and the grass is growing rapidly. This means more milk. Milk must be separated, and the Centrifugal Cream Separator is the quickest, cheapest, and best method of getting the cream from the milk. If interested in the dairy business, look up the advertisement elsewhere in this issue of the close-skimming, easy-running, durable Simplex machine, and write D. Derbyshire & Co., Brockville, Ont., or G. A. Gillespie, Peterborough, Ont., for their free booklet, No. 5.

Willie's Mother—Willie, we are going out. I want to buy you a pair of trousers.
Willie—All right.

(As they enter the store they come to a counter with trousers spread upon it.)
Mother—Willie, do you like these?
Willie—Yes, mother.
But in the meantime Willie spied a counter with a large sign on which read, "Can't be Beat."
Willie then called his mother and said: "Mother, these are just the trousers I want. They can't be beat."

W. J. Davis & Co. held a sale of Hereford cattle at Jackson, Miss., last week. Prices were not exceedingly high, but, on the whole, were quite satisfactory, a large percentage of the buyers being purchasers at one or other of the two former sales held by this company. The highest price for a female was \$300, paid for Lady Direct, and also for Red Rose. Eighteen females averaged \$225.28, and twenty-one bulls averaged \$273.80, an average for the total of thirty-nine head of \$251.41. Prince Lad was the highest-priced bull, selling at \$500, two others bringing \$490 and \$480, respectively.

Aberdeen-Angus cattle belonging to the estate of the late Walter Roberts were dispersed at Atlantic, Iowa, on April 8th. The weather was very unfavorable, but a large crowd kept the bidding brisk. Forty-eight females sold for \$8,837, an average of \$184 each, and eight bulls averaged \$209 each, the average for the fifty-six sold being \$137. New breeders put up the strongest competition for the good things. The highest price for a female was \$315, while \$300 was the top bid for a bull.

Trade Topic.

GRAND TRUNK RAILWAY SYSTEM.—Canadian National Horse Show, Toronto, April 29th to May 3rd, 1913.—On account of the Canadian Horse Show at Toronto, the Grand Trunk Railway System will sell return tickets, single fare for the round trip, with 50c. added for admission to the show. Tickets good going April 29th, returning Monday, May 5th, 1913. Secure tickets and all information from any Grand Trunk agent.

Markets.

Toronto.

REVIEW OF LAST WEEK'S MARKETS
Monday's receipts at the Union Stock-yards comprised 58 cars, consisting of 1,124 cattle, 348 hogs, 4 sheep, 56 calves, and 36 horses. No business was being transacted. At the City yards, receipts were 7 cars, including 114 cattle, 9 sheep, 64 calves, and 52 hogs. Prices at the City market were unchanged, 52 hogs selling at \$9.60, fed and watered.

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

	City.	Union.	Total.
Cars	11	328	289
Cattle	225	4,450	4,675
Hogs	188	7,183	7,371
Sheep	28	259	287
Calves	84	1,468	1,552
Horses	—	125	125

The total receipts of live stock at the two yards for the corresponding week of 1912 were as follows:

	City.	Union.	Total.
Cars	241	200	441
Cattle	2,777	2,487	5,264
Hogs	6,859	5,920	12,779
Sheep	926	6,415	1,341
Calves	1,524	186	1,710
Horses	—	152	152

The combined receipts of live stock at the two markets for the past week, show a decrease of 102 cars, 589 cattle, 5,408 hogs, 1,054 sheep, 158 calves, and 27 horses, compared with the corresponding week of 1912.

Receipts of live stock at the Toronto markets for the past week were moderately large, although not as large as for the corresponding week of 1912. The supply of cattle was quite equal to the demand. There were several buyers from outside points, principally Montreal and Hamilton, which helped materially to strengthen the market. Prices, however, were not any higher than in our last report, for cattle. Sheep, lambs, and calves, sold at about steady prices, and all offerings were readily taken. Hogs sold at lower quotations. Selects, fed and watered, sold as high as \$9.55, and \$9.20, f. o. b. cars.

Exporters.—William Howard bought for the Swift Company of Chicago, 100 export steers, weighing from 1,150 to 1,300 lbs., at \$6.75 to \$7.

Butchers.—Choice butchers' steers and heifers sold as high as exporters, and in one or two instances higher, ranging from \$6.75 to \$7.15; loads of good to choice, \$6.50 to \$6.75; good, \$6.30 to \$6.50; medium, \$5.90 to \$6.25; common, \$5.50 to \$5.80; cows, \$4.50 to \$5.75; canners and cutters, \$3.50 to \$4.25; butcher bulls, \$4.50 to \$5; export bulls, \$5.25 to \$5.75.

Stockers and Feeders.—There was little doing in the stocker and feeder classes. Stockers and feeders ranging from 400 to 800 lbs., sold at \$4.75 to \$5.25, and in some instances, \$5.50 to \$5.75 per cwt. was paid.

Milkers and Springers.—Receipts of milkers and springers during the week was not equal to the demand, especially in the good to choice quality cows. Good to choice cows are worth from \$60 to \$70, but a few select quality reached \$75. Common quality cows sold at \$40 to \$45 each.

Veal Calves.—Receipts were the largest of the season. Common, light calves, sold at \$4.50 to \$5.50; medium calves, \$6 to \$7.50; good calves, \$8 to \$8.50, and choice calves, \$9 to \$9.50 per cwt.

Sheep and Lambs.—Sheep sold at \$6 to \$7.25 for ewes, and \$5 to \$5.50 for rams. Spring lambs sold at \$5 to \$10 each.

Hogs.—Selected lots of hogs, fed and watered, sold at \$9.50 to \$9.60; and \$9.20 to \$9.25 f. o. b. cars at country points, and \$9.85 weighed off cars.

Horses.—Trade in horses at the Union Horse Exchange, Union Stock-yards, was quite active last week, and better than for some time. The principal demand was from farmers and the city, although there were two carloads bought and shipped to Montreal. Spring work has

caused quite a demand, principally from the farmers in different parts of Ontario. Prices ranged as follows: Drafters, \$240 to \$275; general-purpose horses, \$200 to \$240; expressors, \$175 to \$225; drivers, \$75 to \$150; serviceably sound, \$40 to \$75 each.

BREADSTUFFS.

Wheat.—Ontario, No. 2 red, white or mixed, 94c. to 96c., outside; inferior grades, down to 70c.; Manitoba, No. 1 northern, 98½c.; No. 2 northern, 95½c., track, lake ports. Oats—Ontario, No. 2, 33c. to 34c., outside; 33c., track, Toronto; Manitoba, oats, No. 2, 42c.; No. 3, 40½c., lake ports. Rye—No. 2, 60c. to 63c., outside. Peas—No. 2, \$1 to \$1.05, outside. Buckwheat—51c. to 52c., outside. Corn—No. 2 yellow, 63c., track, Toronto, all-rail shipments. Barley—For malting, 51c. to 53c.; for feed, 43c. to 48c., outside. Flour—Ontario ninety-per-cent. winter-wheat flour, \$3.90 to \$3.95, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.30; second patents, \$4.80; in cotton, 10c. more; strong bakers', \$4.60, in jute.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, No. 1, \$12 to \$13; No. 2, \$10 to \$11 per ton. No. 1 hay is hard to get.

Straw.—Baled, car lots, track, Toronto, \$9 to \$10 per ton.

Bran.—Manitoba bran, \$19 to \$20 per ton; shorts, \$21.50; Ontario bran, \$19 to \$20, in bags; shorts, \$21.50, car lots, track, Toronto.

TORONTO SEED MARKET.

Toronto seedsmen are quoting re-cleaned seeds to farmers at the following prices per cwt.: Alsike No. 1, \$28.50 to \$31.50; alsike No. 2, \$24.50 to \$26.50; red clover No. 1, \$26; red clover No. 2, \$23; timothy No. 1, \$7.50 to \$8; timothy No. 2, \$6 to \$6.50; alfalfa No. 1, \$19.50 to \$20.50; alfalfa No. 2, \$17.50.

COUNTRY PRODUCE.

Butter.—Prices remain steady. Creamery pound rolls, 32c. to 34c.; creamery solids, 28c. to 30c.; separator dairy, 28c. to 30c.; store lots, 22c. to 24c.

Eggs.—Receipts continue to be heavy, and prices declined 1c. per dozen, and were quoted at 20c. to 21c.

Cheese.—Market unchanged; large, 14c.; twins, 15c.

Honey.—Extracted, No. 1 clover honey, 12½c.; combs, per dozen sections, \$2.75 to \$3.

Beans.—Broken car lots, at Toronto, hand-picked, \$2.60; primes, \$2.25, down to \$1.25 for inferior samples.

Potatoes.—Market easier, at 60c. to 65c. per bag for Ontarios, and 70c. to 75c. for New Brunswick Delawares, track, Toronto.

Poultry.—Receipts of fresh-dressed poultry were light, and, as a rule, of very poor quality, with prices very high. Turkeys, 30c. per lb.; geese, out of season; ducks, out of season; chickens, 25c. to 28c.; hens, 18c. to 20c. per lb. There is more cold-storage poultry than fresh-dressed, which sells at about the same prices.

HIDES AND SKINS.

No. 1 inspected steers and cows, 13c.; No. 2 inspected steers and cows, 12c.; city hides, flat 12½c.; country hides, cured, 12c.; country hides, green, 11c.; calf skins, per lb., 15c.; lamb skins, \$1.10 to \$1.50; horse hides, No. 1, \$3.50 each; horse hair, per lb., 37c.; tallow, No. 1, per lb., 5½c. to 6½c.

FRUITS AND VEGETABLES.

Apples.—No. 1 Spies scarce, and worth \$4.25, and for table use, \$4.50; No. 2 Spies, \$3.50 to \$3.75, and these are plentiful. All other kinds of winter apples are plentiful and cheap, at \$2.60 to \$3.50 per barrel. Cabbage, \$1 per barrel; beets, 70c. to 75c. per bag; onions, Canadian, plentiful, at 90c. to \$1 per 90-lb. sack; turnips, plentiful and cheap, at 30c. per bag; parsnips, 75c. per bag; American strawberries, 40c. to 50c. per quart basket.

British Cattle Market.

John Rogers & Company cable Irish steers making from 15c. to 16c. per pound.

Montreal.

Live Stock.—The market for cattle was rather easier last week, and a decline of a fraction took place. Supplies were limited, but butchers, generally, seemed to have sufficient on hand to carry them through. Some very choice steers sold at 7½c. per lb., and some fine stock was picked up at 6½c. to 7c., and good at 6½c. to 6¾c., and medium at 5½c. to 6c. per lb., while common ranged down to 4c. per lb. Sheep and lambs were in good demand, and old sheep sold at 8c. per lb., while spring lambs ranged from \$4 to \$9 each, there being a very fair demand for them. Calves were from \$1 to \$3 for poor stock, the best ranging from \$5 to \$10.50. Hogs showed a rather easier tone, and selects were purchased at 10c. to 10½c. per lb., weighed off cars.

Horses.—The supply of horses was not very large, and prices held firm, as follows: Heavy-draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$350; light-draft, 1,400 to 1,500 lbs., \$225 to \$300; light horses, 1,000 to 1,100 lbs., \$125 to \$200; broken-down, old horses, \$75 to \$125, and choicest saddle or carriage animals, \$350 to \$500 each.

Poultry.—The market for poultry was not attractive, supplies being very limited, and nothing but cold-storage stock available. Turkeys were from 23c. to 24c. per lb.; geese and fowl, 15½c. to 17c. per lb.; ducks, 20c. to 22c. per lb., and chickens, 18c. to 19c. per lb.

Dressed Hogs.—The market for dressed hogs was easier, owing, no doubt, to the lower prices for live hogs. Prices declined slightly, and fresh-killed, abattoir-dressed, sold at from 14c. to 14½c. per lb.

Potatoes.—Potato supplies were about the same as the previous week, and the price showed almost no change. Green Mountain potatoes were still quoted, in carloads, at 62½c. to 65c. per 90 lbs., track. Quebec grades were quoted at 50c. to 55c. Smaller lots of potatoes sold at 25c. to 30c. more than the above.

Honey and Syrup.—New maple syrup has been coming along more freely, and as a consequence prices declined. The make was not very large, but there seems to be enough to go around for the time being. Tins were quoted at 90c. for 11 lbs., while syrup in wood was 8c. per lb. Honey was steady, at 16c. to 17c. per lb. for white-clover comb, and dark at 14c. to 15½c., light, strained, being 11½c. to 12c., and dark, 8c. to 9c.

Eggs.—Egg supplies have been quite free of late, and the prices were slightly lower, quotations for fresh-laid stock being 21c. to 23c., according to quality. It does not look as though the price of eggs would go much lower for some time.

Butter.—New-milk creamery arrived in more liberal quantities, and dealers stated that they had to accept 30c. for it, the market having weakened considerably. Held Canadian butter was quoted at about 28c. to 29c.

Grain.—The market for oats was rather firm, No. 2 Western oats, in car lots, were quoted at 42½c. to 43c. per bushel, ex store, No. 1 feed, extra, being 41½c. to 42c., and No. 3 oats, 40½c. to 41c.

Flour.—The market held steady, at \$5.40 per barrel, in bags, for Manitoba first patents, seconds being \$4.90. Strong bakers' steady, at \$4.70. Ontario winter-wheat patents were quoted at \$5.25 per barrel, and straight rollers at \$4.85.

Millfeed.—There was no change in this market. Bran was still quoted at \$20 per ton, in bags, while shorts were \$22, and middlings \$25 per ton. Pure grain mouille sold at \$35 to \$36 per ton, and mixed at \$30 to \$33. Demand was good, much feeding being done at present.

Hay.—The prices were slightly firmer on some grades. No. 1 baled hay sold at \$13 to \$13.50 per ton, car lots, track, and No. 2 extra at \$12 to \$12.50 per ton, while No. 2 ordinary was \$9 to \$10 per ton, and ordinary \$8 to \$9.

Seeds.—Orders were coming in rapidly, and shipments going out promptly. Prices showed no change, being as follows, per 100 lbs.: \$4.50 to \$7.50 for timothy; \$18 to \$26 for red clover, and \$22 to \$28 for alsike.

Buffalo.

Cattle.—Prime steers, \$8.75 to \$9; shipping, \$8 to \$8.65; butchers', \$6.50 to \$8.65; cows, \$4 to \$7.50; bulls, \$5.76 to \$7.50; heifers, \$6.25 to \$8.50; stock heifers, \$5.50 to \$6; stockers and feeders, \$6 to \$7.75; fresh cows and springers, \$35 to \$84.

Hogs.—Heavy, \$9.45 to \$9.55; mixed, \$9.55 to \$9.60; Yorkers, \$9.50 to \$9.65; pigs, \$9.40 to \$9.50; roughs, \$8.50 to \$8.60; stags, \$7 to \$8; dairies, \$9.40 to \$9.60.

Sheep and Lambs.—Clipped lambs, \$3 to \$3.25; yearlings, \$7 to \$7.50; wethers, \$6.50 to \$6.75; ewes, \$6 to \$6.40; sheep, mixed, \$6 to \$6.50.

Chicago.

Cattle.—Beeves, \$7.25 to \$9.25; Texas steers, \$6.75 to \$7.90; Western steers, \$7 to \$8.10; stockers and feeders, \$6.10 to \$8.10; cows and heifers, \$3.90 to \$8.40; calves, \$6.50 to \$8.60.

Hogs.—Light, \$8.95 to \$9.30; mixed, \$8.90 to \$9.30; heavy, \$8.70 to \$9.25; rough, \$8.70 to \$8.85; pigs, \$7 to \$9.15.

Sheep and Lambs.—Sheep, native, \$6 to \$7.15; Western, \$7 to \$7.15; yearlings, \$6.50 to \$7.85; lambs, native, \$6.60 to \$8.75; Western, \$6.75 to \$8.75.

Trade Topic.

Every farm needs a good pump. Poor pumps mean loss, and much annoyance. Pumps must work easily, and be frost-proof in winter. A handy pump is one from which the plunger may be withdrawn without removing the pump. Such is the pump manufactured by the Aylmer Pump and Scale Co., Ltd., Aylmer, Ont., and known to the trade as the Imperial Anti-freezing Pump. See the advertisement in another column, and send a post card for their excellent illustrated catalogue.

Questions and Answers.

Miscellaneous.

Colt's Knees Defective.

I am thinking of buying a colt to mate one I have, and it has what horsemen call "fish knees." It was foaled that way. It is now three years old, and seems to be nearly all right. Are they likely to cause trouble in future? Colt is a mare. Would she be likely to transmit this trouble to her colts?

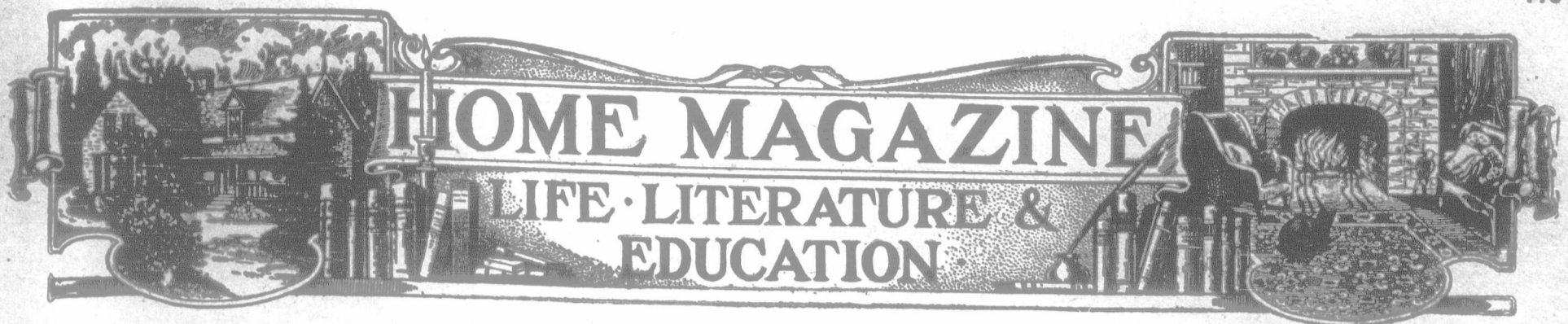
R. N. B.

Ans.—We know of no disease of horses called "fish knees." The trouble, whatever it is, seems to be congenital. We can only suggest that the colt be kept in a box stall, allowed to run loose, and to feed off the floor, as this strengthens weak knees. It is probable that the trouble would be passed on to the mare's progeny, but, of course, it might not be.

Book Reviews.

BOOK ON BANKING.

A more timely and graphically-prepared book than one entitled, "Co-operative Finance," by Herbert Myrick, published by the Orange Judd Co., has not made its appearance for many a day. Widely known as a student of co-operation, editor, and publicist, Mr. Myrick could not do other than produce a live book. Though the work deals with the problem of banking and finance mainly from the United States point of view, these subjects are cosmopolitan, and appeal especially to Canadians just now, when the searchlight of publicity has been turned on the existing bank system. He discusses in a clear, courageous way, the defects of American banking, and proposes, by way of remedy, a national application of the principles of co-operation in finance. The book is popular in style, and illustrated with diagrams and cartoons. It is arranged in seven sections, embracing thirty-two comprehensive chapters, with addenda and references. It is novel and original, and bound to hold interest. It may be ordered through this office, at \$2.50, postage paid.



Little Trips Among the Eminent.

Sir Edwin Landseer.

Perhaps no artist is more widely known in the homes of English-speaking people at large than Sir Edwin Landseer. In cottage and hall alike are to be found prints of his "Monarch of the Glen," his "Dignity and Impudence," and his "Sanctuary," and so people who know nothing of his life, recognize the name of Sir Edwin Landseer at once as that of a great animal painter.

Edwin Landseer was the third son of John Landseer, A. R. A., and was born in London, Eng., on March 7th, 1802. Scarcely, indeed, could the lad have escaped a leaning towards the brush, for his father was a noted engraver and writer on art, while his mother, as Miss Potts, had been one of Sir Joshua Reynolds' models.

At five, then, the young Edwin promised to become a prodigy, producing, at that tender age, a "quite marvellous" drawing of a fox-hound from the life, now preserved in Kensington Museum. At seven, he could etch well and use chalk, sepia and water-colors, with excellent effect; at ten he was an admirable draughtsman, and at twelve, could paint readily in oils.

From the beginning he had chosen animals, which he loved as though they had been human, as his subjects, and, as time went on, not contented with painting from the life, he dissected every carcass he could find, learning, thus, by accurate study of the anatomy, to accomplish "portraits," as he called them, that should be technically true.

At eleven, he won the silver palette of the Society of Arts for a drawing of animals, and two years later, named in the catalogues as "Master Edwin Landseer," he had two pictures exhibited in the Royal Academy. These were, "Portrait of a Mule," and "Portraits of a Pointer Bitch and Puppies."

As a student at the Academy, owing to his frank and genial disposition, he was a favorite with everybody, but especially with his master, Fuseli, who, it is said, used to come into the crowded antique room, look about, and say, "Where is my curly-headed dog boy?"

The history of the lad's student days is chiefly a recital of lists of medals and prizes won by him in every competition in the branch which he chose to enter, then in 1818, his first very notable picture was exhibited at the Academy. This was the canvas, "Fighting Dogs Getting Wind," bought during the exhibition by Sir George Beaumont.

In 1824, his "Cat's Paw" was sent to the British Institution, and made a great sensation, establishing his reputation as a humorist. It was sold at once for £100, and with the proceeds he was enabled to set up a studio for himself in the house in St. John's Wood Road, in which he lived, for nearly fifty years, and died.

During the same year, the artist visited Abbotsford, where he made studies of Sir Walter Scott and his dogs. Scott, who loved dogs, admired Landseer's work very much. In some of his notes, he refers to it as follows: "Landseer's dogs were the most magnificent things I ever saw, leaping and bounding, and grinning all over the canvas."

In 1826, Landseer was elected an A. R. A., and in 1831 was made a Royal

Academician. During these years he took to painting deer, as well as dogs and horses. "Every year," says Mrs. Heaton, "he paid a visit to some aristocratic shooting lodge in Scotland, the walls of some of which he adorned with rough sketches of his pictures of deer-stalking."

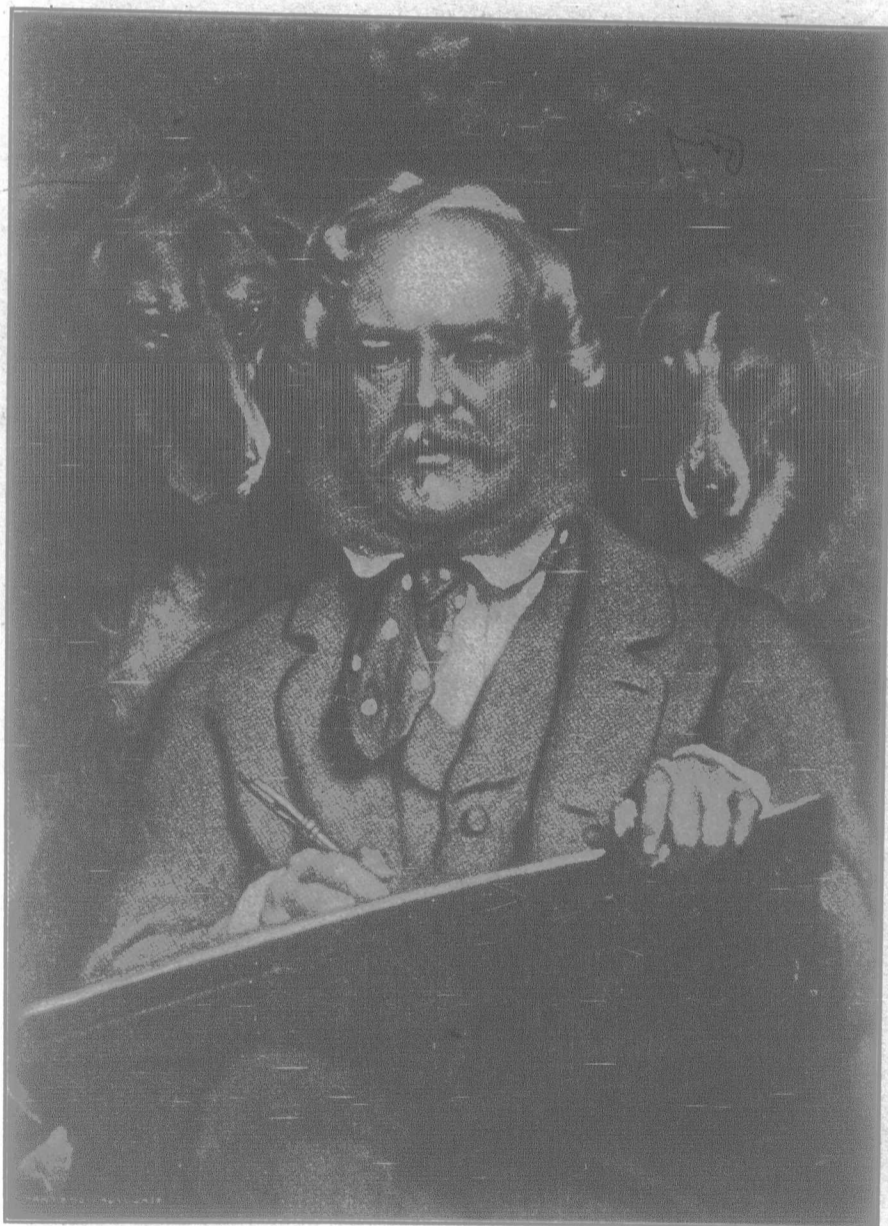
A true sportsman, all doors were open to him among the sportsmen of the North; indeed, his social gifts were such that he was welcomed everywhere, even becoming a friend of Queen Victoria, and painting the portrait of her which was given by her to Prince Albert before her marriage. "He was not merely courted, indulged, and worshipped, wherever he turned," says Mrs. Heaton, "he was truly and heartily valued. His fine nature met response; his conversation was the delight of the most accomplished of men; and, however clear it was that he was the fashion, it was equally clear

His last great work was making the models for the magnificent lions which stand at the base of the Nelson monument; his last portrait was one of the Queen, and his last drawing one of a dog.

On the first of October, 1873, he died, and ten days later was buried with public honors in St. Paul's Cathedral.

Landseer, at his best, has been described as a handsome man of middle height, stout, with a broad, frank face, and fine forehead and eyes; quick-witted, and an admirable mimic. After the death of his one favorite dog, Brutus, he was always followed by a troop of dogs wherever he went.

No reason has been given for the depression of spirits that, in later life, ruined his health and his career, except the supersensitiveness of his disposition, and, perhaps, overwork. Occasionally,



Portrait of Landseer.

(From a painting by himself. From a Perry Print.)

that he was the friend of every household he visited, from that of Balmoral and Windsor, to those of the most homely group of his early associates."

In 1850, he was knighted by the Queen; in 1853, he received the gold medal at the Paris Universal Exhibition, and in 1865, he declined the Presidency of the Royal Academy.

For some time previous, however, his health had been far from the best, and he had been suffering from mental depression. During 1862-3, indeed, his reason had almost completely given way, but it came back to him, although his physical condition improved but little.

it is told, he painted for twelve hours, practically without stopping, while severe mental strain must have followed the exercise of a habit and a peculiar talent he had of being able to draw with both hands at once, a different object with each hand.

In addition to those of his paintings already named, may be mentioned the following: "High Life," and "Low Life," (1829); "The Old Shepherd's Chief Mourner," (1837), considered by many to be his finest painting; "Dignity and Impudence," (1839); "The Challenge," (1844); "Monarch of the Glen," (1851); and "The Sanctuary," (1842).

The New Public Health.

The Farmer's Advocate Bureau of Public Health Information.

QUESTIONS, ANSWERS, AND COMMENTS.

Conducted by Institute of Public Health, London, Ont.

[Questions should be addressed: "New Public Health, care of 'The Farmer's Advocate,' London, Ont." Private questions, accompanied by a stamped, self-addressed envelope, will receive private answers. Medical treatment for individual cases cannot be prescribed.]

RICKETS IN CHILDREN.

Ques.—What causes children to be "rickety"? What are the symptoms? What foods do normal children need between the ages of one and four years? Middlesex Co., Ont. MRS. G.

Ans.—The cause of rickets is unknown. It sometimes follows measles. Boiled or cooked milk has been accused (wrongfully); also ammonia from unchanged diapers. Lack of fat in the diet is perhaps a prominent cause: at all events, many rickety children improve on cod-liver oil. It is probably more often due to improper diet than to anything else.

The symptoms are variable, but all point to mal-nutrition; the symptoms most easily recognized by non-medical people are those due to the bending of the bones of the legs and ribs, producing bow legs and deformed chest, while enlargement and squareness of the head are often present. However, it is very risky for non-medicals to say rickets is or is not present from such symptoms, and a physician should personally examine each child suspected of any abnormality in order to determine exactly what is really the matter.

The question of food for normal children between one and four years old, can best be answered by "increasing variety, not much of any one kind, but plenty all told, avoiding indigestion, diarrhea, or constipation." As the child changes from breast-milk to a mixed diet, careful, sensible experiments with a general diet should be made, beginning with the simpler things, and trying them out in a leisurely, watchful way, until the child of four is able to eat almost anything in reason without trouble. Of course, a delicate or sickly child must be referred to a physician.

H. W. HILL.

INFANTILE PARALYSIS.

Ques.—Will you kindly give the symptoms of infantile paralysis? Is it contagious or infectious? Wentworth Co., Ont. MRS. R. T. C.

Ans.—Infantile paralysis shows as the chief symptom recognizable by the laity, a sudden paralysis of some muscle or group of muscles, resulting in inability to use a limb or limbs; sometimes the muscles of the chest or face are affected, sometimes those of the eye or throat, etc. These symptoms are often, but not invariably, ushered in by fever, headache, vomiting, malaise, pain or tenderness in the bones, joints, etc., and in epidemics, every child showing such symptoms should be seen by a physician; although this is a good rule to follow at all times, since most acute "children's diseases" come on in this way. The paralysis usually develops on or before the third day.

There is very little evidence that infantile paralysis is transmitted from the

sick child to others, and at present the mode of spread is unknown. It has been supposed to be primarily a disease of horses or other lower animals, and to be transmitted by stable flies biting infected animals (or humans) and then biting others, and so carrying the germ from one to another. The whole subject is still quite mysterious, despite much investigation. The germ is so small that no microscope has yet made it large enough to see.

H. W. HILL.

SHOULD MILK BE SCALDED?

Ques.—Should milk be invariably scalded before using it? MISS F. A. Middlesex Co., Ont.

Ans.—Most milk, as ordinarily drawn from the ordinary cow, contains numerous germs, not necessarily harmful, but still likely to have harmful ones added to the usual kinds at odd times. Since manure, or manure dust, falls into most milk, except when extraordinary precautions are taken, one source of dangerous germs is the cow's intestine. If the cow be perfectly healthy, not much harm need be dreaded from that source. But if the cow have, say, tuberculosis, the germs of tuberculosis are apt to pass out with the manure, and so get into the milk, and this is true of some other cow diseases. Of course, if the udder or teats are affected, the germs may go directly into the milk.

The principal source of disease germs, other than the cow, is the milker. If the milker is healthy, discharges from the milker on unclean hands or mouth-spray (droplets thrown out from the mouth in sneezing, coughing, singing, or even talking) easily enter the milk; and of course this happens even more when the milker has a cold, a sore throat, or any other infectious disease. I have often known of persons who, although well themselves, were taking care of relatives who had typhoid fever, scarlet fever, etc., as well as doing the milking. If such a person empties the slops of the sick one, or handles the sick one, or the sick one's dishes, etc., and then milks, he is more than likely to put the discharges of the sick one into the milk from his hands.

The milk of large cities, even of small ones, comes from so many hundreds or even thousands of farms every day, that no consumer can even guess, as a rule, where the milk he drinks first saw the light of day, or through whose hands it has passed. Hence the constant risk everyone runs in drinking milk raw is that some one of the many who may have handled it may have introduced disease germs into it by that handling.

Fortunately, milk can be made safe by boiling, scalding, or even pasteurizing; but these should always be done in a closed vessel, or with constant stirring. Milk, if boiled or scalded in an open pan, especially if it is brought slowly to the boiling point, without stirring, forms a "skin," or scum, because of the evaporation at the surface, and tuberculosis germs have been found surviving in the scum, when those in the rest of the heated milk were killed.

Boiled or scalded or pasteurized milk will rot, although it will not go sour. It ought to be used up promptly, therefore, not kept.

H. W. HILL.

DRINKING AT MEALS.

Ques.—Should liquids be taken during meals, or afterwards? W. G. W. Grey Co., Ont.

Ans.—I don't know. A lot of theoretical arguments may be offered one way or the other, but people vary so in this respect as in many others, that it is very hard to say with any certainty which is better. The choice is probably not much more in favor of one than the other. The most practical thing to do is to try for yourself, and then stick to whichever suits you. If you find that either way, carefully and consistently carried out for a week, really shows any great improvement over the other way, please let me know. I shall be very much interested.

The fact is that milk is 87 per cent. water; vegetables are from 80 to 90 per cent. water; oatmeal porridge is 81 per cent. water; eggs, 73 per cent. water; even meat is 50 to 60 per cent. water, while bread is one-third water, and so on. Tea and coffee are almost all water. Therefore, when you are

eating so-called "solid food," you are really taking with the solids a great deal of water, without noticing it. We often add milk to porridge, gravy to meat, sauce to vegetables, etc., and so increase even the natural amount of water present. Half a pound of ordinary beefsteak is really about three ounces of solid meat, mixed with about five ounces of water, i. e., over half a tumblerful. Only people who are sick, or have some stomach complaint, can be much affected if they take another half-

of people "get used to" strawberries and shellfish, etc., and do not mind them at all, or become very fond of them.

So it is with tea and coffee. We all know people who take huge quantities of either, or both, and yet sleep like logs afterwards; while we all know other people whom half a cup of one or the other would keep awake all night. To most people, tea and coffee are pleasant, harmless drinks; to a few they are mild poisons; try for yourself and see in which class you are.

H. W. HILL.



Laying Down the Law.

(From a painting by Landseer, Perry Print.)

glass of water with it, or even a whole one.

H. W. HILL.

TEA AND COFFEE.

Ques.—Are tea and coffee injurious? Bruce Co., Ont. MRS. B.

Ans.—This is like asking if pork and beans are injurious, or if knives and forks are injurious. Knives and forks are injurious to those who cannot handle them without cutting or sticking themselves; and pork and beans are injurious to those who cannot digest them. It is extremely probable that all foods are



Odin.

(From a painting by Landseer, Perry Print.)

more or less slightly poisonous, and that our bodies have to "become used" to them to a certain degree before we can manage them comfortably. This is especially true of raw foods. This "getting used" to various foods, usually is achieved in early childhood; but with some persons the poisonous effects of certain foods never disappear. Thus, strawberries may bring a rash out on some people; shellfish on others; and so on. But, of course, the great majority

that my eyes were as red as ripe tomatoes, and I had to dope them up with eye-drops and put on dark glasses.

Even now, my head is in such a whirl that when I try to write I relapse into a kind of dazed state. I feel like that much-quoted centipede of the psychology books, that when asked which foot it started with, fell into such a terrible state of perplexity trying to solve the problem that it became completely paralyzed.

Our hotel is in the Arabian quarter, just inside the Porte de France—the main gate of the Arab city—which opens into the broad avenue, which is the heart of the modern French section. Here the contrast between the French and Arab element is the most marked.

Tunis is really two distinct towns—the native town, which is inclosed by a high wall, and entered by five gates, and the modern French quarter, which has grown up outside the wall. The French town is an up-to-date African Paris. Haven't seen so much "style" since I crossed the Atlantic.

I know you hate statistics, but I am going to pour some into your unwilling ears, so you will understand what an awful mixture of races there is in this African town. There is a population of 177,000, of which 100,000 are Mohammedans; the rest are French, Jews, Italians, Maltese, Negroes, Turks, etc. You can imagine, with such a conglomeration, how exciting the street-life is. The red fez and gay-colored burnous, are universally worn. The streets are full of life, and color, and movement. It is wonderful. It is intoxicating. It is as if a rainbow had gone to pieces in the street. After I had been here a few days, the sight of a European in conventional tweeds was positively odious. European attire looks so atrociously ugly in comparison with the graceful, flowing burnouses of the handsome, dark-eyed, dusky-skinned Arabs. One of the strangest features of the Arab town to Western eyes, is the fact that the teeming life of the streets consists almost entirely of men. They are the peacocks of the Orient. They wear the flower-colored draperies, fantastic headgear, and fancy shoes. A common, black porter, draped in sack-cloth, has an artistic air about him, as he leans against the wall waiting for a job. One sees a number of Moslem women in the streets, and they look as much alike as two peas. They all wear the same costume, and anything more hideous was never devised. They shroud themselves from head to foot in a white hiack (a long, straight piece of silk or woollen material), and cover their faces (except the eyes) with a thick, black veil. At a distance, they look exactly like negroes. Then they wear short-pointed slippers, with the heel of the shoe under the instep, and their own heels sticking out behind. Of course, they can't walk; they just waddle.

One of the first things we did was to visit the souks. What are souks, I hear you ask? Souks, my dear, are collection-boxes for the innocent tourists' coins; in other words, they are fascinating little Oriental bazaars. There are miles and miles of these little shops, all under cover, and in passages so narrow, you can shake hands across the pavement, and so crooked, a Canadian snake-fence is straight by comparison.

Most of them are small holes-in-the-wall, bulging inside and out with Oriental nick-nacks, and presided over by an Arabian-night's-dream sort of an Arab, who sits in the middle of the display waiting for a victim. As soon as she appears, he spots her at once, and calls out, "Lady, lady! come, look, look!—not necessaire buy—just come look!" She glances over hesitatingly. He holds up a fancy-leather bag and dangles it alluringly before her. "Ver cheap, madame—look—ver nice—good leather—ver cheap!"

The lady regards it with apparent indifference, but with an inward desire for possession. "How much?" she asks. "Six franc, madam; ver cheap; nice bag." "Too dear," she says disdainfully. "Oh, madame,"—his face expresses absolute amazement—"Look, the fine work—Arabic, the fine leather, Arabic, all Arabic—ver cheap." "Too dear," she reiterates emphatically, making a feint of moving on. "Madame," he implores, "one moment, s'il vous plait. How you like this one?" He holds up another bag. "Coffee, madame, will you coffee?" (Serving coffee in tiny cups is one of the aesthetic features of the souks. It answers the purpose of a strong grappling-iron, and is used when the victim shows signs of bolting.) "No coffee, thank you," says lady. "How much you gif?" asks the dealer suddenly, picking up the bag. She holds up two fingers, meaning two francs. He throws the bag down on the counter in disgust.

Letters from Abroad.

VII.

ON MEDITERRANEAN SHORES.

Tunis, Africa, March 12, 1913.

Dear Jean,—From the moment of landing in Tunis till the present time, we have been completely under a spell. Everything is so new, so strange, so interesting;—the people, the gorgeous costumes, the odd customs, the narrow streets, the Moorish architectures.

It is another civilization—another world. The first day, I stared so much

She moves away. "Four," he calls. "Two," she persists. "Ah! madame, it not possible. 'C'est la mort.'" He looks tragic, and draws an imaginary dagger across his throat to signify that such a sale would plunge him into immediate bankruptcy. "Four," he says, conclusively, beginning to roll the bag in wrapping-paper. "Two," says the lady, decidedly, taking two francs from her purse. He throws up his hands despairingly. "No, no."

She returns the coins to her purse and turns away. "Madame, madame," he calls. She glances back. He lifts up two fingers, and nods affirmatively, passing her the bag. "Now, what else I show you, pillows? secklace? perfumery? See, ver cheap." After half an hour more of haggling, she returns to the hotel laden with five additional articles she didn't want and hasn't any use for, only to discover that other tourists have bought similar things much cheaper.

Miss Morris has made quite a record as a bargainer. Every morning, she solemnly asserts that she is not going near another souk, and yet, seldom a day passes she does not lug home some useless gee-gaw and exhibit it triumphantly as a "bargain." She really has picked up some great snaps in baskets, though where on earth she is going to stow the unpackable things I can't imagine, unless she buys a basket trunk to put them in.

We intended going back to Palermo today, but we simply can't leave this land of handsome Arabs and picturesque burnouses. I've been crazy to buy a burnous ever since I came. Lots of American and English ladies buy them, and wear them for evening cloaks.

I think I'll have to buy an Arab outfit for Jack, so that he can give an illustrated lecture on Mohammedanism to his Boys' Club. With his dark eyes and hair, he would make a most effective Arab, and I can't think of anything that would make him madder than to be dressed up in flower-colored draperies, with his head done up in a tinsel turban, and his feet thrust into yellow-kid slippers. How he would rage!

LAURA.

Hope's Quiet Hour.

The Word is Living.

The word of God is living, and active, and sharper than any two-edged sword, and piercing even to the dividing of soul and spirit, of both joints and marrow, and quick to discern the thoughts and intents of the heart.—Heb. iv.: 12 R. V.

Ask a hundred of your acquaintances what is meant by "The Word of God," in the text given above, and probably at least ninety-nine will answer unhesitatingly, "The Bible." And yet the writer of the original letter to the Hebrew Christians does not seem to have been speaking of any book—not even their treasured Scriptures—but rather of God's direct dealing with each soul. He goes on to say: "And there is no creature that is not manifest in His sight: but all things are naked and laid open before the eyes of Him with Whom we have to do."

Would you say, then, that the people who mean the Bible when they speak of "The Word of God," are mistaken? I don't think so. The Epistle to the Hebrews is nearly all about the Bible—the Old Testament—showing how it is a living witness to Christ. The writer does not say that David once said certain things, but he declares that even at that moment the Holy Ghost is saying (in David), "To-day, if ye shall hear His Voice, harden not your hearts."

The Bible is a wonderful library of books, but the most wonderful thing about it is that the living voice of the Living God speaks through its words. The Voice is a "still," yet never-silent monitor, speaking with authority in the depths of each heart. Does the Bible lie, neglected and unopened, in your house? Then you are deliberately refusing to listen to the living Voice of God. How do you know what special messages of warning against spiritual

danger, of help in your fight for holiness, of encouragement in depression, and of joy in sorrow, you are missing?

A sick man was once sadly preparing to leave home and friends. Feeling depressed and discouraged, he opened his Bible "at random," and God instantly said to him (through Gen. xxviii: 15), "Behold, I am with thee, and will keep thee in all places whither thou goest, and will bring thee again into this land; for I will not leave thee." He says: "I shall never forget the comfort that swept over my soul . . . that was a message to me. It came straight down to me. 'It swept into my soul as a Voice from heaven. It lifted me up.'"

The Bible is not by any means a dead collection of literature, though it was written by men who lived out their

through His written Word, we are listless and inattentive? We need light to guide us safely through life, and through the dark valley of the shadow of death. The light shines out gloriously from that wonderful Book. Those who study it prayerfully, hear the Voice of the Present God speaking to their hearts. No sceptic can disprove what their own experience makes them sure of. A blind man might assert that it was impossible for the sun to hang unsupported in space, burning for ages, yet still unconsumed. We, who can see, might not be able to explain the mystery; but he could not destroy our certainty that the sun gives us light, and health, and life. The Bible has been, and still is, a battle-ground. It has endured the most searching criticism and the most pitiless

short time afterwards they met again, and the thought uppermost in both minds was: "Why can't we start a society for the uplifting of commercial travellers?"

So the Gideon Society came into existence, and each member tries to act like the famous 300 followers of Gideon—standing quietly in his place uplifting the torch of God. The "Gideon" Bible has been placed in thousands of hotel-rooms in Canada. On its first page is a printed suggestion to those who are lonely to study a certain passage, to those who are in business difficulties to study another indicated passage—and so on. Many have turned to the texts indicated, and have been greatly helped. Only God knows all the messages He has spoken through these Bibles; but some of the hearers of the Living Word have told of their experiences. A woman who had turned her back deliberately on holiness, and was heading straight towards ruin, picked up a Gideon Bible once in a Canadian hotel. Sharper than a two-edged sword the message of God cut straight to her heart. The blaze of the torch-light revealed the awful gulf of shame and despair which yawned in front of her, and she turned in shuddering fear from the path of sin which had looked attractive before. That is one case out of many.

I am not going to heap up proofs of the truth of the Bible. Proofs which convince the mind may not help the soul much—besides, the proofs are too many to mention. No one is helped by a medicine just because he knows that it is good. He must TAKE it in order to be benefited by it. We are all suffering from the disease of sin, and I think we are all anxious to be cured. God only can cure that deadly disease; JESUS our Lord is the Good Physician. His words are living and active; can we afford to leave them unheeded? Never man spake like this Man—in all the literature of the world we find no utterances of power which can match His. He only knows the weary, troubled hearts which have been cheered and uplifted by His tender, living words: "Come unto Me, all ye that labour and are heavy laden, and I will give you rest." "Peace I leave with you, My peace I give unto you. . . . Let not your heart be troubled, neither let it be afraid." The very words are like perfect music, and those who act on them know that the Speaker can and will keep His marvellous promise.

The living word of the Living Searcher of hearts cuts straight through the outward beauty of many apparently good actions, revealing—in order to cure—the ugliness of self-love or worldly ambition which spoil them so often: "Take heed that ye do not your aims before men, to be seen of them. . . . enter into thy closet, and when thou hast shut thy door, pray to thy Father which is in secret." He never allows us to deceive ourselves by thinking that all is well, unless our hearts are held up for God's light to search us through and through. He has roused in us such an infinite thirst for holiness that we can never rest satisfied with our attainments until we have become perfect as our Father in heaven is perfect.

He, Who is the Living Word of the Father, speaks directly to my soul when I read His written word, praying earnestly:

"O, let me hear Thee speaking,
In accents clear and still,
Above the storms of passion,
The murmurs of self-will;
O, speak to reassure me,
To hasten or control;
O, speak, and make me listen,
Thou Guardian of my soul."

DORA FARNCOMB.

We are blind with regard to the future; it is as if we had no vision at all; we may not boast of to-morrow, because we know not what one day may bring forth. God keeps to-morrow in His own hand; but this we know, that we shall be led and upheld and comforted; our perplexity shall be relieved, the rough places plain, and even the valleys shall be exalted; a new song will be in our mouth at the close of the day; if we have to sing of judgment, we shall also have to sing of mercy, for God's way towards us is one of judgment and love.—Joseph Parker.



"One sees a number of Moslem women in the streets; and they look as much alike as two peas."

earthly lives thousands of years ago. It is the best-selling book of the day. Although it might seem as if nearly everyone had a copy already, there is a constant and tremendous demand for it—a steadily-increasing demand. Many thousands of copies are printed every working day of each week. Other books, which are greatly in demand for the moment, sell by the thousand each year, but the Bible sells by the million. These other popular books become, as a rule, out of date in a few years. Books written a thousand years ago are only read by a few scholars, and lie on the shelves of the bookseller for years, waiting for a purchaser. But the Bible is in a class by itself. Though it is very old, yet it is always new and fresh. You can't think

attacks for many centuries, yet still it marches onward triumphantly in its world-wide crusade against injustice, slavery, and wickedness. Like the Incarnate Word of God, it proves its Divine authority by healing the sick, raising those who are dead in sin to a new life of righteousness, and carrying the glad tidings of the Love of the Father to the poor and downtrodden. Follow the Bible as it goes out into the darkness of heathen lands, and then you cannot doubt that it carries light and healing wherever it is accepted and obeyed.

"The Church from her dear Master
Received the gift divine,
And still that light she lifteth
O'er all the earth to shine."



Street Scene in Tunis.

of it as an antiquated book, written in a dead language by men of remote ages. It is so vivid and human in its narrative parts, so quick to discern the thoughts and intents of our own hearts, so sharp and piercing in its way of revealing to ourselves the petty or low motives which—if allowed to control our actions—have power to stain and disfigure our souls. The Bible is indeed the Word of God, because He Who is the True Word of God speaks to us through it directly and startlingly. If He appeared on the earth again, we who love Him and claim Him as our Master—I speak to those who do—would delight to sit at His feet and listen to all He wanted to say to us. Is it possible that when He wants to speak to us

It is the golden casket,
Where gems of truth are stored;
It is the heaven-drawn picture
Of CHRIST the Living Word."

I recently had the pleasure of hearing a young commercial traveller speak of the work done by the Gideon Society, of which he is a member.

He said that about twenty-five years ago, two travellers were forced to "double up" in a crowded hotel. Great results have sprang from that apparently trifling incident. One of the men took out his Bible to read a chapter, and the other man—who was already in bed—said: "I believe in that Book, too, won't you read aloud?" They read and prayed together, and parted. A

The Roundabout Club.

Study III. Concluded.

ANOTHER ADMIRER OF SHAKESPEARE.

To be called, through adverse circumstances, to spend a year alone on an island, might suggest at first thought a monotonous and dreary existence, but to have as companion, the right kind of book, that barren isle may be transformed from a lonely hermitage to a veritable haven of enjoyment.

"Of the writing of books there is no end," and many a well-considered or desultory choice might be made, but limited in choice to one secular book the writer would advise a book containing the plays of William Shakespeare.

What is the mission of a book? Some are sent forth to cheer, some to soothe, some to instruct, and others to bless by giving the reader broader and truer conceptions of life. That book which would combine all these functions in its influence is truly the most suitable book under such circumstances.

Denied the privilege of enacting, with fellow mortals, in the real drama of life, why not read from the greatest of dramatists, William Shakespeare? Reading of those whom that mastermind has made so realistic is second only to the actual witnessing and experiencing. How extensive is his subject matter! We are in the midst of low-life and high-life. We can, with Shakespeare, behold with philosophic eye the ambitions and struggles of human kind. At times men are "borne aloft," at others "hurled in the dust." We follow them in the mad pursuit of baubles, enamoured by the glimmer and glitter overstepping the bounds of honor, and meeting with ignominious defeat with all the remorse that follows in its train. In such works as Hamlet or Macbeth we are made to feel, after a study of them, that the few years of mortal life are but dew-drops among the eternal years, and that, after all, there is something infinitely more precious than worldly success, namely, nobleness of soul, fidelity to truth and honor, strength, yet tenderness and trust to the very end. There is a note of consolatory calm throughout his works, hence, how essential to strike that note when living such an apparently lonely existence.

The mighty solitudes with their "lonely raptures", the swish of the incessant waves, the plaintive call of the sea-birds as they hover about, the prospect of immensity in water and sky are all conducive visits from the muses, to study and reflection. Hence, since the words of Shakespeare make demands upon concentration of thought, what more ideal place could be chosen? "Some books," says a worthy authority, "are to be chewed and swallowed, others to be read and digested." There would be nothing in the atmosphere of the place to interfere with any of these processes.

To arouse the feeling of contentment, turn to "the Tempest." In it we see the great magician after a very successful career in the practice of his art, break his magical wand and retire from the scene of his triumphs to the woods and meadows of Avon. He had gained by the wonderful experience of life serene wisdom and beneficent self-control. This, like many other examples in his works, would furnish a sane view of life, and make the reader think that desertion on an island is a mere incident in the story of experience.

The utilization of the year to such good advantage as the reading of Shakespeare would make the mind a storehouse of resources for future years in its broader conceptions of life. The

philosophy of life condensed in those short Shakesperian poetical phrases would ever return to mind.

Shakespeare's works would surely then fulfil the mission of a book to cheer, to soothe, to instruct and to bless, and to be "a joy forever."

Middlesex Co., Ont. MARION BELL.

JUST A BIT OF NONSENSE ABOUT IT ALL.

"A bit of nonsense now and then, Is relished by the best of men."

A year alone, on an island, and only one book! What a dilemma for one who frequently finds great difficulty in choosing only one book to take to bed for a few minutes diversion before sailing off to the comfortable "land of Nod" for a single night!

I have thought a great deal about

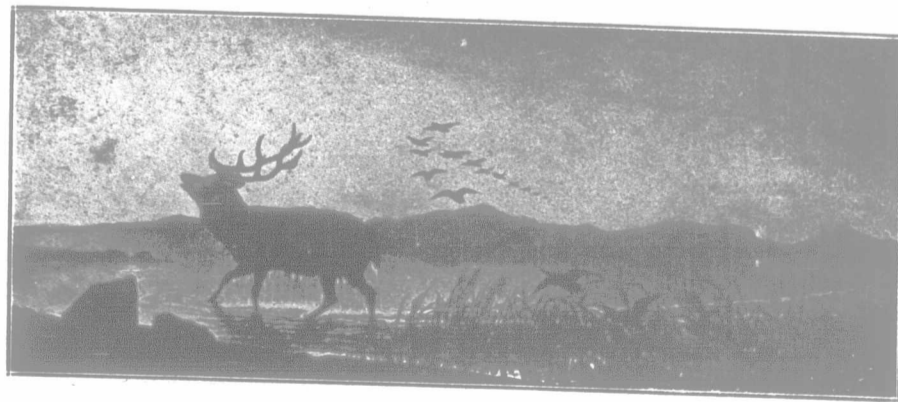


Dignity and Impudence.

From a painting by Landseer.

this matter, and am bound to confess that my first choice was a book of baker's tickets. But that was too futile; for it is inconceivable that any baker would leave his bread cart on an island—with bread so precious dear these days, and I hardly fancy bread would grow there—for all "Swiss Family Robinson"—and I can't make it yet, and if I could I'm "blowed" if I wouldn't take it without the tickets. So that book is off the list.

Well, I've thought of cooking books and needle books and fairy tales, and finally of a book I have seen on a shelf bearing the dreary title—"A Manual of Self Help" O Joy! that's it—at least it sounds good; but here's the rub—I have not the least idea what's in it, if I had immediately this brilliant idea would lose its lustre; for, would not the very fact of knowing what was in the book put me on a standing of in-



The Sanctuary.

From a painting by Landseer.

dependence and self-reliability, whence I could look down with scorn on the source of all my knowledge? For such is human annoyance that we swell with pride and self-sufficiency on gaining, not years, but some few paltry moments of discretion. In short this question has puzzled me already to the extent of taking several long years off my life I'm sure, and there seems but one thing left to do—I'll write to "The Farmer's Advocate" and get their invaluable advice and assistance in choosing the book with which to spend one year alone on an island.

Montreal.

H. M. P.

Gardening Suggestions.

(Conclusion of paper contributed by A. L.)

Before closing the gardening suggestions, I appeal to your common sense on selection of seeds. Have you known the person who would buy her supply from an itinerant peddler, and buy the varieties with the prettiest-colored pictures on the packets? Are you acquainted with anyone who rushes in "hot haste" to the general country store, and buys her stock of seeds about a week too late? (She's the one who is content to scatter them in an unready, weedy soil, to be forgotten, with the exception of a few desultory but venomous attacks, until she expects to have fresh vegetables, because she saw fine ones in the clean garden of the next neighbor.) Have you heard of the person who answers all the "ads." like this:—"25 packets for 25 cents," or worse—"10 packets free," for some mentioned or unnamed cause? No doubt all these old seeds had lost their vitality ten years ago, and are very dear when given gratis.

Patronize the seed-house in your home town. They have a reputation to sustain, and you get more seed for the money, besides information as to the quantity of seed you need for the ground at your disposal. If you have no seed company in your town, order from one of the many with an established reputation for reliability; if not, you will never know if your seed be true to name or worthless, because of age or frost. In conclusion, I shall append a few results that you may reasonably expect, so that you may make a selection accordingly. It will not include perennials, nor novelties, for, while peanuts, sweet potatoes, mushrooms, and many other good things grow here, an amateur would do well not to attempt to grow anything of which the result would be uncertain.

For success with celery, make a trench at the foot of the slope at the rear of the manure-pile, buy Golden Self-blanching, and transplant to the trench from hotbed. The following shows a handy plan for an amateur's attempt, with rows 100 feet long, and will require between one-tenth to one-eighth of an acre. Put first six rows 18 inches apart; next five rows 3 to 3½ feet apart; next two 4 feet apart, and last two 2½ feet apart.

Red Wethersfield onion, 1 ounce seed 2 ounces ashes, sowed together.

Red Wethersfield onion, 1 ounce seed 2 ounces ashes, sowed together.

Yellow Globe Danvers onion, 1 ounce seed to each 100 feet.

Early Egyptian beets, 2 ounces seed to each 100 feet.

Chantenay carrots, ¼ ounce to 25 feet.

Turnip and French Breakfast radishes, ¼

ounce to 25 feet. Butter beans, 1 pint to 50 feet.

Asters, nasturtiums (for capers), snapdragons, etc.

Ground cherry plants, three feet apart.

Ground cherry plants, three feet apart.

Popcorn, ½ pint.

Gladioli, cannas, dahlias.

White beans, Kidney, or Thousand to One, 1 pint.

One ounce cucumbers, White Spine and Pickling, 25 flat hills, 4 feet apart.

Cauliflower, ¼ ounce, plant 2 feet apart.

Cabbage, ¼ ounce Early Winningstadt, 18 inches apart.

Late cabbage, 2½ feet apart.

The above garden ought to yield:

Onions, 9 bushels.....	\$ 9 00
Beets, 6 for 5 cts.....	2 50
Ground cherries, \$1 per bushel.....	10 00
Popcorn, 1½ bushels, at \$1.....	1 50
White beans, ¼ bushel.....	75
Cucumbers.....	10 00
Cauliflowers, 50, at 10 cts.....	5 00
Cabbages, Early, 66, at 5 cts.....	3 30
Late cabbages, 40, at 4 cts.....	1 60
With 5th, 6th and 10th rows thrown in.	
Total.....	\$43 65

This would not be the estimate of a professional, but it approximates what I can do unaided, except for the plowing and harrowing. A. L.

Mending Basket.

The Hired Help Question.

Dear Sir,—So much has been said and written about the hired-help question, and yet so few suggestions have been made to eliminate or remedy the trouble. From city and country we hear people complaining. "We cannot get competent help," or "We cannot get anyone who will take interest in the work," and, most pitiful complaint of all, "When we do get satisfactory help, we cannot keep them." Not very long ago I spent an evening in the office of the Y. W. C. A., and overheard one side of a conversation between the Secretary and a farmer looking for a girl, which threw a little light on the subject. After the usual preliminaries had been discussed, the Secretary asked, "And, now, where do you live, Mr. B—?" and on receiving his answer, much to my surprise, she remarked, approvingly, "Oh, R—! That's a good locality. You see, so much depends on that. So often, when everything else proves satisfactory, a girl will say, 'Oh! I wouldn't go there!'"

That last remark, the emphasis on the "there," the tone in which it was uttered of commingled horror and disgust, set me thinking. Why should a girl care about locality? The only solution to the problem was, that the expression, "good locality," meant situated in a neighborhood with good social advantages.

Once, I, a city woman, spent nine months on a farm in the capacity of hired girl. I will confess it was not from choice, but a case of "have to." Ledgers, daybooks, and the eternal clicking of a typewriter, proved too much for a highly-strung nervous system. There came the inevitable breakdown, a long, enforced rest, and then the decree, "Go to the country, live out of doors, and we'll make a strong girl of you yet." "Go to the country!" I repeated to myself, groaning inwardly at the thought of the slimness of my pocketbook; "He might as well say go to Mars." But where there's a will there's a way. Three weeks later found me installed in a farm-house, doing things I had never done before, and enjoying the out-door life.

If I had been like some girls, "cooped up" in the house, never going anywhere, never seeing anybody or anything, working without any recreation, I, too, should probably have lost heart.—I don't think I would have stayed that long,—more probably, in defiance of doctor's orders, I should have given up the experiment.

But no; I enjoyed it thoroughly; enjoyed the novelty of the work; enjoyed the cordial hospitality of the neighbors, and finally returned to the city, better fitted, physically and mentally, to cope with the strain and stress of my own work. Now, all farms cannot be situated in "good" localities as regards their close proximity to towns, and villages, and churches, but all can be in good localities as regards social life.

"All work and no play, makes Jack a dull boy—and Jill a dull girl." Treat your hired help well, and they'll work well. Let them feel that they're human. Don't find fault continually. In other words—don't nag.

Don't ask them to do things you wouldn't do yourself.

Don't expect them to work steadily, day in and day out, without recreation of some kind.

Don't expect perfection—we are all human.

Don't give too many orders. Let them do some things on their own account. A little freedom of thought inspires independence and interest. Let them see you place some confidence and trust in them. Nothing makes a man or girl more careless and indifferent about things than to know he or she is not trusted. Give a cheery word of encouragement occasionally. It's only a little thing, but it makes the whole day happier and brighter, and gives an added stimulus to the work.

Surely if some of these suggestions were followed, we would have fewer discussions on the "hired-help question."

Just as a last word,—of course, discretion must be used in the treatment of one's employees as in everything else, but the man or girl who would become masterful and overbearing under such conditions as I have mentioned, is not the man or girl you want around your barn or home.

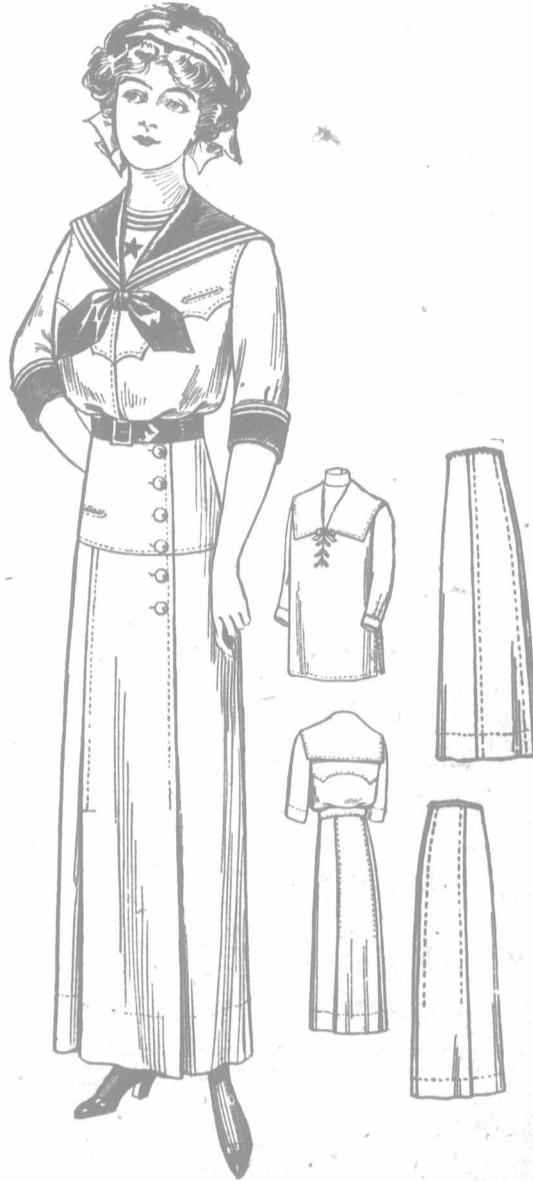
L. RUTH MILNER.



7765 Tucked Kimono, 34 to 42 bust. 7682 Empire House Gown, 34 to 42 bust.



DESIGN BY MAY MANTON. 7634 Empire Gown, 34 to 42 bust.



7545 Middy Costume for Misses and Small Women, 14, 16 and 18 years.



7494 Five Gored Skirt, 22 to 32 waist. 7751 Semi-Princesse Gown, 34 to 42 bust.



DESIGN BY MAY MANTON. 7608 House Jacket with Fitted Back, 34 to 44 bust. 7236 Three-Piece Skirt, 22 to 32 waist.



DESIGN BY MAY MANTON. 7585 Loose Fitting House Jacket, 34 to 44 bust. 7515 Five Gored Skirt, 22 to 32 waist.



DESIGN BY MAY MANTON. 7612 Corset Cover with Straight Upper Edge, 34 to 42 bust. 7577 Seven Gored Petticoat, 22 to 32 waist.



7448 Semi-Princesse Dress, 34 to 44 bust.

The "Farmer's Advocate" Fashions.

HOW TO ORDER PATTERNS.

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state issue in which design appeared. Price ten cents PER NUMBER. If two numbers appear for the one suit, one for coat, the other for skirt, twenty cents must be sent. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

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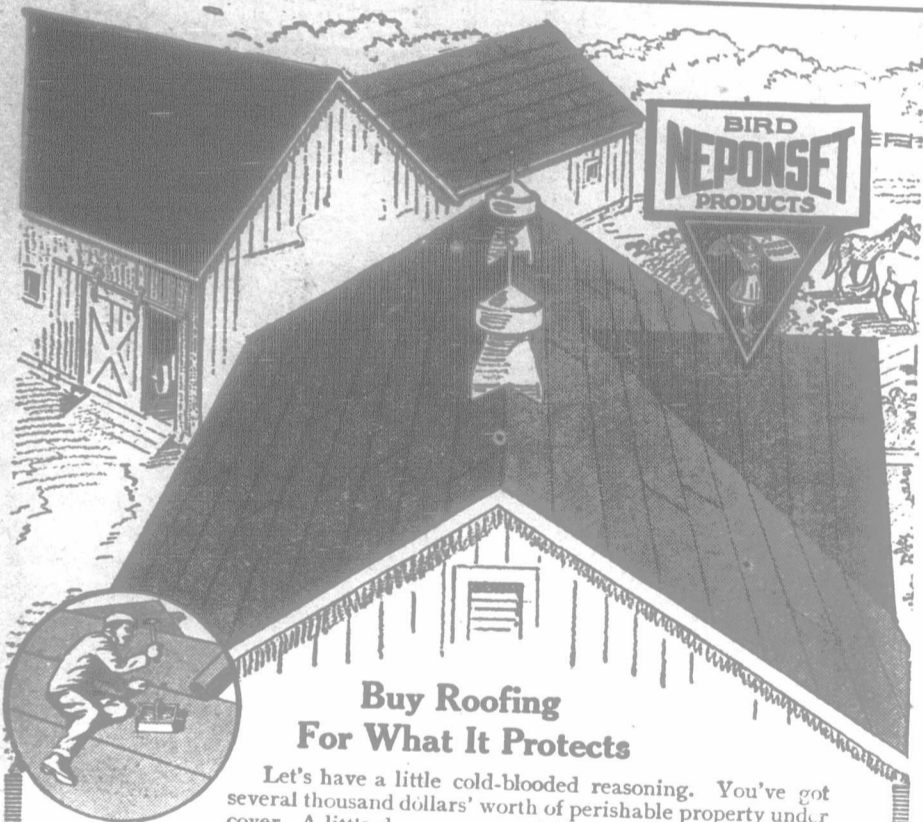
POTASH and Phosphatic materials cannot be applied too soon if this year's crops are to obtain full benefit from them. Farmers are invited to communicate with us, and we shall send free any of the following bulletins. State which are required:

- "Artificial Fertilizers; Their Nature and Use."
- "The Principal Potash - Crops of Canada."
- "Potash in the Prairie Provinces."
- "Fertilizing Orchard and Garden."
- "The Potato Crop in Canada."
- "Fertilizing Fodder Crops."
- "A Farmer's Field Tests."
- "Farmer's Computation."

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The Ingle Nook.

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

Dear Ingle Nook Friends,—The Pattern Department has a message for you. In the first place, when you order a pattern be sure to give your name and that of your post-office. You would be surprised if you know how many forget to attend to this simple matter. Some of them become cross, too,—when the patterns fail to materialize. For instance, one woman—I don't know her name, so she must not take this personally—wrote us for a number of patterns, sending the money, but no indication whatever as to who she was or where she was to be found. Of course, the letter was laid aside in the hope that the omission might be speedily supplied. After two or three weeks a second letter arrived, a very angry one. She wanted to know why her patterns had not been sent; if our business methods weren't better than that she didn't want any more of us; if the patterns weren't sent at once we might take her name off our mailing lists. Would you believe it?—neither name nor post-office address was given in this second epistle! More than once people have written us a second time making the same omission.

A great many say, "send my pattern at once," or "by return mail." Now the patterns are not manufactured here in the editorial rooms; they are made in New York, and are sent from there on our order, hence, obviously, it is impossible to respond by return mail. In the paragraph, "How to Order Patterns," which appears regularly in our fashion columns, you are asked to allow ten days at least for the receipt of patterns. We cannot promise to do better than this. The patterns may go to you sooner; occasionally, for reasons unknown to us, they may be delayed even past the ten days, but this is very exceptional.

Occasionally, too, patterns are held up at the Customs. We have been roundly scolded about this, but really we have no control over the Customs. We cannot understand why it is that, while the great majority of patterns come through free, a few are held up and duty demanded. The pattern manufacturers, to whom we have written for light on the subject, know no more about it, so there the matter must rest.

It is not necessary, if you are an adult over eighteen years of age, to give your age, as hundreds do—"bust 38, age 35," and so on. The bust measure for blouse and waist measure for skirt are all that is required. Mature women of small size may, of course, order 16 or 18-year size. . . . Neither is it necessary to give all the measurements, under arm, shoulder, back, front, etc., as when sending to Eaton's or Simpson's to have a garment made to order. Patterns are not made according to individual order; bust and waist are all that need be considered, age, of course, for children's patterns.

Last of all, please be kind enough to state the issue of our paper in which you saw the design that you want. If you neglect this—some very busy people have a great deal of trouble looking up and verifying your number, as is invariably done to prevent chance of mistake. Now is all this clear?

We should be very much pleased to hear all particulars about vacuum cleaners from homes or neighborhoods in which they are being used. We have heard of the smaller ones being purchased by two or more families. Is this plan satisfactory?

We have also heard that, in some places, a large one has been bought by an entire community, but have learned no details about the purchase or use. There are, doubtless, many communities which would be glad to make the investment, if enlightened in regard to cost, etc., and assured that a neighborhood

cleaner is a satisfactory outlay of money.

In the cities since the advent of hardwood or "finished" softwood floors, vacuum cleaners, and the use of rugs instead of tacked-down carpets, the house-cleaning uproar has become almost a thing of the past. The principle of keeping clean, absolutely, all the time has quite routed the old plan of having a big clean-up of extra and otherwise unget-at-able dirt twice a year. Of course papering and painting time will insist on arriving occasionally, but ordinarily the vacuum cleaner keeps walls, curtains, upholstery and rugs clean and sweet, while the use of rugs removable at any time makes it quite possible to prevent the accumulation of the layer of dust invariably found beneath the tacked-down carpet.

The possibility of a similar condition in rural homes at large would surely be welcomed, hence, we ask those who have solved the problem to "pass the good thing on."

• • • • •

Have you decided to try a few flowers in addition to vegetables this year? Doubtless, a garden of bulbs and perennials is the most satisfactory, but if you have not such an one under weigh do not despair; a few packages of seeds of annuals will do wonders before fall, even though planted in the open ground towards the end of May. Try a bed or two in the back yard where you can be cheered by the bright flowers every day as you go about your work in the kitchen. Varieties very easily grown and that give a fine showing for the money are, annual larkspur, phlox Drummondii, coreopsis, verbenas, Shirley poppies, candytuft, asters, gaillardia, and some of the handsome new marigolds. Some would add to these zinnias, stocks and petunias. Zinnias are rather stiff, but they keep in bloom a long time and some of the new varieties are very rich in color. Petunias also bloom a long time, and are considered by many very handsome. Personally I quite agree, in regard to them, with the writer in Suburban Life who said, "In spite of all the catalogues and advertisements you never can make anything but one of the 'Mary Ains' of life out of a petunia." There is always something commonplace about it, and its coloring—its purples and magentas—clashes, as a rule with that of every other flower planted near it.

Of course, for a corner of sweet odors you will have mignonette and a few of the dear old-fashioned herbs. You will also have plenty of sweet alyssum for bordering your beds, and a clump of feathery "baby's breath" for mixing with cut flowers. If there is a sandy sunny place in your garden where nothing seems to grow well plant it with portulaca. You will be surprised to see how it will run riot with very little care.

And what about vines?—Vines to soften hard angles and cover up ugliness, vines, most graceful of all things that grow—surely no garden is complete without them! For screening purposes perhaps nothing is better than Japanese hops; the leaf is rather rough and coarse, but the vine makes great growth in a single season. Aristolochia or Dutchman's-pipe, and coccinea scandens are both attractive vines, but for beauty of color in the flower none can be better than our old friends morning-glory, scarlet runner, and, for lower growth, tall nasturtiums, sweet peas, and the delicate feathery canary vine. The cinnamon vine, with its clusters of small white flowers, is especially good for twining about pillars.

I wish you all happiness with your garden.
JUNIA.

RE HOSPITAL NURSING.

Dear Junia,—Having received much valuable information from the Ingle Nook, I have come for help in a matter of which I know but very little. I am thinking of entering a hospital to train for a nurse. Would you tell me how to apply to the hospital, and how much education it would be necessary to have? Would an entrance certificate be enough? I have been told that you can enter an American hospital with less education than a Canadian one. Also how are you supposed to dress the first

three months while on probation? Would an ordinary gingham house dress and white apron do, or are the dresses made from a certain material and pattern? Any other information on this subject would be gratefully received.

Glengarry Co., Ont. **STRAWBERRY.**
Write a letter to the superintendent of the hospital you would like to enter asking for all information. Rules differ for various hospitals; there is as yet no universal standard of education for hospital nurses. During the probation period an hospital uniform must be worn. This differs in the various hospitals, hence, after being accepted, you will have to get information from the superintendent of the one in which you are to be trained.

ICING FOR CAKE—ROLL JELLY CAKE—MAYONNAISE

Dear Junia,—I have been a silent reader of your columns for a long time; in fact, I do not remember when "The Farmer's Advocate" first started to be a regular visitor to our home.

Having received so many helpful hints myself, I thought possibly I could help a "Constant Reader", in your issue of March 27th., about the icing cracking. This question appeared in miscellaneous Questions and Answers.

No. I.: 1 cup granulated sugar, $\frac{1}{2}$ cup sweet cream, boil for fifteen minutes, flavoring as desired. Beat till partially cold and spread.

No. II.: Grate one medium-sized apple. Beat into it $\frac{1}{2}$ cup sugar and white of one egg; flavor with almond. Beat thoroughly.

I have a good recipe for roll jelly cake. Perhaps some one would like it. 1 cup granulated sugar, 1 cup flour, and 1 teaspoon baking powder, sifted together, 3 eggs, 1 tablespoon cold water, flavor as desired. Slightly dampen a clean cloth, sprinkle it with sugar, and when your cake is done turn it up on this; spread with jelly, roll up quickly, roll the cloth around the cake and leave until used.

I wonder if anyone has a good mayonnaise recipe to pour on chopped nuts to use for sandwiches. I would be very grateful for one.

Kindest wishes to Junia and members of the Ingle Nook.

Grey Co., Ont. **JACK'S DAUGHTER.**

As you may know, the real mayonnaise dressing contains pure olive oil. Many, however, who do not like the oil, substitute melted butter or thick cream. Here is a recipe for the "real article." Allow $\frac{1}{2}$ cup oil, 2 eggs (yolks only), vinegar to thin, $\frac{1}{2}$ teaspoon "made" mustard, $\frac{1}{2}$ teaspoon salt, $\frac{1}{2}$ teaspoon pepper, $\frac{1}{2}$ teaspoon sugar, 6 drops Worcester sauce if you have it. Boil one of the eggs 10 minutes, and when cold take out the yolk and mash it in a bowl. Now add the yolk of the other egg (raw) and stir until smooth. Next add the other ingredients, leaving out oil and vinegar until the last. Add the oil by degrees, stirring constantly, and as soon as all is used thin with the vinegar. Place on ice for one hour before using.

A NET HAT—CREAM PUFFS.

Dear Junia,—I am writing again to get a few hints as I received much help from former inquiries, and must say that the Ingle Nook is very helpful to us all.

Could you tell me if there is any way to freshen up a white all-over net hat that has become a creamy color, as all other white straw hats do on being worn out in the sun?

Also tell me what to use on a cook stove to make the blacking stay on. It seems to all burn off just as soon as the fire is started again. Also a recipe for cream puffs.

Middlesex Co., Ont. **S. B.**
I really do not know what you can do with that hat. Try dry cleaning it by rubbing starch and borax (half and half) into it and leaving it rolled up in cloth for a couple of days. Brush out the powder, repeating if necessary. This will clean the hat, but may not remove the sunburn. If still badly burned wet the hat and suspend it in a barrel, in the bottom of which is a pan of burning sulphur. Cover the barrel well.

For reply re stove, see answer to Mrs. R. M., March 20th. issue.

Cream Puffs:—Put a cup of boiling water and $\frac{1}{2}$ a cup butter in a saucepan over a hot fire. At once turn in a cup of flour and stir well until cooked to a paste. Remove and let cool. When almost cold rub in, one by one, three eggs, without beating them first, when well mixed drop the paste in rough lumps (about a dozen) on a buttered pan and bake in a hot oven. When nicely browned take out, and when cold cut a slit in the side of each and put in custard or whipped cream. No soda or baking powder must be used.

FLOWERS FOR WINDOW BOXES, ETC.

Please give me a few names of flowers and plants that will bloom early and do best on north and south side of dwelling house; I suppose I might say shady and sunny sides of house.

What plants or flowers would be best adapted to put in boxes outside window ledge?

Greenville, Ont. **FARMER'S WIFE.**

So one lady at least has been making delightful plans. The list of flowers given in first Ingle Nook article, this issue, will enlighten you in regard to those that can be grown in bright sunshine. On the shady side make a deep rich root-bed of mellow soil mixed with black barnyard earth, and, if possible, woods soil, then plant ferns, ornamental grasses, Alleghany vines (will not bloom until second year), tuberous begonias, pansies, lily-of-the-valley bulbs, forget-me-nots, and meadow rue.

For window-boxes in a sunny situation nothing can be better than geraniums, heliotrope, ageratum, lobelia and scarlet runner. For those in a shady situation fancy caladiums, trailing fuchsias, maurandya vine, ivy geranium; some of the begonias, manettia vine, asparagus sprengeri, and ferns, are suitable. Morning glories on the north side of a house are usually very satisfactory as the flowers keep "out" longer than when in brighter situations.

If you have to study economy and buy seeds rather than plants for your window-boxes, you may find the following selection satisfactory: phlox Drummondii, sweet alyssum, verbenas, nasturtiums, ageratum, petunias, morning glory, wild cucumber.

PAPERING ROOMS.

Dear Junia,—I, like so many others, have ventured to your Ingle Nook for advice, but before asking for it, allow me to say that we, as a family, enjoy your valuable paper. "The Farmer's Advocate and Home Magazine," very much. It is such a good all-round paper, all departments, each give such excellent advice, making it a fine educational paper. I want advice as to decorating the walls of my home. The ceilings are very high, being 10 $\frac{1}{2}$ feet high; the base boards are about 1 $\frac{1}{2}$ feet high, making the walls look so high and bare. I want you to tell me through your valuable paper how you think best to paper these walls. The living room faces the east, and has two windows which let in abundance of light and sunshine. It has also a built-in cupboard with two glass doors. It has a bedroom opening off it, facing the east, having one window which lets in the morning sun. This is a fine large room. There are also small parlor and bedroom off it, which is also small. These are north-west rooms, each having but one window. Now you would greatly oblige me if you would give me some suggestion as to papering these rooms. I also want to paint the wood-work. Would you advise dropping the ceiling paper on the walls about 12 or 18 inches, and putting an 18-inch border below that? Also will you give your advice of papering a narrow hall which leads from the living room to the kitchen? This has no light except from doors opening into it. The ceiling of this hall is 10 $\frac{1}{2}$ feet high also. Would it be nice to have inside of this cupboard, which is built in the living-room, (which is also used as a dining-room sometimes) grained imitation natural oak and used for holding fancy dishes, rather than have them exposed to the dust as is the case when a plate rail is used? Now I fear I have already made this letter too long for my first. But I sincerely hope to

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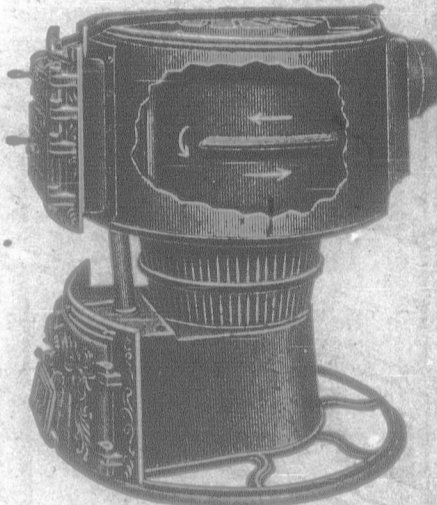
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receive some help from your Ingle Nook in this matter. Wishing your paper the best of success. I will sign myself Wellington Co., Ont. "TROUBLED."

It is a little difficult to suggest wall-colorings for your house without knowing either the color of the woodwork or of the furnishings to be used in the rooms.

As your ceilings are so high we would suggest drop-ceiling effects throughout, having the drops 18 inches or 2 feet, with a narrow wooden moulding below, the kind used to hang pictures from. This moulding should, of course, be stained the same as the baseboard below.

For the living-room you might have a dull, soft-yellow ceiling, covering the walls with one of the foliage papers in which the tones are soft green and brown touched up with burnt orange or yellow. The woodwork fumed oak stain. If you do not like this and prefer a plain paper—and especially if you have some good pictures—you might choose a grayish green oat-meal paper for the wall, using a deep cream for the ceiling. Woodwork fumed oak stain.

As the room opening off this is a bedroom, thus necessitating that the door be always shut, you might use for it any of the pretty cream bedroom papers with dainty floral patterns. If the room were a den or library the wall might be done the same as that of the living-room.

For the parlor and bedroom facing northwest, and with but one window each, use cream paint or enamel for all the woodwork. Have the drop ceilings deep cream. Beneath the moulding in the parlor use a plain soft-yellow or buff paper. A green rug would be pretty with this.

I should certainly use the cupboard for pretty china if I were you. In fact built-in china cupboards are more in favor now than plate-rails in any room which is at all hard to keep dusted. Some people like graining. Personally I am not fond of it for any woodwork whatever; it is always merely an "imitation" of natural grain. A stain, dull-finished, appeals more to me, but, of course, you must consult your own taste in the matter.

For the dark hall you might use a light-tan paper. This would add to the light without being too delicate for a hall.

The Scrap Bag.

Gladioli.

Try starting a few gladioli early in tin tomato cans. Before planting them burn the cans so that the bottoms fall off, and the cans can come apart. Place the cans close together in a box, tying them with strings if necessary. When danger of frost has passed the string may be cut, and the balls of earth set out without disturbing in the least the roots of the plants. After the first setting out plant more gladioli at intervals of two weeks until July, thus providing for a long succession of bloom of these beautiful flowers. You know, do you not?—that tomato plants do well when transplanted from the seed-box to tin cans prepared in this way.

COVERING LIQUIDS.

Never permit liquids to stand uncovered. Old-fashioned butter "patties" will be found very useful for covering wide-mouthed bottles and small pitchers.

FERTILIZER.

Bore a few small holes in the sides of leaky pails, tubs, etc., and keep these to sink in cucumber, squash or melon beds. Fill, as needed, with water or weak liquid manure.

CANNED GOODS.

Canned goods should not only be emptied into a glass or earthen dish as soon as opened, but should be allowed to stand for an hour before using. Keep in a cool place where the air is pure.

TO RESTORE FADED UPHOLSTERY.

Beat the dust out well, wash with a hard brush and lather of castile soap and water, rinse with clear water, and finally wash with alum water. Do the work out of doors, and dry the upholstery in a windy, shaded place.

A SEWING HINT.

When making a waist run a thread around the neck until the collar or binding can be put on. This will keep it from stretching.

HOME-MADE LAUNDRY SOAP.

Take 1 lb. lye and $\frac{1}{2}$ lb. borax. Pour 1 quart hot water over these, holding a cloth over the mouth and nose, as the fumes are very strong. Cool. Melt 5 lbs. clarified fat, strain; and when cool pour in lye and borax, stirring until as thick as honey. Pour into a paper-lined tin, and when cool mark off into cakes.—Pictorial Review.

POLISH FOR PATENT LEATHER.

One part linseed oil, 2 of cream. Apply with flannel and polish off with soft cloth.

SEASONABLE RECIPES.

Maple Syrup Apple Sauce:—Make apple sauce as usual, but when partly cooked add 1 cup maple syrup.

Cracker Pudding:—Roll 6 crackers fine and soak the crumbs in 8 pints warm milk. Add $\frac{1}{2}$ cup butter, 1 cup sugar (small), $\frac{1}{2}$ teaspoon salt, 1 of spice, and 3 well-beaten eggs. Then add 1 cup seedless raisins. Bake in a pudding dish, well greased, for 2 hours, very slowly. Stir several times during the first hour to prevent the raisins from settling.

Steamed Prune Pudding:—Cream together 3 tablespoons sugar and 2 tablespoons butter. Add 1 egg, beaten, and 1 large cup buttermilk in which has been dissolved 1 teaspoon soda. Sift $1\frac{1}{2}$ cups flour with a pinch of salt and nutmeg and beat in. Last of all add $1\frac{1}{2}$ cups soaked prunes pitted and chopped fine. Steam 3 hours and serve with hard sauce.

Date Rolls:—Take a piece of dough from bread dough. Roll this dough into a long, thin strip and spread this with melted butter. Sprinkle with finely chopped dates, roll like a jelly roll and cut in one-inch pieces. Place these pieces flat side down on a greased pan, brush them with milk and allow them to rise until double in bulk. Bake in a hot oven. They are very wholesome and tempting.

How to Get Beautiful Lace

WRITE FOR BOOKLET.

If you want to buy some really handsome and distinctive lace for any purpose whatever, see the advertisement of Mrs. Addie Armstrong, Olney, Bucks, England, elsewhere in this issue. "Pillow" and Irish crochet a specialty.

The Beaver Circle

OUR JUNIOR BEAVERS.

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

Mud Pies.

Sweetened with sugar and sprinkled with spice,
Apple turn-overs are really nice;
But make-believe pies are a great deal more fun,
When little cooks bake them out here in the sun.

With soft, coaxing touches they mix up the dough—
Brown flour is said to be wholesome, you know;
And if little fingers shall gather a stain,
Why, water and soap will soon wash them again.

And, after the wonderful baking is done—
The droll, jolly baking out here in the sun—
The sweet little cooks will be happy to take,
If somebody gave it, a good slice of cake.

—Margaret Sangster.

Junior Beavers' Letter Box

Dear Puck and Beavers,—I am going to tell you about our trip last August. We started early in the morning. We passed along near the lake. It was fun to see the waves. We stopped for dinner at a farm-house. There was a nice

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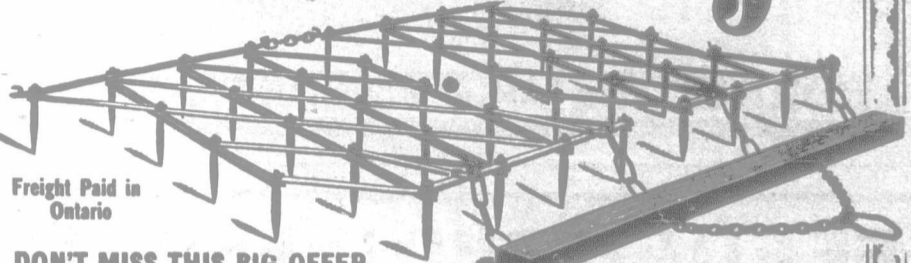
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Our No. 3 Farm Plow is specially built for clay or stony land, but can be used for any soil. Beam is of high-grade carbon channel steel. Points are well tempered and strong. Mould board best crucible cast-steel. Handles of best selected timber, well braced. Complete with knife coultter, extra point and wrench.
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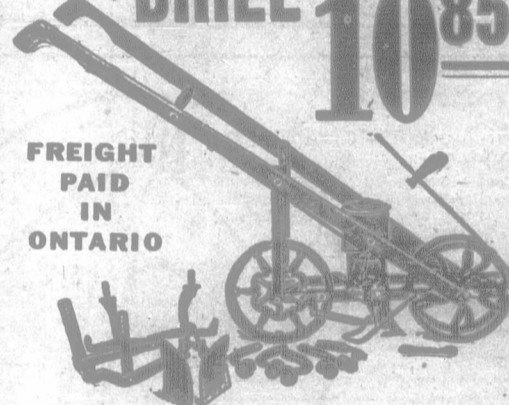
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orchard, and we gathered a lot of apples. Then we started again, and it was seven o'clock before we got to our next stopping-place. We stayed over night, then we drove down to my aunties. We stayed there three or four days. We passed through quite a few towns. We were all glad when we were coming home again. I will close now.

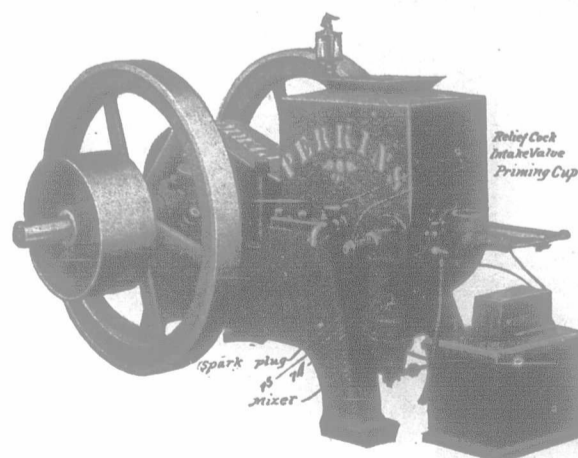
LENA COSENS (age 10, Sr. II.)
Parkhill, Ont.

Dear Puck and Beavers,—I have just been reading some of your interesting stories, and I find some of them quite interesting to read. I have four dolls, and my sister has five. I have one brother; his name is William. He has for pets, two bantam hens and two cats. My father has been taking "The Farmer's Advocate" for several years.

MAGGIE COOPER (age 10, Jr. III.)
Kippen, Ont.

Dear Puck and Beavers,—I read your letters, and like them so well I would like to join your Circle as a Junior Beaver. My papa has taken "The Farmer's Advocate" for ten years, and all our family like it fine. Sister says to tell you she enjoys Sherard McLeay's writings.

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My pets are a dog and a cat. I once had a pet colt which I could ride. It would come to the door and lift the latch with its nose. One day it came into the summer kitchen and put its nose in hot apple sauce and burned it.

I have four dolls and a doll-carriage. My grandpa built me a play-house, and I play in it with my dolls. I have two miles to go to school. I like my teacher.

FLORENCE STEPHENS (age 8, Bk I.)
Pretty River Valley, Ont.

Dear Puck and Beavers,—I thought I would write to you; it is my second letter. I will tell you what I have for pets. I have a dog (I call him Buster), and a cat (I call it Tootsie). I have a few chickens. We did have three small kittens, but they went away, and we never saw them after. I have joined the Loyal League of Bird-lovers. This is a league to protect the birds and animals. HAROLD E. SKELLETT.
(Age 9, Jr. II. Bk.)

London Jct., Ont.
We are glad to hear about your Bird-lovers' League, Harold. Tell us more about it, won't you?

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THIS is for the man who drives a real horse—the man who is a bit particular about the sort of buggy, harness and whip he uses—the man who knows what's what.

The "Jim Slick" Halter

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Will appeal to such a man. He will appreciate its fine points. He will notice the way it follows the contour of the head—no sharp angles or slants. The "Jim Slick" Halter is made in either ¾-inch or 1-inch leather, with plain black mountings, \$1.25; with leather shank at \$1.60; same, with solid brass mountings, at \$1.40 and \$1.75. If your dealer cannot supply you, we will send one, prepaid, on receipt of price. For delivery to points west of Fort William add 25c.

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Dear Puck and Beavers.—As this is my first attempt to write to you, I guess it will not be very good. Every Thursday when I come home from school I look anxiously for "The Farmer's Advocate," and am soon reading the Beaver Circle. I have a fine dog for a pet. My dog, which I call Rover, will draw me all over the neighborhood on a hand-sleigh, or an express wagon. He will also play hide-and-go-seek. I think him a fine playmate, and rub him down with a brush. As my letter is getting rather long, I guess I will close.

NELLIE MARK (age 11, Sr. II.)
Valentia, Ont.

Dear Puck and Beavers.—We live on the top of a big hill in the northern part of Dufferin County. It is very pleasant living here in the summer-time; we get such a good view of the surrounding country. I go to school in the summer-time, but I cannot go in the winter, as I have over a mile to go. I have five pets, a canary, a dog, a rabbit, and a pair of pigeons. I have great fun with them. I have had the rabbit for over two years, and he is so very tame. My dog is called Carlo. I have one little sister called Jessie, age seven years. I enjoy reading good story books. I have read "Beautiful Joe," "Black Beauty," "Buster Brown's Autobiography," and several other stories. I often wish Buster Brown would come and visit me. I am sure we would have a big time together. Now, Puck, I must close, or I will be taking up too much of your space, hoping this will escape the w.-p. b.

DOUGLAS MOODIE (age 9)
Black Bank, Ont.

Dear Puck and Beavers.—My father has taken "The Farmer's Advocate" for as long as I can remember, and would not be without it. I am reading Rebecca of Sunnybrook Farm. I like it fine. I go to school every day. Our teacher's name is Miss Dods. We all like her. My little sister and I have a play-room up-stairs. We dress up when it is storming out doors. I think my letter is getting long, so I will close.

RETA WILLCOCKS (age 10, Sr. II.)
Islington, Ont.

Dear Puck and Beavers.—We live 25 miles west of Kingston, on the shore of the Bay of Quinte. The boats stop at Conway when flagged. When we go to see my grandfather we pass the Lake of the Mountain at Glenora, where there is no prettier view. He lives on the shore of Lake Ontario.

FRANK HAM.
Conway, Ont.

Dear Puck and Beavers.—This is my first letter to the Beaver Circle, although I have enjoyed reading the letters for some time. I am a little dark-eyed lassie, and like lots of fun. I am in the Junior Third Reader, and am eleven years old. I have two sisters, one older and one younger than myself. I have lots of fun with them, as I like to tease them. If I see this letter in print, I will write again and tell you about some of the fun we have.

I will close with a riddle.
Why are naughty children like corn-stalks?
Ans.—Because they get their ears pulled.
LAURA RHINDRESS (age 11, Jr. III.)
Delaware P. O., Ont.

Dear Puck,—We are not having very nice weather just now. It is windy, and very slushy. We have a creek a few rods from our house, and the water is very dirty, and our garden beside it was half-filled, so you can imagine how the other side was enlarged. This was Monday morning, but it is lots smaller now, which is about four o'clock in the afternoon.

The storm we had on Good Friday, or March 21st, did quite a lot of damage, so people are busy repairing. We tapped quite a number of trees, and have boiled three-quarters of a gallon of molasses, but we did not get a chance so far to boil any more, as it was getting cold, and then it would rain. I suppose you think my letter is getting long.

VERA SCHWEITZER (Sr. IV.)
Heidelberg, Ont.

Riddles.

If the ice-wagon weighs two thousand pounds, what does the man on the hind end of the wagon weigh? Ans.—He weighs ice.

What is a kiss? Ans.—Nothing, divided by two. Sent by Verda Northey, Peterboro, Ont.

I went out into the woods and got it. After I got it I looked for it, and the more I looked for it the less I liked it, and so I took it home in my hand because I could not find it. Ans.—A silver. Sent by Hugh Black, Tullamore, Ont.

What does a man set in his garden first? Ans.—His foot.

When does a man rob his wife? Ans.—When he hooks her dress. Sent by Florence Deans, Galt.

What is sharper than a thorn? Hunger. Sent by Alberta Everett, Iron-quois, Ont.

Beaver Circle Notes.

Clara McDermid (age 8), Batteau, R. M. D., Ont., wishes some of the girls of her own age to write to her.

Jack Organ and others, wrote on both sides of the paper, so their letters cannot be printed.

Letters to be printed must be written on but one side of the paper. Do not forget this, Beavers.

All letters for the Beaver Circle must be addressed, "The Beaver Circle," "The Farmer's Advocate," London, Ont. Otherwise, in future, they will not be printed. When addressed simply to "The Farmer's Advocate," they are sent to another department, and give some very busy people a great deal of trouble.

Very many letters are still held over. We made room this week for a few recent ones whose writers, we knew, were very anxious to tell about Good Friday's storm and syrup-making.

No Name Signed.

Unsigned order for pattern No. 7699, has been received from Sandford, Ont. Will sender kindly send name and address, and give size required?

An electioneer visited a man to get his vote. The man himself was out, but his wife said:—

"I can't promise you nothing about Jonathan, sir. He's independent. He'll vote as seems best to himself."

The electioneer, after being as agreeable as possible, rose to go. But first he patted a wretched, mangy kitten on the woman's lap.

"I'm very fond of cats," he said. "I shouldn't mind giving you \$5 for that one."

The woman jumped at his offer. She locked the \$5 in a drawer, she put the cat in a basket, and, as she ushered the man out with his purchase on his arm, she said:—

"I'll do the best I can for you about that vote, sir. As I told you before, Jonathan won't be influenced by anybody. The gentleman that's electioneering for your opponent spent a full hour here with me uselessly yesterday, and, by the way, he bought the brother of that kitten of yours for \$10."

A New Mexico homesteader received from the Department of Agriculture a quantity of dwarf milo maize seed, with a request to plant it and report the result. Here is his report: "Mr. Wilson: Dear Sir—I planted your dwarf maize and it did fine. It was the dwarfest maize I ever saw. But the jack-rabbits ate it as fast as it got ripe. Please send another lot of seed, and send along a lot of dwarf jack-rabbits to match the maize."

A Philadelphia lawyer and connoisseur was describing some of his experiences in search of curios. "I once entered a shop," he said, smiling, "and the salesman pointed out to me a dilapidated chair. 'That there chair, sir,' he said, impressively, 'belonged to Louis Cross-eye, King of France.' 'Louis Cross-eye?' said I. 'Why, there's no such person.' 'Oh, yes, there is, sir,' said the salesman, and he showed me a ticket marked 'Louis XI.'"

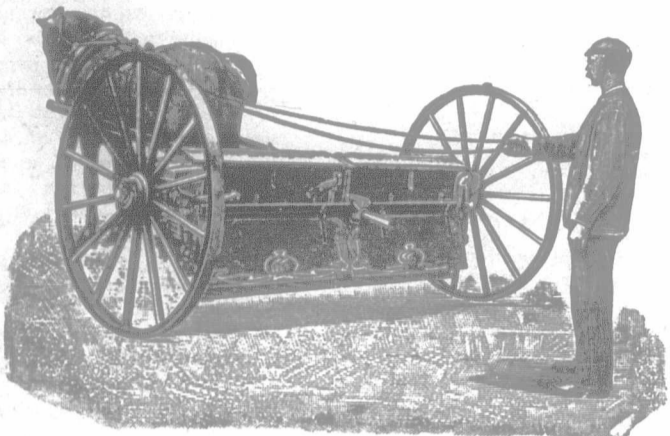
CALCULATING YOUR PROFITS PER ACRE

Will be a much more interesting and gratifying undertaking next fall if you make up your mind to use a quantity of

Davies High - Grade Fertilizers

on your crops this spring. Do you want to be among the thousands of prosperous farmers who will at the end of the season reap the benefits of increased yields obtained through the use of those materials, or are you going to be satisfied with the usual starvation crops, and know besides that all your summer's work has been practically wasted, and that you are no further ahead financially than when you started.

It's up to you to act at once: if you will send us particulars of the crops you intend growing, also the nature of your soil, we will assume the responsibility of recommending the fertilizer for you to use. We are in a position to ship goods in any quantity the same day order received, and will prepay freight on all orders for 500 pounds or more to any station in Ontario. Can you afford to let another year go by without giving "Davies Fertilizers" a trial? Answer that question by writing us at once to forward you enough Fertilizer for at least one acre of each crop you have on your farm. Goods shipped in 100 pound jute bags. Our Booklet, "Farm Davies Way" sent free on request.



The William Davies Co., Ltd., West Toronto, Ont. COMMERCIAL FERTILIZER DEPT. R. INNES, B.S.A., Manager

The Last Straw.

In the old Dodge City days, the cowboys were hard citizens. One time a travelling evangelist came along and converted Circle-Bar Bill, the toughest cow-wolloper of the lot.

Circle-Bar Bill decided to convert his old companions, and he determined to convert them with the illustration of the necessity and the value of patience and long-sufferingness. He hired a dance hall for an evening, and the cowboys all flocked in to hear his discourse.

"Now," said Circle-Bar Bill, "I'm goin' to show you leather-skinned geezers the long-sufferingness and patience a man gets when he is really and truly converted. I'll stand up here, and you fellows kin heap any indignity on me you feel like, and I won't kick, although you know before I was converted they warn't ary cowpuncher on the range who was handier with his gun or his dukes than me, Circle-Bar Bill, who is now here personifyin' meekness and lowliness in the hopes of winnin' some of you unregenerate sons of the devil to the proper mode of life."

Bill folded his arms across his chest and the cowpunchers began. They threw potatoes, tobacco quids, dead prairie hens, and other things at Bill, and he made no move, but smiled sweetly. Then Greaser Ike, of the Oxbow outfit, produced an old and timeworn wild-turkey egg, and let Bill have it smack in the face.

The egg exploded, and its contents spread over and obliterated that sweet smile. Bill jumped down among the crowd, shouting: "Fellers, there is aow goin' to be an intermission in this here long-sufferin' business until I lick the everlastin' tar outen the white-livered, bow-legged, chicken-stealin' coyote who thrun that egg. I ain't lost my faith in religion none, but they ain't no Scripture that forbids me to whip hell outen a man who would thrun a egg like that."—Saturday Evening Post.

Preparations were going on for the funeral of a colored resident in a Southern town. As the negro undertaker bustled in and out of the house, his progress was somewhat impeded by the body of a small darky who had taken his position in the doorway.

"Move on, niggah, move on," ordered the undertaker, "an' quit projeckin' yo'-self 'roun' heah whar you ain't wanted."

"Move on nothin'!" was the answer, as the picaninny backed against the doorjamb. "Ise de crepe!"

A man travelling in Maine met a middle-aged farmer, who told him his father, aged 90, was still on the farm where he was born.

"Ninety years old, eh?" "Yep; pop's close on 90." "Is his health good?" "Tain't much now. He's been complainin' for a few months back."

Shy But Wild.

Fred Kelly stood on a corner near the railroad station in Cleveland waiting for a car.

A mild-mannered little man, with a good growth of whisker and a hesitation of speech, came up. The little man was shy; indeed, he was diffident. He stood rubbing his hands together, and alternately opening his mouth to speak and then closing it without saying anything.

Presently he plucked up courage, came over to Kelly and whispered: "Are you acquainted in this city?"

"To some extent," said Kelly.

"Well," whispered the little man, "perhaps you can tell me where the street fair is?"

Kelly gave the directions. Then he asked: "Have you got a show over there?"

"No," whispered the little man, "not exactly that, but I'm in a show over there."

"What do you do?"

"Why," he replied, "you know that circus they have there? Well, I'm the wild man."

Left the Tap Running.

James Russell Lowell's remark that Niagara Falls had nothing else to do, may remind us of the delightful Irishman who—called upon to be impressed by his first view of "all that water coming down such a height"—replied. "Why wouldn't it?" But the best of recent Niagara stories is told by a Torontonian. It is of the housewife who saw the Falls for the first time. "Oh!" she cried, "that reminds me—I left the kitchen tap running."

The M. D.—For a time it would be safer to feed the child modified cow's milk.

The Young Mother—But I'm quite sure, doctor, that our milkman doesn't keep a modified cow.

—Mrs. Honeymoon (to husband in railway train): "Do you love me?" Old Party (confidentially, from other seat, to bridegroom: "She's asked you forty-seven times already. I get out here, but I'll leave the score with this gentleman by the window."

Bigger Crops and Better Crops

May be raised by Top Dressing with NITRATE OF SODA 15% Nitrogen 18% Ammonia ALL IMMEDIATELY AVAILABLE

The only Fertilizer that works in a cold soil.

Write for our Booklet on Home Mixing NITRATE AGENCIES COMPANY, Bay and Richmond Streets, TORONTO, ONTARIO

Peace Millions.

Millions for dreadnoughts, nothing for poverty; Millions for slavery, nothing for slaves.

To princeling exploiter, surrender earth's property—

Millions for nothing, to sink in the waves.

Halt not to reason why, yield up your treasures;

Reason would break the spell binding you fast.

Jingoists call for blood, offer war's pleasures—

Give your life, give your all, give to the last.

Turn from the paths of peace, think of war's glory—

Widows and orphans to weep for the slain;

Ignorant feuds shall need bayonets gory—

Plutocrats urge it—your loss is their gain.

Millions for dreadnoughts, nothing for poverty;

Millions for Moloch, for Christ but a cent.

Heed not a praying word, license its robbery;

In the whirlwind of nations find time to repent.—Toronto Globe.

A Remedy.

Do you find this life is dreary? Is your spirit sad and weary? Do you shudder at the weather, At the rain and snow together? There's a remedy entrancing Which will set your spirit dancing, Keep bees.

Has the Little Girl refused you? Has she haughtily excused you From attendance Sunday Night In a dim religious light? Do not grieve, like other men, You may start to life again, Keep bees.

Have you found your job a sorrow? Have you sought in vain to borrow Comfort from the Poet's page For your weary pilgrimage? Do not grieve, O brother man Think upon our little plan, Keep bees.

While you dance in fury pointing To the stings you are anointing, While the whoop with wondrous charm O'er the swelling on your arm, O'er the lump upon your nose, You'll forget your minor woes, So Keep bees.—Toronto News.

Early Rising in Kansas.

"I reckon," said the first farmer, "that I get up earlier than anybody in this neighborhood. I am always up before three o'clock in the morning."

The second farmer said he was always up before that, and had part of his chres done. The first farmer thought he was a liar and decided to find out. A few mornings later he got up at two o'clock and went to the neighbor's house. He rapped on the back door and the woman of the house opened it. "Where is your husband?" asked the farmer, expecting to find the neighbor in bed.

"He was round here early in the morning," answered the wife, "but I don't know where he is now."

He Knew What to Expect.

A small boy who attends a district school was vaccinated recently, and after the arm had been dressed the attending physician suggested that he place a ribbon with the word "Vaccinated" round it.

At this the youngster spoke up. "Put it around the other arm," he said. "But that won't do any good," protested the doctor. "It wants to be placed round the sore arm so that the boys at school won't be hurting it."

The lad looked at him in disgust and replied: "You put it round the other arm. You don't know the kids at our school."

PAINT INSURANCE

Did you ever think that a little money spent in Paint insures your property against decay and deterioration, and that the amount saved is many times greater than the cost of the paint?

JAMIESON'S Paints and Varnishes

Will Provide the Protection You Need Specially made for Houses, Floors, Barns, Fences, Implements, Carriages, Etc. They have experience of over half a century behind them and none better can be made.

Ask your dealer or write us for Color Cards. R. C. JAMIESON & CO. LIMITED Montreal - Vancouver

BEAUTIFIER

If you have a face void of good looks, spotted, blotched, discolored and poor generally and want a healthy, clear skin, use Princess Complexion Beautifier

An external remedy that is simple and easy to use and that produces results. It clears away tan, freckles and other discolorations quickly. Price \$1.50 delivered. Superfluous Hair, Moles, Warts, etc., permanently removed. Booklet "F" explains. Send for it and free sample of toilet cream. HISCOTT INSTITUTE Estab. 1892 61 College Street Toronto, Ontario

BUST AND HIPS

Every woman who attempts to make a dress or shirt waist immediately discovers how difficult it is to obtain a good fit by the usual "trying-on method." With Herculite for the model and a looking-glass with which to see how it fits at the back. "Hall-Borchert Perfection Adjustable Dress Forms" do away with all discomforts and disappointments in fitting, and render the work of dressmaking as easy and satisfactory. This form can be adjusted to 50 different shapes and sizes; bust raised or lowered; also made longer and shorter at the waist line and form raised or lowered to suit any desired skirt length. Very easily adjusted, cannot get out of order, and will last a lifetime. Write for illustrated Booklet containing complete line of Dress Forms with prices. Hall-Borchert Dress Form Co. of Canada, Limited 156 N Bay St. Toronto, Ont.

Dyeing is Easy With MAYPOLE SOAP

Cotton, wool, silk and mixtures all take rich, lustrous, even, fadeless shades when dyed with Maypole Soap. In cake form—no powder to waste and make a mess. No trouble cleaning up afterward, for Maypole Soap does not stain hands or kettle. 24 colors—will give any shade. Colors 10c—black 15c—at your dealer's or postpaid with free Booklet, "How to Dye," from FRANK L. BENEDICT & CO., Montreal.

"Mike, I am going to make you a present of this pig." "Ah, sure; an' 'tis just like you, sor!"

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at 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 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 advertisements inserted for less than 50 cents.

A DOLLAR per sitting, Barred Rock eggs, O.A.C. laying strain. Mrs. W. H. Berry, Guelph, Ont.

BEAUTIFUL Buff Leghorns—All year layers, choice birds, eggs \$1.25 per fifteen. Unfertile eggs replaced free. Charles Watson, London, Ont.

BARRED ROCK eggs, choice utility stock; one dollar per fifteen. Satisfaction guaranteed. Arthur Hayward, Eastwood, Ont.

BARRED ROCK eggs from well barred, heavy-laying stock (Pringle and McCormick strain), \$1, \$1.50 and \$3 per setting. T. L. Patrick, Elderton.

BUFF ORPINGTONS, Large vigorous stock, good color and type guaranteed, laying strain. Eggs \$1.00 for twelve. M. T. Payne, Belmont, Ont.

BUFF ORPINGTONS—Pure-bred cockerel, \$3, pullets, \$2; large, stout, healthy birds. Satisfaction guaranteed. Hugh A. Scott, Caledonia, Ont.

BARRED ROCK eggs from well-bred, heavy-laying, prize-winning stock; \$1. per 15, \$2. for 40, \$4. per 100. Chas Hillier, Norwich, Ont.

BRED TO LAY Anconas and Columbian Wyandottes, eggs for hatching ten cents each. E. Wardle, Corinth, Ont.

Bronze Turkey eggs for sale, also Rouen Duck eggs. Prices reasonable. C. A. Powell, Arva, Ont.

BRED-TO-LAY—Single-comb Rhode Island Reds from the best exhibition prize-winning stock. Red to the skin. Two dollars per 15. Best utility eggs one dollar per fifteen. B. M. Hansy, Dunaville, Ont.

CHOICE bred-to-lay strains Barred Rocks, R. I. Reds, White Wyandottes, S. C. Brown and White Leghorns. Eggs \$2 per 15. Wm. Bunn, Birt, Ont.

ROSE-COMB Rhode Island Reds—Have the best of stock and a good laying strain. Try me. Eggs two-fifty per fifteen. C. R. Cuthbert, Alton, Ont.

EGGS—One dollar per fifteen. Baby chicks 15 cents each, \$10 per 100; safe delivery. White Leghorns, White Orpingtons, White Wyandottes. W. R. Kaiser, Mitchellville, Ont., Leeds Co.

EXHIBITION Silver Laced Wyandottes, R. C. Black Minorcas and S. C. R. I. Reds, \$2.00 a sitting. Frank Mc Dermott, Tavistock, Ont.

EGGS Double Rose Comb R. I. Reds, fifteen in setting at \$1. Caleb Hopkins, Pickering, Ont.

EGGS Silver-laced Wyandottes. White Wyandottes One dollar per setting. Cockerels two fifty each. John Thomson, Fergus, Ont.

EGGS from pure-bred Single- and Rose-comb Mottled Anconas, Sheppard strain; Barred Rocks, Ontario College strain, \$1 per 15, \$5 per 100. Karl Snyder, Wales, Ont.

EGGS—\$1. setting, \$5. hundred, "Snowflake" S. C. W. Leghorns. Record layers. E. W. Burt, Paris, Ont.

EXCLUSIVE breeder of Barred Rocks, Eggs for hatching, \$1. per 15. Pringle and Hall strain. Mating list free. Jas. E. Metcalfe, Hanover, Ont.

EGGS, Indian Runner ducks, 10c. each. Pure Barred Rocks (headed by grand laying strain cockerels) and S. C. R. I. Reds, \$1.00 per fifteen, \$1.75 per thirty. Frank Bainard, Glanworth, Ont.

EGGS, Barred Rocks: good winter layers and prize-winners. \$1.00 per thirteen, \$5.00 per hundred. Miss Z. Barbour, Erin, Ont.

EGGS for sale—White Wyandottes and R. C. B. Leghorns. All prize-winning stock. \$2 per 15. G. & W. Rats, Tavistock, Ont.

EGGS from Imported Single Comb Brown Leghorns, grand layers, sixty-three eggs gathered daily from eighty hens. Price \$1. for fifteen, \$2.00 for forty or \$4.50 for a hundred. W. C. Shearer, Bright, Ont.

EGGS from pure-bred vigorous stock, White Wyandottes, Barred Plymouth Rocks, Single-comb White Leghorns, and Silver Campines, all great layers. Birds raised on 40-acre open range and orchard. Prices on application. W. H. Furber, Dunganon Poultry Farm, Box 436, Coburg, Ont.

EGGS from Barred Rocks, S. C. White Leghorns (Both O. A. C. laying strains), Rhode Island Reds, Brown Leghorns, \$1.50 per setting, Pekin ducks \$1 per 11. Mammoth Bronze turkeys 25 cents each. Norfolk Specialty Farms Co., Ltd., St. Williams, Ont.

FAIR VIEW BRED-TO-LAY Barred Plymouth Rocks pay; why? because they are a uniformly well colored flock of strong healthy birds. Always had large orchard run. During Dec. Jan. and Feb. my 100 hens laid 228 dozen large yellow eggs. Eggs \$1. per 15, \$5 per 100. S. H. Culp, Campden, Lincoln, Co.

GOLDEN Wyandottes—Large, handsome, hardy, great layers. Beautiful pullets \$1.00, up; show cockerels \$2.00. Eggs \$1.50 for 15. Get in on these bargains. Glenora Stock Farm, Rodne, Ontario.

INGLEWOOD Buff Rocks won thirteen prizes at London International last winter. My 1913 matings combine exhibition type with great utility qualities. My numerous winners are in these pens. Eggs are \$3.00 per 15. Stock for sale. C. H. Hillborn, Leamington, Ont.

IDEAL Poultry Yards offer eggs for hatching from choice mating of S. C. Black Minorcas, White Wyandottes, S. C. White Leghorns, R. C. Rhode Island Reds, only \$1.50 per 15. Peterson Bros., Norham, Ont.

LAKENVELDER belted poultry and eggs from laying strains; also Indian Runner duck eggs. Write for prices. Artemas O'Neil, Birt, Ont.

RHODE Island Reds, "Red Feather Yards", R. and "Watson's" N. G. strain, Pen No. 1. Prize-winner's eggs \$3.00 per fifteen. No. 2, nearly as good, \$2.00. Buff Cochin Bantams' eggs, \$3.00. I import from England and breed seven kinds of ornamental and ordinary pheasants, Leg Ear rabbits, etc. Satisfaction guaranteed. Chas. W. Macklin, Grafton, Ont.

ROSE-COMB R. I. Reds prize-winning stock—Eggs \$1.25 for 15. Fred. Bodkin, R. No. 2, Wilton Grove, Ont.

RHODE Island Red eggs; either comb; dollar setting; hundred, five dollars. Layers' circular Wm. Runchey, Byng, Ont.

SUPERIOR Barred Rocks—Laid 4,928 eggs this winter in sixty days. Pullets laid at four and a half months. Pens headed by Ringlet males. Eggs \$1.25 per fifteen. Unfertile eggs replaced free. Charles Watson, London, Ont.

S. C. White Leghorn eggs from high-grade stock. Great layers. \$1 per fifteen; \$5 per hundred. E. M. Cross, Manassas, Ont.

SILVER CAMPINES The great egg machines. Eggs for setting from imported stock at \$3.00 per 15. The Valley Poultry Yards, W. B. McCulloch, Brampton, Ont.

SINGLE Comb Brown Leghorns—Eggs for hatching, \$1.25 per 15. Bred from good laying strains. Wm. Barnett & Sons, Living Springs P. O., Fergus Station, Ont. G. T. R. and C. P. R.

THE R. Roy Farm breeds for egg production and utility. B. Rocks, W. Leghorns, eggs \$1.50 per 15, \$5 per 100. Utility and exhibition R. I. Reds, eggs \$2 per 15. Ruppel Bros., Elmira, Ont., Box 98.

TO MAKE ROOM—I offer eight good quality R. C. Red yearlings, grand winter laying strain, with cock or cockerel, for \$15. Blair Stock, Mimico, Ont.

WHITE Wyandottes exclusively. Eggs \$1.00 per 15. Good hatch guaranteed. Thos. F. Pirie, R. R. 3, Ingersoll, Ont.

WHITE Wyandotte eggs, large, \$2. John Orchard, Shedden, Ont.

WHITE ROCKS, Guelph winners. Booklet free. John Pettit, Fruitland, Ont.

WHITE WYANDOTTE COCKERELS of the best breeding; 20 of them while they last; \$2, \$3, and \$5 each. Send to us and get a bargain. Our mating list will be sent on request. Marshall & Marshall, Niagara Falls, Canada.

WHITE ORPINGTONS—Eggs from best pens (Moore and Kellerstrass), \$1.50 for 15. Jacob M. Moyer, Box 47, Campden, Ont.

WESTSIDE FARM offers choice S. C. Brown Leghorn eggs at one fifty per fifteen. David A. Ashworth, Maple Grove, Ont.

Pleasant Valley Farms—Eggs for hatching. White Wyandottes and S. C. White Leghorns, \$4 per hundred. Special matings, both varieties, \$2 per 15, excellent varieties.

GEO. AMOS & SON, Moffat, Ont.

C. E. S. PEERLESS BARRED ROCKS—We invite you to try our strain and compare results with any \$10 setting. Eggs from choice exhibition matings \$3 per thirteen, \$5 for twenty-five, \$8 for fifty. Also choice hens, pullets and cockerels from \$2 to \$5 each. C. E. SKINNER, Mitchell Nursery Co., Mitchell, Ont.



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.

ALL KINDS OF FARMS—Fruit Farms a specialty. W. B. Calder, Grimsby.

CANADIAN, 22, A1 farmer, desires permanent position with well-established farmer. Prefer close to town or city. State best wages to Joseph Edgar, 16 McGill St., Toronto, Ont.

FARM for sale—200-acre farm, 40 miles east of Toronto, in the apple belt; good land, orchard, buildings. School, churches, railway near; \$50 per acre; easy terms. Awdrey Brown, 258 Grace St., Toronto.

HELPFUL literature for Bible students free on application. Secy. International Bible Students' Association, 59 Altonway Ave., Winnipeg.

SCOTCH collies for sale—Four well-bred pups from good cattle dogs. J. A. McPhedran, Wanstead, Ont.

TEMISKAMING farm for sale, 160 acres, all good land, free from hills, ravines and stone. 20 acres chopped, 4 logged, stumping commenced. Patent obtainable next fall. On good road, convenient to railway and river, in well settled and organized section. A snap for quick sale. Apply E. G. Hand, Box 235, Cobalt, Ont.

WANTED—Good hardwood bush lots, state all particulars and lowest price. Box No. O. S., Farmers' Advocate, London.

WANTED—Two first-class farm hands; must be sober and industrious and understand all kinds of farm work; good milkers; wages \$35 per month and board. References required. David Moffitt Barlett, Cook's Co., Ill.

WANTED—A first-class groom to handle Clydesdale stallion for May, June and July, 1913; must be sober and competent. Apply, giving reference to ability and wages expected to Mt. Victoria Stock Farm, Hudson Heights, P. O.

Canadian White Wonder Field Beans, \$3.25 per bushel, \$1 per peck. THOS. R. MOSCRIP, St. Mary's, Ont.

FLOUR English firm requires a good export flour. Samples and prices, c.i.f. London and Liverpool, to MESSRS. EUSTACE, KROG & CO., Limited 19 Mark Lane, London, England, E. C.

Animal Fertilizers are natural fertilizers made from blood, trimmings, etc., of animals, to which is added just enough Potash and quick-acting Nitrates and Super-Phosphates to give the plant an early vigorous start. The Harris ABATTOIR Co., Ltd., TORONTO

News of the Week.

CANADIAN.

The Minister of Militia of Canada has ordered strict enforcement of the rules against allowing liquor in the military camps.

BRITISH AND FOREIGN.

Efforts at Washington to put cattle and sheep on the free list were defeated.

Honan, China, is again in the grip of a famine.

Over 200,000 workmen of all trades, went on strike in Belgium on April 14th, in an effort to force the Government to grant them the suffrage.

At the close of the Reichstag, on April 18th, Herr Liebknecht, the Socialist leader, stated that certain German armor-plate and ammunition firms have been supplying the French Chauvinistic press with material to assist in inflaming the present agitation in France against Germany.

Mr. Walter Hines Page, of "The World's Work" magazine, has been appointed by President Wilson to succeed Whitelaw Reid as American Ambassador to Great Britain. His selection, says Literary Digest, is "looked upon as a personal appointment by the Chief Executive, who prefers brains to dollars in the diplomatic service."

Rebecca of Sunnybrook Farm.

By Kate Douglas Wiggin. Serial rights secured from Houghton Mifflin Publishing Company, New York.

CHAPTER XXVII.

"THE VISION SPLENDID."

A year had elapsed since Adam Ladd's prize had been discussed over the teacups in Riverboro. The months had come and gone, and at length the great day had dawned for Rebecca,—the day to which she had been looking forward for five years, as the first goal to be reached on her little journey through the world. Schooldays were ended, and the mystic function known to the initiated as "graduation" was about to be celebrated; it was even now heralded by the sun dawning in the eastern sky. Rebecca stole softly out of bed, crept to the window, threw open the blinds, and welcomed the rosy light that meant a cloudless morning. Even the sun looked different somehow,—larger, redder, more important than usual; and if it were really so, there was no member of the graduating class who would have thought it strange or unbecoming, in view of all the circumstances. Emma Jane stirred on her pillow, woke, and seeing Rebecca at the window, came and knelt on the floor beside her. "If it wasn't wicked, I could thank the Lord, I'm so relieved in mind! Did you sleep?"

"Not much; the words of my class poem kept running through my head, and the accompaniments of the songs; and worse than anything, Mary Queen of Scots' prayer in Latin; it seemed as if

"Adoro, Imploro, Ut liberet me!"

were burned in my brain." No one who is unfamiliar with life in rural neighborhoods can imagine the gravity, the importance, the solemnity of this last day of school. In the matter of preparation, wealth of detail, and general excitement it far surpasses a wedding; for that is commonly a simple affair in the country, sometimes even beginning and ending in a visit to the parsonage. Nothing quite equals graduation in the minds of the graduates themselves, their families, and the younger students, unless it be the inauguration of a governor at the State Capitol. Wareham, then, was shaken to its very centre on this day of days. Mothers and fathers of scholars, as well

as relatives to the remotest generation, had been coming on the train and driving into the town since breakfast time; old pupils, both married and single, with and without families, streamed back to the dear old village. The two livery stables were crowded with vehicles of all sorts, and lines of buggies and waggons were drawn up along the sides of the shady roads, the horses switching their tails in luxurious idleness. The streets were filled with people wearing their best clothes, and the fashions included not only "the latest thing," but the well-preserved relic of a bygone day. There were all sorts and conditions of men and women, for there were sons and daughters of storekeepers, lawyers, butchers, doctors, shoemakers, professors, ministers, and farmers at the Wareham schools, either as boarders or day scholars. In the seminary building there was an excitement so deep and profound that it expressed itself in a kind of hushed silence, a transient suspension of life, as those most interested approached the critical moment. The feminine graduates-to-be were seated in their own bedrooms, dressed with a completeness of detail to which all their past lives seemed to have been but a prelude. At least, this was the case with their bodies; but their heads, owing to the extreme heat of the day, were one and all ornamented with leads, or papers, or dozens of little braids, to issue later in every sort of curl known to the girl of that period. Rolling the hair on leads or papers was a favorite method of attaining the desired result, and though it often entailed a sleepless night, there were those who gladly paid the price. Others, in whose veins the blood of martyrs did not flow, substituted rags for leads and pretended that they made a more natural and less woolly curl. Heat, however, will melt the proudest head and reduce to fiddling strings the finest product of the waving-pin; so anxious mothers were stationed over their offspring, waving palm-leaf fans, it having been decided that the supreme instant when the town clock struck ten should be the one chosen for releasing the prisoners from their self-imposed tortures.

Dotted or plain Swiss muslin was the favorite garb, though there were those who were steaming in white cashmere or alpaca, because in some cases such frocks were thought more useful afterwards. Blue and pink waist ribbons were lying over the backs of chairs, and the girl who had a Roman sash was praying that she might be kept from vanity and pride.

The way to any graduating dress at all had not seemed clear to Rebecca until a month before. Then, in company with Emma Jane, she visited the Perkins attic, found piece after piece of white butter-muslin or cheesecloth, and decided that, at a pinch, it would do. The "rich blacksmith's daughter" cast the thought of dotted Swiss behind her, and elected to follow Rebecca in cheesecloth as she had in higher matters; straightway devising costumes that included such drawing of threads, such hemstitching and pfm-tucking, such insertions of fine thread tatting that, in order to be finished, Rebecca's dress was given out in sections,—the sash to Hannah, waist and sleeves to Mrs. Cobb, and skirt to aunt Jane. The stitches that went into the despised material, worth only three or four pennies a yard, made the dresses altogether lovely, and as for the folds and lines into which they fell, they could have given points to satins and brocades.

The two girls were waiting in their room alone, Emma Jane in rather a tearful state of mind. She kept thinking that it was the last day that they would be together in this altogether sweet and close intimacy. The beginning of the end seemed to have dawned, for two positions had been offered Rebecca by Mr. Morrison the day before; one in which she would play for singing and calisthenics, and superintend the piano practice of the younger girls in a boarding-school; the other an assistant's place in the Edgewood High School. Both were very modest as to salary, but the former included educational advantages that Miss Maxwell thought might be valuable.

Rebecca's mood had passed from that



Add water to milk—
You *weaken* the milk.
Add soft wheat to flour—
You *weaken* your flour.
Cheapens it too.
Soft wheat costs less—*worth less*.
Soft wheat flour has less *gluten* less
nutriment.
Your bread is less nutritious, sustaining,
economical.
Soft flour has less *strength*, less *quality*
gluten.
Giving less good things for your money and
things less good.
Use Manitoba flour—Manitoba *hard* wheat flour.
Having everything the soft stuff *lacks*.
Five Roses is *all* Manitoba.
Without a grain of cheaper wheat.
Strengthen your food values.
Use **FIVE ROSES**.

Five Roses Flour

Not Bleached



Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED, MONTREAL

of excitement into a sort of exaltation, and when the first bell rang through the corridors announcing that in five minutes the class would proceed in a body of the church for the exercises, she stood motionless and speechless at the window with her hand on her heart.

"It is coming, Emmie," she said presently; "do you remember in The Mill on the Floss, when Maggie Tulliver closed the golden gates of childhood behind her? I can almost see them swing; almost hear them clang; and I can't tell whether I am glad or sorry."

"I shouldn't care how they swung or clanged," said Emma Jane, "if only you and I were on the same side of the gate; but we shan't!"

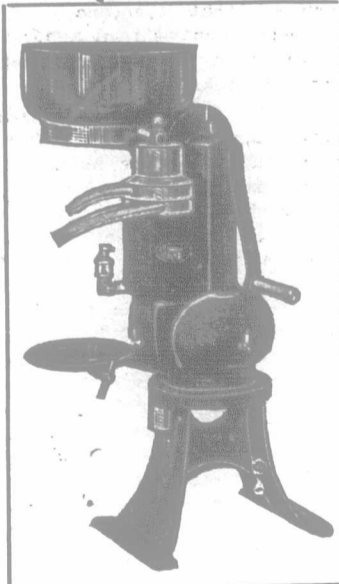
"Emmie, don't dare to cry, for I'm just on the brink myself! If only you were graduating with me; that's my only sorrow! There! I hear the rumble of the wheels! Peoples will be seeing our grand surprise now! Hug me once for luck, dear Emmie; a careful hug, remembering our butter-muslin frailty!"

Ten minutes later, Adam Ladd, who had just arrived from Portland and was wending his way to the church, came suddenly into the main street and stopped short under a tree by the way-side, riveted to the spot by a scene of picturesque loveliness such as his eyes had seldom witnessed before. The class of which Rebecca was president was not likely to follow accepted customs. Instead of marching two by two from the seminary to the church, they had elected to proceed thither by royal chariot. A haycart had been decked with green vines and bunches of long-stemmed field daisies, those gay darlings of New England meadows. Every inch of the rail, the body, even the spokes, all were twined with yellow and green and white. There were two white

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Or **G. A. GILLESPIE, Peterborough, Ont.**

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horses, flower-trimmed reins, and in the floral bower, seated on maple boughs, were the twelve girls of the class, while the ten boys marched on either side of the vehicle, wearing buttonhole bouquets of daisies, the class flower.

Rebecca drove, seated on a green-covered bench that looked not unlike a throne. No girl clad in white muslin, no happy girl of seventeen, is plain; and the twelve little country maids, from the vantage ground of their setting, looked beautiful, as the June sunlight filtered down on their uncovered heads, showing their bright eyes, their fresh cheeks, their smiles, and their dimples.

Rebecca, Adam thought, as he took off his hat and saluted the pretty panorama.—Rebecca, with her tall slenderness, her thoughtful brow, the fire of young joy in her face, her fillet of dark braided hair, might have been a young Muse or Sibyl; and the flowery hayrack, with its freight of blooming girlhood, might have been painted as an allegorical picture of The Morning of Life. It all passed him, as he stood under the eaves in the old village street where his mother had walked half a century ago, and he was turning with the crowd towards the church when he heard a little sob. Behind a hedge in the garden near where he was standing was a forlorn person in white, whose neat nose, chestnut hair, and blue eyes he seemed to know. He stepped inside the gate and said, "What's wrong, Miss Emma?"

"Oh is it you, Mr. Ladd? Rebecca wouldn't let me cry for fear of spoiling my looks, but I must have just one chance before I go in. I can be as homely as I like, after all, for I only have to sing with the school; I'm not graduating, I'm just leaving! Not that I mind that; it's only being separated from Rebecca that I never can stand!"

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MADE BY THE COTTAGERS OF BUCKINGHAMSHIRE

Our Laces were awarded the Gold Medal at the Festival of Empire and Imperial Exhibition, Crystal Palace, 1911

BUY some of this hand-made Pillow Lace, it lasts many times longer than machine-made variety, and imparts an air of distinction to the possessor, at the same time supporting the village lace-makers, bringing them little comforts otherwise unobtainable on an agricultural man's wage. Write for descriptive little treatise, entitled "The Pride of North Bucks," containing 200 striking examples of the lace-maker's art, and is sent post free to any part of the world.



Collar Pure linen \$1.00
DAINTY HANDKIE No. 910 70c. each



Lace 1 1/4 in. deep.

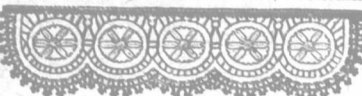
Lace for every purpose can be obtained, and within reach of the most modest purse. Every sale, however small, is a support to the industry.

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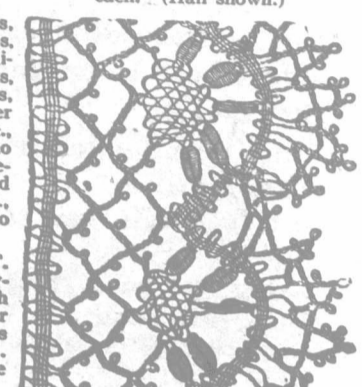
IRISH GROCHET. Mrs. Armstrong having over 100 Irish peasant girls connected with her industry, some beautiful examples of Irish hand-made laces may be obtained. All work being sold direct from the lace makers, both the workers and customer derive great advantage.

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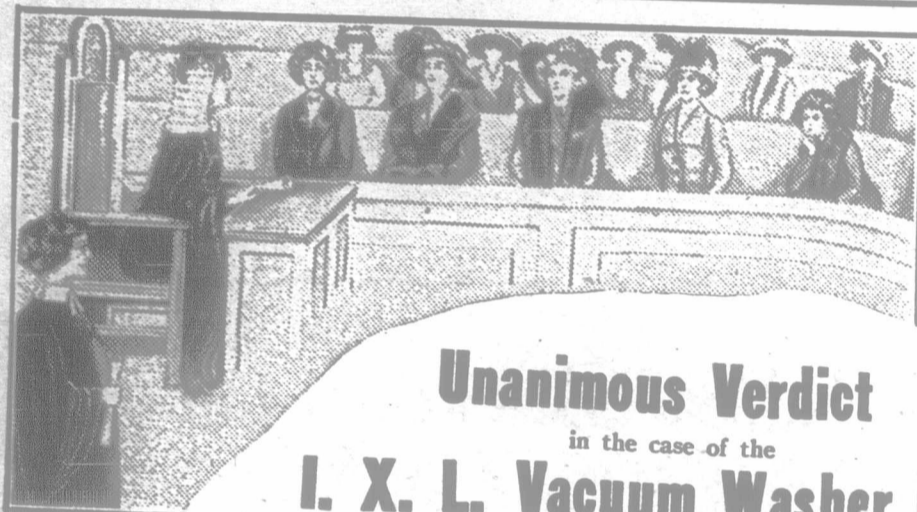
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Before the Court of Public Opinion that it does Excel in Every way All Others

Thousands of women who are using them have rendered an unqualified verdict in favor of the I. X. L. VACUUM WASHER, and these women have used every make of Washing Machine, and are fully qualified to judge merit.

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SAVES YOU \$2.00

If you do, YOU WILL concur in the verdict, as it WILL demonstrate to YOU that it will wash anything and everything, from a horse-blanket and overalls to the finest and most delicate laces without injury, as there is no friction.

YOUR CLOTHES WILL WEAR THREE TIMES AS LONG

Washes a Full Tub of Clothes in Three Minutes—No Severe Exertion Required

It's so easy to operate, a child can do an ordinary family washing and have it ready for the line in one hour.

Sent You Under a Money Back Guarantee

It is the Most Popular Washer on the American Continent. Its popularity is the reward of merit. Send for one TO-DAY and Blue Monday will be robbed of its terrors forever.

YOU WILL NEVER REGRET IT YOU WILL BE DELIGHTED

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Present or mail this Coupon and \$1.50 to Dominion Utilities Mfg. Co., Ltd., 482 1/2 Main Street, Winnipeg, Man., and you will receive one I. X. L. VACUUM Washer.

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NAME
ADDRESS
PROVINCE



The two walked along together, Adam comforting the disconsolate Emma Jane, until they reached the old meeting-house where the Commencement exercises were always held. The interior, with its decorations of yellow, green, and white, was crowded, the air hot and breathless, the essays and songs and recitations precisely like all others that have been since the world began. One always fears that the platform may sink under the weight of youthful platitudes uttered on such occasions; yet one can never be properly critical, because the sight of the boys and girls themselves, those young and hopeful makers of to-morrow, disarms one's scorn. We yawn desperately at the essays, but our hearts go out to the essayists, all the same, for "the vision splendid" is shining in their eyes, and there is no fear of "th' inevitable yoke" that the years are so surely bringing them.

Rebecca saw Hannah and her husband in the audience; dear old John and cousin Ann also, and felt a pang at the absence of her mother, though she had known there was no possibility of seeing her; for poor Aurelia was kept at Sunnybrook by cares of children and farm, and lack of money either for the journey or for suitable dress. The Cobbs she saw too. No one, indeed, could fail to see uncle Jerry; for he shed tears more than once, and in the intervals between the essays decanted to his neighbors concerning the marvelous gifts of one of the graduating class whom he had known ever since she was a child; in fact, had driven her from Maplewood to Riverboro when she left her home, and he had told mother that same night that there wasn't nary rung on the ladder o' fame that that child wouldn't mount before she got through with it.

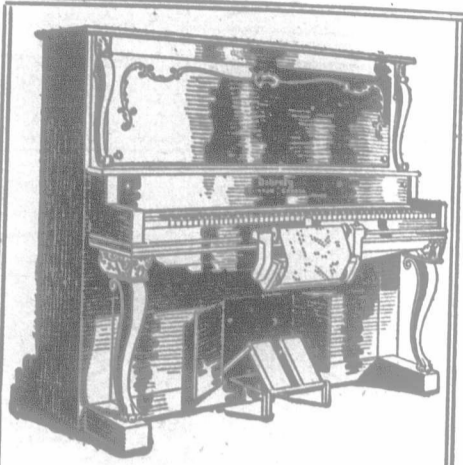
The Cobbs, then, had come, and there were other Riverboro faces, but where was aunt Jane, in her black silk made over especially for this occasion? Aunt Miranda had not intended to come, she knew, but where, on this day of days, was her beloved aunt Jane? However, this thought, like all others, came and went in a flash, for the whole morning was like a series of magic lantern pictures, crossing and recrossing her field of vision. She played, she sang, she recited Queen Mary's Latin prayer, like one in a dream, only brought to consciousness by meeting Mr. Aladdin's eyes as she spoke the last line. Then at the end of the programme came her class poem, Makers of To-morrow; and there, as on many a former occasion, her personality played so great a part that she seemed to be uttering Miltonic sentiments instead of school-girl verse. Her voice, her eyes, her body breathed conviction, earnestness, emotion; and when she left the platform the audience felt that they had listened to a masterpiece. Most of her hearers knew little of Carlyle or Emerson, or they might have remembered that the one said, "We are all poets when we read a poem well," and the other, "'T is the good reader makes the book."

It was over! The diplomas had been presented, and each girl, after giving furtive touches to her hair, sly tweaks to her muslin skirts, and caressing pats to her sash, had gone forward to receive the roll of parchment with a bow that had been the subject of anxious thought for weeks. Rounds of applause greeted each graduate at this thrilling moment, and Jeremiah Cobb's behavior, when Rebecca came forward, was the talk of Wareham and Riverboro for days. Old Mrs. Webb avowed that he, in the space of two hours, had worn out her pew more—the carpet, the cushions, and woodwork—than she had by sitting in it forty years. Yes, it was over, and after the crowd had thinned a little, Adam Ladd made his way to the platform.

Rebecca turned from speaking to some strangers and met him in the aisle. "Oh, Mr. Aladdin, I am so glad you could come! Tell me"—and she looked at him half shyly, for his approval was dearer to her, and more difficult to win, than that of the others—"tell me, Mr. Aladdin,—were you satisfied?"

"More than satisfied!" he said; "glad I met the child, proud I know the girl, longing to meet the woman!"

(To be continued.)



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HE WRITES:—"The Player Action installed in our Piano a short time ago, we are glad to say, has come up to our expectations. We are much pleased with the simplicity of the Player Action and the instrument as a whole is very satisfactory. We also might say that you need not hesitate to recommend the Doherty Attachable Player Action and I would be pleased to advise anyone should they write me personally."

Write for particulars.

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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. You see I sell my Washing Machines by mail. I have sold over half a million that way. 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.

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 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 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 six minutes.

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But write, describe your case, and we will send our BOOK—sample contract, letters from breeders and business men the world over, on every kind of lameness and advice—all free (to horse owners and managers).

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

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only and must be accompanied by the full name and address of the writer.

3rd.—In Veterinary questions the symptoms especially must be fully and clearly stated otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

Udder Trouble.

Last year, cow's udder became large and hard before calving, and she swelled on floor of abdomen. I treated according to your directions, for mammitis, and had no further trouble until now. She will soon be due to calve, and one teat is enlarged, and I milked two cupsful of dark matter from the quarter. Had I better breed her again?

W. H. P.

Ans.—Conditions of this kind occasionally occur, and usually give little trouble. Bathe the quarter well three or four times daily with hot water, milk after bathing, and then rub well with camphorated oil. Feed on dry food for a few days, so as not to encourage secretion of large quantities of milk until the quarter becomes normal. This, of course, applies to treatment after calving. It may be well to milk the fluid out of this quarter daily, even before calving. I would not cease to breed her unless you have serious trouble this year.

Gossip.

The Directors of the Canadian Shire Horse Association are continuing the policy adopted a couple of years ago of offering special cash prizes at exhibitions in Canada for the best two Shire mares or fillies, any age, owned by exhibitor. It is desired to increase the entries of females at these shows, and also to encourage the exhibition of those bred in Canada. The prizes are as follows: Canadian National Exhibition, Toronto, first prize, \$20; second prize, \$10; third prize, \$5. At the London, Ottawa, Winnipeg, Saskatoon, Edmonton, Regina and Victoria, B. C., Exhibitions, the prizes are: First, \$10; second, \$7; third, \$3. Special prizes will also be offered at Brandon, of \$25 for the best Shire stallion, and \$25 for the best Shire mare. The usual grant of \$50 will be made to the prize list for Shires at the Guelph Winter Fair, and D. H. Messenger's valuable Silver Cup for two best fillies, three years old or under, bred and owned by exhibitor, will also be competed for at Guelph. This cup must be won by an exhibitor two years in succession before becoming his property. Animals competing for these special prizes must be recorded in the National Live-stock Records, Ottawa, in the name of the exhibitor. In addition to these prizes, the English Shire Horse Society is giving two fifty-guinea cups for champion mare and stallion at Toronto this year. More stallions and mares than ever before were imported in 1912, the majority going to the Western Provinces. A larger number of Shires were also shown at exhibitions than in previous years.

Trade Topic.

The farm owes much to asphalt, the greatest source of which is the Lake of Trinidad. In the form of prepared roofing, it makes a covering of lasting waterproof qualities, and has the added advantage of being in such form that any handy man about the farm can apply it to any of the buildings. Asphalt, prepared in the form of cement, is invaluable for rendering damp-proof the walls of cellars, dairy-houses, concrete floors, or any similar surface, and asphalt paint does invaluable work in protecting all kinds of iron and steel

work, such as fences, girders, and the like, from rust and all corroding influences. Also, as a wood-preserver, natural asphalt effects almost incalculable savings. Fence-posts dipped and impregnated with it, it is said, can be made to last indefinitely. The same can be said of planks or lumber of any kind which are likely to be used in damp places. Natural asphalt is one of the most potent agents the farmer of to-day can employ to help him reduce the upkeep expense of the farm, and should be welcomed and used by the intelligent farmer for every possible purpose that it can be put to.

A little boy was badly puzzled over the theory of evolution. He went to his mother, and asked—

"Mamma, am I descended from a monkey?"

"I don't know," she answered; "I never met any of your father's people."

A very small boy was trying to lead a big St. Bernard dog up the road.

"Where are you going to take the dog, my little man?" inquired a passer-by.

"I—I'm going to see where—where he wants to go first," was the breathless reply.



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We can prove to you by scientific experiments made in Canada, by the testimony of Agricultural Experts and by results achieved by many farmers in the Dominion, that a complete Potash Fertilizer, a fertilizer which contains from 8% to 10% of Potash, pays far better than the average fertilizer, which contains only 2% of Potash.

Your own common sense will show you the simple truth of this fact. All Canadian crops take from the soil about three times as much Potash as Phosphoric Acid. What you take from the soil you must put back in order to maintain fertility. But, the ordinary fertilizers do not even contain as much Potash as Phosphoric Acid, let alone three times as much. They usually analyze 2-8-2, that is, 2% Nitrogen, 8% Phosphoric Acid and 2% Potash. They should analyze 2-8-8 or 2-8-10, that is, 2% Nitrogen, 8% Phosphoric Acid and 8% or 10% Potash.

If you want to make the most out of your farm this year do this: Insist that your dealer give you an 8% or 10% Potash Fertilizer. If he has not got it and you have to buy a low-grade fertilizer, add enough Potash to raise it to 8% or 10%. Our Scientific Bureau will tell you free how to do this. It is simple and easy: Or, you can mix your own fertilizer at home if you wish. We will tell you how to do this too.

If you will write, telling us what you raise, we will be glad to send you free information concerning how best to increase your crops. This information is prepared by the best Agricultural Experts in the country.

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Toronto, Ont.

We'll Pay

for your worn-out hose, if those hose are "Holeproof," by replacing worn pairs free if any pairs wear out in six months. Send for six pairs and try them. With every six pairs you get six guarantee coupons.

More Than a Million People

In the States and Canada now buy their hosiery this way—a million regular customers. For every pair they wear out within six months of the day they buy them, we pay them back with a new pair free. But we don't have to replace many pairs. In all of our thirteen years of "Holeproof," 95 per cent of the output has outlasted the guarantee. That means

24,700,000 Pairs

Think what a wonderful record. Send for six pairs of our Cashmere "Holeproof" and see how they'll wear for you. They are made from the finest yarn in existence, for which we pay the top market price. They are warm and soft, without being heavy. You can wear them six months or longer without ever having to darn them. Think of the work that saves. Think of the convenience.

We are making this year 9,000,000 pairs to meet the demand for "Holeproof." Don't you want some of them?

We Spend \$60,000

just to inspect "Holeproof." Our inspectors' salaries cost that every year. But every pair is twice closely examined before it is sent out. That means perfect hosiery—no disappointment when the six pairs are received. It means, in all probability, that the hose will last longer than six months. We cannot afford to let poor hose go out, for we have a great reputa-



"Wear Holeproof Hose and End the Mend"

Losses in United States Live Stock.

Some interesting figures in connection with the live-stock industry of the United States are brought to light in the report of the Bureau of Statistics of the Department of Agriculture. Losses of swine from disease have been unusually heavy during the past year ending April 1st, being 110.1 in every thousand, which indicates a total loss of 6,736,000 head, or \$66,417,000, and it is estimated that 90 per cent. of it was due to hog cholera. The number of breeding sows in the United States on April 1st, is estimated to be about 99 per cent. of the number held one year ago, and 90.5 per cent. of the number held two years ago.

Losses of cattle from disease during the past year, are estimated to be 20.5 per thousand head. This is about a normal loss, and 14.1 per thousand head die from exposure, which means the loss of, approximately, 1,956,000 head, at \$33.12 each, or a total of \$64,783,000.

Sheep suffered loss to the extent of 24.6 per thousand due to disease, and 25.1 per thousand due to exposure. Losses were much smaller in both cattle and sheep last year, due to exposure, than they were the previous year, but the total sheep loss represented a money value of \$10,082,000.

About 22.6 head in every one thousand horses succumbed to disease last year, a money loss of \$63,817,000.

All classes of animals showed a comparatively good state of healthfulness on April first.

Hickman & Scruby, of Court Lodge, Egerton, Kent, England, recently purchased the famous prizewinning Suffolk Punch stallion, Bawdsey Laddie, for export to Western Australia. The price paid was a record for the breed, being \$3,000.

tion at stake. These statements refer to our entire business, in United States and Canada.

Order on the Coupon

or write us a letter. There are two grades of Cashmere "Holeproof" for men: Medium, \$2 for six pairs; Fine, \$3 for six pairs. Six pairs for women cost \$3. Every six pairs are guaranteed six months. Colors for men are black, tan, and navy blue—for women, black and tan. Three pairs of children's Holeproof Stockings, guaranteed three months, \$1.

Fill in what you want on the coupon, post card or letter and mail it today. See what a wonderful saving in comfort and money you can make with Holeproof Hose. We have sold hose this way for the past 13 years. We guarantee satisfaction as well as wear.

HOLEPROOF HOSIERY CO. OF CANADA, Ltd.
20 Bond Street, London, Canada

Holeproof Hosiery
FOR MEN, WOMEN AND CHILDREN

Holeproof Hosiery Co. of Canada, Ltd. (418)
20 Bond Street, London, Canada

Gentlemen: I enclose \$..... for which send me one box of Holeproof Hose for..... (state whether for men, women or children). Size..... Color.....

Weight.....

Name.....

Street.....

City..... Province.....

"OTHELLO" TREASURE

THE WONDER WORKER

In our guessing contest we have much pleasure in announcing that Miss Elvie Johnson, R.R. No. 1, Petrolia, Ont., won the set of dinner dishes, her guess being 2,016 biscuits, the correct number baked being 2,020 biscuits with one fire-pot (30 lbs.) of coal! We received hundreds of guesses, ranging all the way from 36 to 77,000 biscuits. The biscuits were carefully counted and the answers carefully recorded and checked by W. W. Robinson, Vice-President; S. D. Robinson, Manager, and W. B. Lewis, Sales Department.



Biscuits Baked in OTHELLO TREASURE

Ask your dealer to show you this beautiful range, or write us for full information.

The D. MOORE COMPANY, Ltd., Hamilton, Can.

For sale by dealers in every locality.

OIL CAKE

Nothing better for fattening steers quickly and putting them in the market in prime condition.

It is equally good for milk cows. They give more and better milk when fed Livingston Brand

OIL CAKE MEAL

Prices now lower than during the past several years.

Also Linseed Meal and Flax Seed

If your dealer cannot supply you, write us direct.

Dominion Linseed Oil Co. Limited

BADEN, ONTARIO

MONTREAL, QUE.

Coarse Ground. Manufactured by

FINE GROUND, PEA SIZE,

THE OLD PROCESS ONLY

were alive, and all were of normal size. Another gave birth to four lambs, and several are dropping triplets. H. P. Jaques, in charge of the sheep, attributes the heavy lamb crop to the folding of the ewes on rape pasture during and previous to the breeding season last fall.

THOMPSON'S CLYDESDALE SALE.

The sale of Clydesdale horses, the property of J. E. Thompson, Orangeville, Ont., was very well attended, and prices, while not exceptionally high, ruled a good average. The two stallions advertised were not sold, but one has been disposed of since to Geo. Hepton, Laurel, Ont., the other being still for sale. Eleven fillies sold, averaged \$411.81, the top price being \$490, paid by W. G. Pettit & Sons, Freeman, Ont., for Ella. This firm took seven of the eleven offered, the others going to Hugh Potter, Caledon; J. Hancock, Georgetown; Geo. A. Cox, Orton.

D. Hill, proprietor of Merton Stock Farm, Staffa, Ont., breeder of Clydesdale horses, writes that he has sold the filly Merton's Duchess [23701], to W. J. Cox, of Peterborough, Ont. This filly should greatly strengthen Mr. Cox's already strong string of Clydesdales. Mr. Cox saw the advertisement of the filly in "The Farmer's Advocate." King of Fountain Park, the stallion advertised, is still for sale, and is growing rapidly.

Trade Topic.

Attention is called to the advertisement which runs in this paper, of Hickman & Scruby, Court Lodge, Egerton, Kent, England. If desirous of importing any live stock from Great Britain, correspond with them, as they pay special attention to supplying customers in this country.

A farmer down in the State of Maine has solved the problem of protecting his sheep from losses due to dogs. He is, as it were, fighting fire with fire. He has trained his Scotch collie dog to stay in the pastures with the sheep, herding them on their own runs, and at the same time giving battle to any stray curs which may happen along to disturb the

peace of the flock and their master. While the dogs fight, the sheep get away to safety, and it is said that the dog-shepherd is usually master of the situation.

A Suffolk ewe, on the Northern Star Ranch, Castor, Alta., recently gave birth to six lambs at a yearling, five of which

Methods of Seeding Corn.

Corn for forage or ensilage may be planted in rows or hills. If planted in rows, as usually advisable, the rows should be at least 42 inches apart. The plants should stand about 8 inches apart in the rows. In seeding, it would not be advisable to try to sow as sparsely as this. It is better to give a rather heavier seeding, and then thin out to the desired thickness with a hoe, when plants are six or eight inches high.

If land intended for corn is very dirty, whether from the presence of weed seeds or couch grass, it is usually advisable to plant in hills. The hills should be at least three feet apart each way, and from three to five kernels should be planted in each hill.

For planting in rows, there are special corn-planting machines made by various agricultural implement manufacturers. Where the farmer has a grain-seeder that sows in rows, he can, by closing up part of the seed spouts, use it as a corn planter, and so get along without the special implement.

If it is desired to plant in hills, here again special horse planters are available. There are also hand-planters of various descriptions on the market which will enable a man to plant from two to four acres a day when the land is ready. If no planter is available, planting may be done with a hoe, or even with the foot, when the soil is loose and friable.

If the hill planting is to be done other than with a horse planter, it will be necessary to mark the land off into three-foot squares, the hills to be at the corners of the squares. This may be done by a man dragging a heavy chain back and forth across the field till it is marked off into three-foot strips, then doing the same thing lengthwise till the whole thing is marked off into three-foot squares.

A better plan, and a much more rapid, however, is to construct a marker to run by horse-power, then mark the field off into squares by running first lengthwise and later crosswise.—J. H. Grisdale, Director Experimental Farms.

Prize Farming Condemned

According to the estimate of the Farmers' Educational and Co-operative Union, over a quarter of a million dollars have been spent in Texas in prize farming during the past five years, and the recognition which many business men have given prize farming has caused the Union to officially review its effect upon farming, and to point out more practical lines of co-operation for the information of those who may desire to render effective service to agriculture.

It has carefully reviewed, from the standpoint of practical farming, the result of prize farming as carried on in the State during the past few years, and considers it in every instance inadequate, and, as a whole, damaging to the farming industry. The educational value is too limited to be of any practical use, it turns the mind of the child from practical to fancy farming; its effect is immoral where the cost of growing a prize crop exceeds the value of products. It gives the occupation of farming a childlike appearance, and acknowledges the farmers as delinquent, feeble, and incompetent. The assembling of the best products of the farm in a community for study and comparison is considered of educational value, and small prizes offered after the crop is grown, are not so objectionable, but the offering of large prizes before the crop is planted, is deemed damaging to agriculture for the reasons above stated.

It is prices, not prizes, that are wanted. Only one farmer can be benefited by a prize, but half a million profit by increase in prices.

The value of the staple crops can be increased at least 20 per cent., it is urged, without increasing the cost to the consumer, simply by a more business-like method in marketing.

Prices of short-pedigreed cattle (Short-horns) of the right type are rising steadily in England. These cattle are excellent milkers, as well as having good beef form when dry. Dairy Shorthorns are being eagerly sought by England's home trade at the present time, and for this purpose the short-pedigreed Short-horn seems to fill the bill well.

LOOK INTO THIS GATE

BEFORE you buy any farm gates look into the "Clay" Steel Gate. It has features possessed by no other gate. It is the ideal gate—the very gate that all farmers want and have wanted always. Consider these good points of "Clay" Gates: [1] They always hang true—they can't and won't sag, bend, break, burn, blow down, or rot. [2] They can be raised (as shown) to let small stock through or to lift over snow in winter. [3] Are so light that a child can work them with ease. [4] Positively keep back breachy cattle.

Clay STEEL FARM Gates

will last a lifetime. They are fully guaranteed. The leading stockmen of Eastern Canada, and the Model Farms at Guelph, Ottawa and Macdonald College use Clay Gates, knowing their worth.

Clay Gates are made of tubular steel of large diameter—far stronger than gas pipe or tee- or angle-iron, and of heavy wire mesh fabric. They are made in a great variety of sizes and styles—a gate for every purpose.

SEND TO-DAY FOR ILLUSTRATED PRICE LIST.

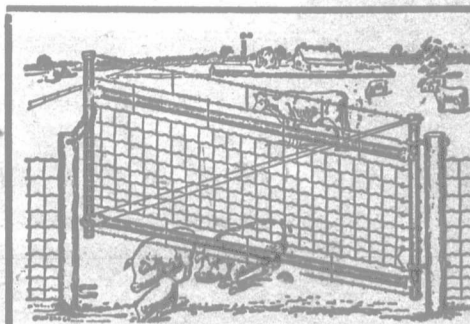
The Canadian Gate Co. Ltd., 34 Morris St., Guelph, Ont.



GUARANTEE

I guarantee every Clay Gate to be free from any defects whatsoever in materials or workmanship. I will replace free, any parts or the entire Gate giving out for such reason.

H. RALPH STEEL, MGR.



Clay Gates

In a recent competition on the subject of "The Ideal Farm Gate," open to the students of the Ontario Agricultural College, Guelph, every competing student, with but one exception, declared "Clay" Gates to be the most perfect farm gate made.

60 DAYS' FREE TRIAL

One or a dozen Clay Gates sent for sixty days' free trial, in order that they may be tried out before being purchased. Thirty thousand Clay Gates were sold in 1912 on these terms.

PRO-FAT MOLASSES MEAL

Dried Malt and Molasses for Dairy Cattle and Horses. Malted Corn and Molasses for Hogs, Sheep, Calves and Poultry.

These feeds are both sold at a uniform price of \$28.00 per ton, delivered to any station in Ontario. They are sold on THIRTY DAYS' TRIAL WITH GUARANTEED RESULTS. They are the only COOKED feeds on the market which make the PROTEIN AND FAT wholly digestible. They are fed as a whole ration or part with proportionate results. When a mother lacks nourishment for her new born babe, the medical man invariably prescribes a MALT PREPARATION, nothing else will produce the desired results. Our PRO-FAT WITH MOLASSES will do the same for cows, horses, sheep and calves which are not thriving, and the price is no higher than ordinary chopped feeds. Dairy men have an opportunity here of procuring a meal, a ton of which is guaranteed to produce greater results than any other feed on the market, manufactured or home grown. Send us the name of the seed merchant in your neighborhood and we will mail you an order to get a ton from him or if he will not handle it, will ship direct to you (with guarantee) on THIRTY DAYS' TRIAL. Can anything be fairer than this? Dairy men will never get the MAXIMUM AMOUNT of milk from their cows until they use PRO-FAT as a part or whole ration. Try it and be convinced. Analysis—Protein 20%, Fat 5%, Fibre 13%.

Feed Pro-fat Molasses Meal and Watch the Milk Flow Increase

The Farmers' Feed Co., Limited
Dept. A, 108 Don Esplanade,
TORONTO, ONTARIO.



"TWEED" Steel Troughs are made of heavy galvanized steel, thoroughly riveted and soldered. Finished round the top with heavy angle steel, so making them very strong and rigid. Reinforced along the sides, as shown.

STEEL WATER TROUGHS

Are strong, rigid, clean and sanitary. Will last a lifetime. Never rust, never leak, and are frost-proof. Infinitely superior to wooden troughs, which rot, become slimy, and are disease breeders. "TWEED" Steel Troughs are provided with an outlet for drainage.

Send for illustrated catalogue of "TWEED" Steel Equipments for farmers and stockmen.

STEEL TROUGH AND MACHINE CO., LTD.
5 James Street, Tweed, Ont.

GLUIEN FEED

FOR **Dairy Cows**

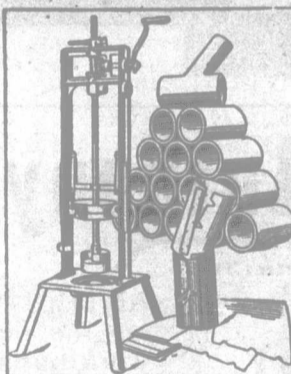
Guaranteed Percentage of Protein and Fat

25%

PRICE **\$20.00** per ton

Canada Starch Co., Ltd.
BRANTFORD ONTARIO

MAKE YOUR OWN TILE



Cost \$4.00 to \$6.00 per 1,000 Hand or Power Send for Catalog

Farmers' Cement Tile Machine Co.
Walkerville, Ont.

Columbia Double Disc Records

DOUBLE VALUE FOR YOUR MONEY




The Practical GAS and OIL ENGINE HAND-BOOK
A manual on the care, maintenance and repair of gas and oil engines. By L. E. Brooks, M.E. 100 pages. Fully illustrated; cloth. Price, \$1.00 postpaid. We issue a large catalogue of books. Write for it. Also write for our catalogue, "Engineers' Bargains". If interested in threshers' supplies. Address: Windsor Supply Co., Windsor, Ont.

ROGERS
CEMENT
AND
CRUSHED STONE

**Concrete
Stables Pay
Dividends**

A dilapidated shed is expensive stabling for cattle. No horse or cow can render good service under such conditions.


**"Portland Cement
on the Farm"**

We have spent thousands of dollars to prepare a book for the up-to-date farmer. It tells how you can build your own concrete barns, chicken-houses, silos, etc., etc., giving exact ingredients and instructions. We gladly send the book to any farmer on receipt of 50 cents—a mere fraction of its real value. Write for "Portland Cement on the Farm." 

**ALFRED ROGERS
LIMITED
28 KING WEST TORONTO**

The Anthony Wire Fence

The Perfect Tie



See That Knot

ANTHONY WIRE FENCE is the **cheapest** on the market if you value **quality and workmanship**.

ANTHONY WIRE FENCE is made from all No. 9 hard steel wire thoroughly galvanized.

ANTHONY WIRE FENCE has the stay wires tied to the line wires with the **strongest, neatest and most compact lock** on any wire fence made.

ANTHONY WIRE FENCE is so constructed that **it will not bend down at the top nor roll up at the bottom; but stands up straight when erected.**

Buy it and try it, and be satisfied.

LIVE AGENTS WANTED IN ALL UNOCCUPIED TERRITORY

The Anthony Wire Fence Co. of Canada, Limited
Walkerville, Ontario.

Please Mention The Advocate

Questions and Answers. Miscellaneous.

Birth in England.

Could you please tell me whether births were registered in Yorkshire, England, seventy-five years ago, and also whether there is any way to find out the exact age of a person born in England about seventy-five years ago?
SUBSCRIBER.

Ans.—We do not know definitely, but would suppose that they were. Get in touch with the officials in the municipality (parish) in which the birth took place. This may be accomplished by addressing a letter to the registrar of this municipality.

Boric Acid for Navel-ill—Tile at Culvert Entrance.

1. Could you, through the columns of your paper, inform me whether boric acid, given to a mare about a month before foaling-time, will prevent navel disease in the colt? If so, what amount is advisable to give to the mare?

2. Also, if a large tile put at the head of a culvert will cause more water to get away? On a fifteen-inch culvert, what size tile would you need to put at the inlet to cause it to take as much water as possible?
G. F.

Ans.—1. The belief that colts may be affected with navel ill during foetal life, is not credited by most of our best authorities of the present day. We would not expect to get any results from feeding to mare boric acid with a view to preventing this disease. Better have a ten-per-cent. carbolic acid solution ready when the colt is foaled, and apply it to the navel cord as soon after as possible, and three or four times daily until the navel dries up, and always have a clean, dry place for the mare to foal in.

2. You might put a slightly larger tile at the entrance to the culvert, but it would not cause much more water to get away than the size of the culvert.

Castrating Calves.

Will you explain how to castrate a bull calf, and what is best age?
W. S.

Ans.—This should be done as soon as the calf becomes strong and is doing well, preferably while he is on new milk, but many calves are put on skim milk at a very early age. From two weeks to a month old is a good age in a strong, healthy calf. Of-course, it may be done after the calf is older, but the "set-back" to his development is almost invariably greater. Animals are generally cast and tied, or securely held by an attendant, and each testicle is seized in turn with one hand to cause the skin to be tense over it, and a slit is made in the skin with a sharp knife, parallel to the median line; that is, the cut is made lengthwise, or up and down. This incision should be fairly large, and should extend to the lowermost portion of the scrotum to allow of free vent after the operation. The incision makes it possible to free the testicle from the scrotum, but it will still be attached to the cord. Pass the knife between the middle and posterior parts of the cord and sever it (this is the membrane adhering to the cord), drawing the testicle away, and breaking the cord. In older animals, it is necessary to cut the cord. It is well to use a little antiseptic, as a five-per-cent. solution of carbolic acid, on the scrotum before cutting, and to dip the knife blade in this solution before each incision is made. Larger calves may be castrated without casting. Simply secure the head and tie the animal in a narrow stall, and from behind grasp the scrotum and perform the operation. In place of kicking, as one would suppose would be the case, the animal will usually simply crouch until the operation is over.

Trade Topic.

Attention is directed to the advertisement elsewhere in this issue of "The St. Mary's 'Kool-oil-King' Engines." Gas, gasoline, and coal-oil engines, specially adapted for use on the farm, simple, durable, and useful, are manufactured, fully guaranteed, and shipped on thirty-days' free trial by this firm. See the advertisement, and correspond with A. W. Parks & Son, Petrolia, Ont.



Seed Time and Harvest!

So quickly the seasons come and go that the up-to-date farmer must save time by employing all modern aids to scientific farming.

A telephone on the farm is the greatest of all time and labor savers. No long tie-up of the work through an accident is possible on the farm with telephone service.

The Bell Telephone Company of Canada has over 190,000 stations in Ontario and Quebec, many of these serving farmers. It has direct connection also with 475 Independent Companies serving over 50,000 farmers.

More than 9,000 pole miles of Long Distance line connect Bell subscribers with all points in Eastern Canada and the United States.

If you have no telephone, consult our nearest Local Manager before Spring construction starts.

*Every Bell Telephone is a
Long Distance Station.*

**The Bell
Telephone
Co. of Canada**





VELOX
GEARLESS MOTOR WASHER

We recommend the Velox because we believe it has the simplest, strongest and best gearless water motor made. There is no lost power, no danger, no noise, no stained clothes, no attention required, no sticking, no rust; great power and high speed. It is perfectly simple and simply perfect.

The tub has exclusive patented features that prevent warping and give great strength rigidity and durability of the tubs.

See the "Velox" at your dealer's or send us for full information, 204 SUMNER-DOWSWELL, LTD. HAMILTON, ONT.

Photography

For Pleasure and Profit.

Amateur and professional photography taught right at your home in spare time UNDER CANADA'S EXPERT PHOTOGRAPHIC CRITIC AND TEACHER. Be an expert amateur or a capable professional. Don't experiment. Don't guess. Learn How. Write for prospectus.

SHAW CORRESPONDENCE SCHOOL
393 Yonge St. TORONTO

Have "Canada and Sea Power," you read by Christopher West? The most illuminating work on the Canadian naval question, \$1.00. McClelland & Goodchild, Publishers, Toronto.

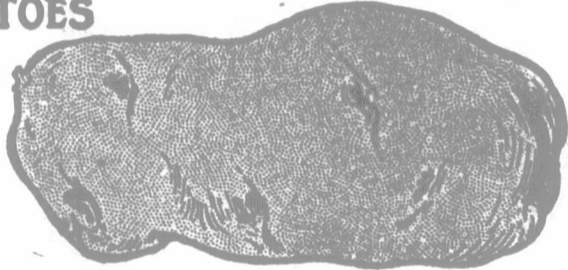
It's Time To Use Fertilizer

Increase the yield and produce earlier and better crops by feeding the soil with **STONE'S FERTILIZERS** Pulverized, thoroughly mixed, ready to apply. Will Drill, Broadcast or Scatter.

Get your supply NOW from **William Stone Sons, Limited** at either Woodstock or Ingersoll, or from any Agent.



MONEY IN POTATOES



\$128⁰⁰ an acre Clear

Yes Sir! We can show you how to make it in potatoes, over and above the cost of seed, fertilizer, labor, marketing and your own time. With the market price \$1.00 a bag—and better, it's worth while going in strong for potatoes and getting every last bushel the ground will yield.

We can show you how to grow 240 bushels to the acre: how to get a double crop from the same outlay of labor and seed.

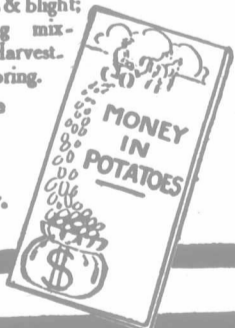
A lot of potato-growing experience is boiled down and plainly told in "Money in Potatoes." We have culled out the frills that a practical farmer has no time to read. The book is complete, but brief and to the point. See the list of subjects it covers. From this book you can see how other men have got the best results. You can grow and handle bumper crops of potatoes and take the long price.

List of Subjects Covered by this Book.

Best Soil for Potatoes; Potatoes Help the Land; Preparing Soil; Fertilizing; Time to Plant; Selecting Seed; Cutting Seed; Depth to Plant; distance between hills; crop cultivation; Fighting bugs & blight; Spraying mixture; Harvesting; Storing. Secure your free copy to-day.



Clip the Big Crop Coupon to-day.



BIG CROP COUPON

I am using the following machines for potato raising:

The Canadian Potato Machinery Co., Limited
L. Galt, Ontario

As a Potato Grower I would like a free copy of your book, "Money in Potatoes."

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

BEST RESULTS ARE OBTAINED FROM ADS. IN "ADVOCATE."

Questions and Answers. Miscellaneous.

Cultivators.

As our land is a mixture of light, loamy, heavy, and clay land, some hilly and some fairly level, which would you prefer, a spring-tooth or a stiff-tooth cultivator?

1. For working the soil.
2. For killing weeds.
3. As an all-round implement, what kind of cultivators do you use on your farm? Has it detachable tooth-points, or is it solid, one-piece teeth? What is the best widths of shovels to get with cultivator, or do the sets go with the machine?

A. A. M.
Ans.—1, 2 and 3. For working the soil, a spring-tooth cultivator, or disc, is good. These also have a value in killing weeds, but for this purpose the cultivator must have wide points. As all-round implements, the spring-tooth cultivator and disc harrow, are good. The cultivator used at Weldwood is a stiff-tooth one, with wide points, for killing weeds. The sets of points are purchased with the machine.

Grass, Pig and Feeding Queries.

1. Re "Grass for Pasture," page 702, "Advocate" for April 10, recommended by Prof. C. A. Zavitz, kindly tell me, through your columns, how to put this in. Is it put in with oats, or something like that, or put in alone in the spring? How long must it be left before cattle can pasture on it, and how many head per acre can be pastured?

2. Re "Pigsty vs. Pasture," page 1,500, August 29th, 1912, "Advocate," Commissioner Huson's plan. How many pigs per acre can be pastured in this way? Could the same field be used year after year, rotating the crops?

3. What is "corn stover"? I have lived in the country only six years.

4. My husband is a lumberman, and hasn't much time for farming, so I have taken that in hand. We have 27 head of cattle, and are not making anything on them at present on account of not feeding properly. This coming summer I hope to grow enough to feed them until the following spring, and am going to try and do so every summer. I have no silo at present, but thought by raising a good deal of corn and feeding it shredded, it would, in a measure, take the place of silage. How many acres of corn should I plant for 27 head of cattle?

5. Are Kafir corn and Sorghum, good feeds for fattening cattle and milch cows? Are they as good as or better than corn?

6. In building a dairy barn, is it better to have the cows facing in or out? How have you got them facing at "Weldwood"?

A. H. M.
Ans.—The grass mixture in question should be sown with a nurse crop of barley, oats, or wheat. The grass seeding, owing to its bulky nature, should be sown by hand. The grass is not ready to pasture until the following year. The number of cattle to be pastured per acre, depends upon the cattle and the grass produced. For the entire summer's pasture, with large cattle, anywhere from one to two acres per head should be provided in a favorable season.

2. From one to three good-sized litters could be kept in this way, and the crops could be rotated year after year. Of course, this is assuming that grain rations are also fed.

3. Corn stalks from which the ears have been husked, the stalks to be fed separately, are called "stover."

4. The amount of corn for 27 head of cattle depends upon whether you intend to feed summer and winter, or just in winter. Anywhere from twenty acres down to ten acres, according to which system you intend to follow.

5. These are satisfactory feeds, but corn, on the whole, is a more profitable crop.

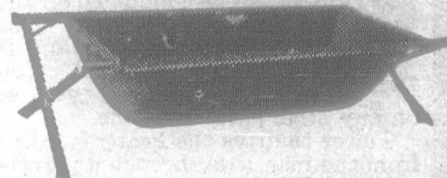
6. This is a point upon which there is a wide difference of opinion. Some favor facing out, claiming the cows get more light, and others favor facing in. The stables at Weldwood are arranged with a row of tied cows facing a feed alley in the center of the barn, with box stalls on the opposite side.

EARLY SEED POTATOES

Early Ohio	\$2.50 per Bag
Irish Cobbler	1.50 " "
Early Puritan	1.50 " "
Quick Lunch	2.00 " "
Early Sunlight	2.00 " "
Early Sunshine	2.00 " "
Early Fortune	1.50 " "
Early Eureka	2.00 " "
Burpee's Early	1.75 " "
Chicago Market	1.50 " "
Early Harvest	2.00 " "

Late Varieties: Peerless Savoy, Empire State, Delawares, Green Mountain, Clinton. Any of above LATE Varieties, \$1.50 per bag. Terms, cash. All F.O.B. Guelph, sacks included.

HEWER SEED CO.
GUELPH ONTARIO



Get in Line with Your City Friends

For \$7.50, express paid to any part of Ontario we will give you what it has cost your city friends from \$100 to \$150 to install. This bath tub is 5 ft. long, 2 ft. wide, 18 inches deep (inside measurements), and weighs only 15 pounds. Each tub carries a guarantee for five years. It is not a question of whether you can afford this tub, but can you afford to be without it. Bear in mind, your health is the most valuable asset you have, and it is necessary to bath the body regularly in a proper tub if you wish to enjoy good health.

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Ontario price of Tub, \$7.50 f.o.b. Gananoque.

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After more than twenty years' experience in growing strawberries, I have found the Williams and Parson's Beauty the most productive and the best for the market. I am prepared to offer for early Spring delivery, 500,000 plants of last year's growth of these two varieties. Also 250,000 plants of the following splendid kinds:

FOUNTAIN WOLVERTON
MICHEL'S EARLY SENATOR DUNLAP
LATE GIANT SPLENDID

Price for any of these varieties, \$5.00 per 1,000, or 75c. per 100.

I have the best varieties of Red and Black Raspberries at \$10 per 1000; \$1.50 per 100.

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Making High-priced Pork While Grinding Their Own Feed



Agents wanted in every town and district.

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and all essential business subjects are included in our excellent Home Study Commercial Courses. Many have used these courses as a means to a good salaried position. We invite you to write for particulars.

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Write for our new Instructive Illustrated Catalogue

on Spraying and Apple Evaporating

It's free. Fruit Machinery Co., Ingersoll, Ont.

John Deere Spreader

The Spreader with the Beater on the Axle



Take any manure spreader you have ever seen, remove all the clutches and chains, all the countershafts and stub axles, do away with all adjustments and mount the beater on the rear axle. Rebuild the spreader so that the top of the box is only as high as your hips. Make it stronger. Remove some two hundred trouble-giving parts and throw them away. You will have some sort of an idea of what the John Deere Spreader, the Spreader with the Beater on the Axle, is like.

The Beater on the Axle



The beater and all its driving parts are mounted on the rear axle. This construction is patented. You cannot get it on any other spreader made. Power to drive the beater is taken from the rear axle through a planetary transmission (like that on automobiles). It is positive, runs in oil, and does not get out of order.

Few Working Parts

The John Deere Spreader is so simple that there are no adjustments. It has some two hundred less parts than the simplest spreader heretofore made. There are no clutches to throw it into gear. The lever at the driver's right is moved back until the finger, or dog, engages a large stop at the rear of the machine. All the chains and adjustments have been done away with.

Only "Hip-High"



Because the beater is mounted on the rear axle, it is only "hip-high" to the top of the box. Each forkful of manure is put just where it is needed. You can always see into the spreader. Roller bearings, few working parts, the center of the load comparatively near the horses, and the weight distributed over four wheels, make the John Deere Spreader light draft.

Spreaders Data Free—Tells about manure, when and how to use it, how to store it, and a description of the John Deere Spreader. Ask for this data as Package No. Y 119

John Deere Plow Company, Limited
Toronto, Ontario

THE DAISY GRINDER

The greatest labor saving grinder ever placed on the market. All made of steel. As a foot-power grinder it has no equal for grinding chisels, drill-bits, knives, axes, scuffer and cultivator points, and all kinds of grinding that is required in a shop or on a farm. For grinding mower or binder knives, it excels any grinder offered to the public. Cut shows mower knife in position. Price \$3.50 complete, with two of the best vetted grinding wheels. Freight paid to your railway station in Ont. and Que.



PAT. DEC 15TH 1908
Mfg. by W. J. MANDLEY, SHELburne, ONT.

O. A. C. No. 21 Barley

We increased one pound to nine-hundred bushels in three crops. Our present supply was all grown after corn and roots. Sample beautiful. Price 85c per bush. Bags extra.

JNO. ELDER HENSALL, ONTARIO

Questions and Answers.

Miscellaneous.

Perjury and Marriage.

1. What age must a girl be before she can marry without her parents' consent?
2. If a man, when getting a marriage license, has not the parents' consent, and the girl is under eighteen, and he states and also makes his affidavit that she is eighteen, knowing at the same time that it is not true, is there a penalty for such act in our Ontario laws?

Ontario. ENQUIRER.

Ans.—1. Eighteen years.
2. He is guilty of perjury, and liable to prosecution, conviction and imprisonment accordingly, under the Criminal Code.

Cumbering Stones.

I am having the line surveyed between my neighbor and myself, as the fence that stands between us has great stones in the corners on his side—which he drew there. I expect when the new line is run that this fence and quite a strip of land will fall to me. Can I compel him to move those stones that he has drawn in the fence, which will be on me, I expect, when the new line is run? J. R. Ontario.

Ans.—If, eventually, these stones, which belong to your neighbor, should be ascertained to be upon your land, you ought to request him, in writing, to remove same, and give him reasonable time and opportunity to do so. Then, if he should fail to comply with such request, or should refuse to do so, you might treat the stones as having been abandoned by him, and move them away yourself. But we do not think that you could compel him to move them.

Horse Died of Worms.

I had a horse that was not doing very well all winter, so I had him starved out for about 24 hours, and gave a good purgative of aloes on the 9th of April, and on the 10th he took very sick, and on the morning of the 11th, he died. I opened him, and in the back intestines there was about a gallon of worms, some about 11 inches long. They had stopped up the bowels in such a manner that the physic could not work through. Did I treat him right, or what should I have done? U. W.

Ans.—The question does not state how much aloes was given. Had the horse been given a worm exterminator some time ago, it is not likely he would have died. A good treatment for worms is to take three ounces each of sulphate of iron, sulphate of copper, calomel, and tartar emetic. Mix, and make into 24 powders. Give a powder every night and morning, and after the last has been given, give a purgative of eight drams aloes and two drams ginger. The horse should have been treated as soon as symptoms of worms were noticed.

Purchaser in Default---Conveyancing


A sold B a piece of land for twenty-one hundred dollars, paying one hundred dollars March 1st, at time of agreement. He was to have paid the two thousand dollars April 1st, when A was to have given B a satisfactory deed. B has not offered to do anything regarding agreement.

1. Can A keep the one hundred dollars and sell land to C?
2. Has B any claim on land?
A has two acres of land bordering on a twenty-six foot right-of-way. A divides this piece of land into quarter-acre parcels so that each piece is bordering on the twenty-six foot right-of-way.
3. Can A secure a deed for each quarter acre of land?
4. Can A sell each quarter acre by description?
Ontario.

Ans.—1. Probably not, as the matter at present stands. It depends to a large extent—but not entirely—upon the terms of the agreement,—which we presume is in writing. The Courts are very reluctant to declare a forfeiture, and very much disposed to relieve against one; and they are usually astute enough to find some way of disposing of the matter equitably.
2. Apparently, he has at present, at all events.
3. Yes.
4. Yes.

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1 Tobacco Producer.....	9 General Garden.....
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5 Potatoes and Celery Special.....	13 Fine Steam Bone.....
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7 Forcing Growth.....	15 Blood and Bone Compound.....
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Full strength standard analysis. Particulars on request.

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When you put up a fence it is to bar intruders who might injure or destroy your property. Why not give it the same protection against its worst enemy—weather?



Low Brothers

HIGH STANDARD LIQUID PAINTS

will guard your property against every danger from hot sun—driving rains—snow or frost. As superior in efficiency to hand-mixed "home-made" paint as a "Cockshutt gang" is to an old one-blade plow. Machine-made, ready for instant use. Easy to put on, hard to wear off, gives best results at least cost.

Send for one of these Valuable Books Free—Homes Attractive And How To Make Them; Guide To Farm Painting.

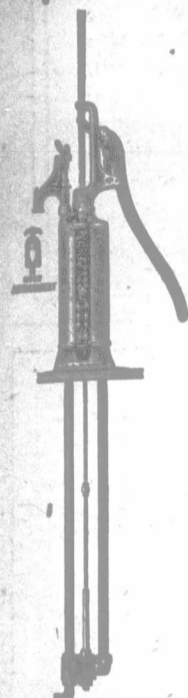
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Pump annoyances never worry the farmers who are fortunate enough to be using the

Imperial Anti-Freezing Pump



The "Imperial" is the pump best suited for all farm purposes.

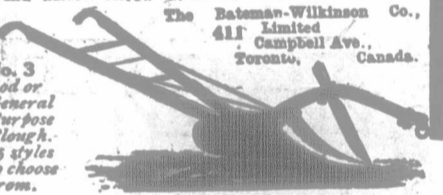
It has a large air-chamber, extending to top of stand, containing 127 1/4 cubic inches. Has 1 1/4-inch plunger-pipe instead of stuffing-box. The advantage over the stuffing-box is that it has three plunger-buckets which are self-expanding, and therefore require no attention. Can be used on any sized pipe from 1 1/4 to 2 inches in diameter, tapped for 1 1/4-, 1 1/2- or 2-inch pipe. On tubular wells, the plunger can be withdrawn without removing the pump.

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Aylmer Pump & Scale Co., Ltd.
AYLMER, ONTARIO

Ploughs—Wilkinson

U. S. S. Soft Centre Steel Moldboards, highly tempered and guaranteed to clean in any soil. Steel beams, steel landsides and high carbon steel coulters. Clevises can be used either stiff or swing. Each plough is fitted especially with its own pair of handles—rock elm, long and heavy and thoroughly braced. The long body makes it a very steady running plough. Shares of all widths—specials for stony or clay land. The plough shows turns a beautiful furrow, with minimum draft and narrow furrow at finish. Ask for catalogue.



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Every Canadian poultry raiser should have a copy of SPECIAL CANADIAN EDITION of our 1913 Year Book. "Profitable Poultry and Egg Production"—164 pages, 1 1/2 x 10 in. Contains special matter of vital importance to Canadians, letters, experiences of Canadian poultry growers. Eight valuable chapters of money-making methods. Also pictures and describes

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World's Standard Poultry Equipment. Already widely used and praised in Canada. You save money—freight—buying from Canadian representatives. Write for our free book today. Start right this money-making poultry year.
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DYER sells at factory price, guarantees satisfaction or money refunded. 17c. rod up. Law n Fence 7 1/2c. A one cent postal DP to me now may mean many a \$1 to you
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and 25c. will get you the best \$4.00 pair of shoes for men or women ever made. Write for particulars to the Brantford Shoes Company. Brantford, Ontario

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INSTANTLY RELIEVED BY THE OLD
DR. MARSHALL'S CATARRH SNUFF
25¢ AT ALL DRUG STORES OR SENT FREE PAID BY C. W. KEITH, 111 CLEVELAND BRID.

MENTION "FARMER'S ADVOCATE."

To Sell Wool in Britain.

Realizing the urgent need that something should be done to encourage sheep-raising in Western Canada, and recognizing the fact that an improvement of the wool trade and of the facilities for marketing that product would greatly strengthen the hands of those engaged in the industry, the Dominion Minister of Agriculture, according to the Census and Statistics Monthly, has decided to co-operate with the sheep-raisers by aiding them in consigning to the British market, under the most favorable conditions feasible, their wool clip of the present year. Inquiry into the conditions during 1912, by a special officer of the Live-stock Branch, made it apparent that the marketing of wool in Western Canada followed no particular system, and was attended by many of the difficulties and losses which naturally result from lack of organization and co-operation. It was found that the wool was put up in bad condition. While of good quality naturally, it contained too large a proportion of foreign matter, was without uniformity as regards classification when presented for sale, and consequently proved unattractive to the trade. In addition to this, as no permanent facilities had been provided for storage, the grower was practically obliged to take the price he was offered on the ground, and this, in many cases, was considerably below the actual market value of the product.

In view of this situation, and in the light of the attitude taken by the sheepmen themselves, it became clear to the Minister that he would be well advised in furthering any reasonable scheme to provide for the sale of Western-grown wool in Great Britain. The strength of the wool market in London has encouraged growers, to seek an outlet for their annual clip through the medium of the great colonial wool sales which are held at stated intervals in the British metropolis. Encouraged by the support which the Government is prepared to offer them, it is probable that considerable consignments of wool will be sent forward this year. If this is undertaken, there is no doubt that the wool will be put up in much better condition than was formerly the case. It will be graded, skirted, pressed, and sold, according to classification. With the adoption of these measures, it is hoped that the Canadian product may in future command fuller recognition by the trade, and that thus, through standardization, better and steadier prices may be secured to the grower.

It is proposed that the Department shall co-operate as far as possible with the Wool-growers' Associations in the Provinces of Alberta and Saskatchewan; and if they are prepared to go on with the undertaking, the services of T. R. Arkell, sheep specialist of the Branch, who during the past month has gathered a great deal of information in reference to all features of the trade, will be placed at their disposal. The Department will, in addition, provide two expert wool-sorters, one for Saskatchewan and one for Alberta, who will take charge of the sorting of the wool at the shearing-sheds.

It is proposed further that for the current year 25 per cent. of the freight charges on a consignment of wool, from point of shipment to its destination on the London market, shall be paid by the Department. The Associations will be required to furnish a full statement of expenditures and receipts, itemized in such a way that the data so secured may be used in determining what advantages, if any, may accrue to Canadian growers by consigning their wool to the colonial sales in London.

AROUND THE WORLD VIA "EMPRESS OF ASIA."

The "Empress of Asia" will leave Liverpool June 14, calling at Madeira, Cape Town, Durban, Colombo, Singapore, and Hong Kong, arriving Vancouver August 30th. Vessel remains 14 days at Hong Kong. "Rate for entire cruise, \$639.10," exclusive of maintenance between arrival in England and departure of "Empress of Asia," and stop-over at Hong Kong. Particulars from Canadian Pacific Agents, or write M. G. Murphy, District Passenger Agent, Toronto.

2 IN 1 SHOE POLISH

10¢

The Modern Shine! Easier to Use Better for the Shoes



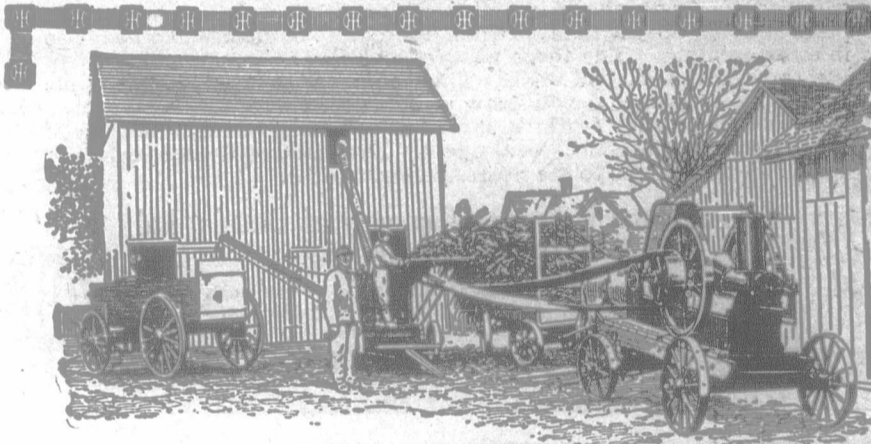
Count Them in the Fall

Profits depend on the number of chickens matured, not on the number hatched. What proportion can you bring through? Are you satisfied with the average results you secure each year? Just try the better way and experience the satisfaction of a highly successful season. It is easy! Secure from your dealer, or direct from us if necessary, these preparations:

Pratt's Baby Chick Food 25c up
Pratt's White Diarrhea Remedy 25c, 50c

This combination furnishes just what you need to grow the best chicks, and lots of them. It starts them right, strong, vigorous, husky, and keeps them free from the worst chick disease. After the chicks reach three weeks of age, include in their ration a small amount of **Pratt's Poultry Regulator**—25c, 50c, \$1; 25 pounds, \$2.50. This will keep them healthy and vigorous right up to maturity. Chickens lice are comfort destroyers and stunt growth. An occasional dusting with **Pratt's Powdered Lice Killer**—25c, 50c, will insure freedom from these trouble makers. Use these products according to directions. You take no risk. Remember the unqualified Pratt guarantee: "Your money back if it fails." Pratt's 160-page poultry book 10c by mail. Our products are sold by dealers everywhere, or

PRATT FOOD COMPANY OF CANADA, Ltd., Toronto.



The Best Bargain You Ever Made

SUPPOSE you bought an engine that did practically all of your hardest work for you—sawing, pumping, grinding, etc.—and that paid for itself in a short time. Would you call that a good bargain? An I H C engine will do all that, and more. Having paid for itself, it will continue to earn its way by working steadily year after year until you will say, "My I H C engine is the best bargain I ever made."

I H C Oil and Gas Engines

are thoroughly dependable, and unusually durable. 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. The ignition apparatus can be understood at a glance. The fuel mixer is the most effective and simplest known. Moving parts are perfectly balanced. Bearings are large and carefully fitted. I H C 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. Kerosene-gasoline tractors, 12 to 60-horse power.

The I H C local agent will show you the good points of the I H C engine. Get catalogue from him, or, write the nearest branch house.

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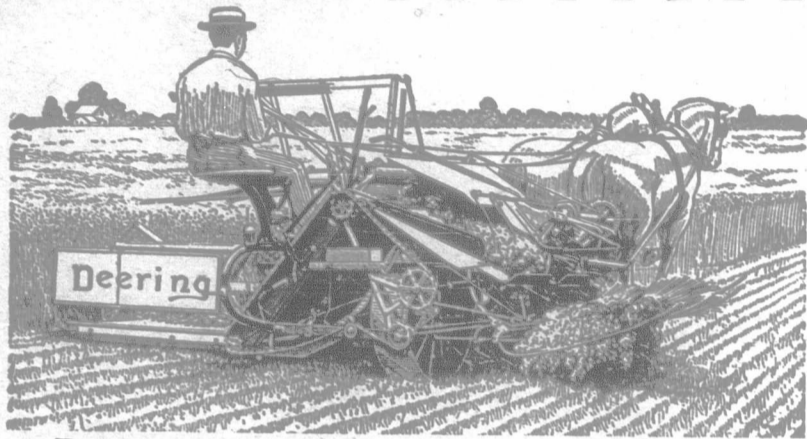
In-Foal Mares INSURANCE

OF ALL the losses owners are liable to, none can be less prevented or modified in any manner whatsoever than loss by foaling. Notwithstanding the best care and attention, although a mare may have foaled many times successfully, she is always a cause of worry and anxiety to the owner through the fear of losing by death the often very high cash value of the Beast, not to mention service fee, care and expenses incurred for no avail. Why risk such loss when a payment of a few dollars in premiums would cover you should it happen. Reduce the amount of the RISK by insuring, only risking thereby the loss of the Premium if the mare foals allright. We issue 30 days, 6 months and 12 months policies with or without cover on foal.

Write for address of nearest agent.

All kinds of live stock insurance transacted.

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Deering New Ideal Binder The Master of the Grain Field

DEERING harvesting and haying machines have established a world-wide standard. Wherever grain is grown, the Deering binder is known as a reliable machine, one that is always ready to go into any field of grain—short or tall, standing, down or tangled—and cut and bind it all.

Deering quality has a name the world over, but the machines themselves are changed to meet the conditions of various countries. For the work in Eastern Canadian harvest fields certain features are added which make the New Ideal binder particularly efficient.

The T-shaped cutter bar allows the platform to be tilted close to the ground when necessary. The reel is easily adjustable to exactly the desired height. It can always be held parallel with the cutter bar, whether working high or low. Smooth section knives can be used in place of usual serrated knives when desired. The change can be made in a few minutes. The three packers and three discharge arms help greatly in doing efficient work. The wonderful Deering knotter needs only to be mentioned—you know what it does.

Other strong features as well as these will be explained to you fully by the I H C local agent. Drop in and see him, or, write for a catalogue to the nearest branch house.

International Harvester Company of Canada, Ltd

EASTERN BRANCH HOUSES

At Hamilton, Ont.
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London, Ont.
St. John, N. B.

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These machines are built at Hamilton, Ont.



This Name Protects You

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You cannot tell by looking at them whether field and garden seeds are well-bred, vigorous and sure to grow, or exactly the opposite. You must buy by faith, and your faith has the best foundation when you select

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For over forty years these seeds have produced the finest vegetables and flowers grown in Canada—and they are better to-day than ever.

They do not disappoint.

Write now for our illustrated Catalogue, and if your dealer hasn't Ewing's Seeds, buy from us direct.

WM. EWING & CO., Seedsmen
McGILL ST., MONTREAL.



25

Edmonton's Spring Show

The horse classes were the feature of Edmonton's Spring Live-stock Show, recently held. Clydesdales and Percherons were the breeds to put up the strongest competition. Aged Clydesdale stallions were headed by Roberts Bros.' (Edmonton) Lord Arnot, by Arnot's Heir, with A. Galbraith's (Edmonton) Proud Edward, by Royal Edward, second. Two-year-old stallions furnished the champion of the show in Prince of Troprain, by Buchlyvie Again. This horse, owned by W. W. Hunter, of Olds, Alta., is brimful of quality, has plenty of substance, and is a good goer. Roblin Bob stood second for P. McLaren, of Clearwater, Man. Only one class of females was forward. Ruth Mario, an outstanding winner, by Boreas, could not be denied first place, second going to Roberts Bros., on Frances, by Buttress 2nd. Prince of Troprain was made grand champion over McLaren's Roblin Bob, the winner of the Canadian-bred championship.

Percheron stallions furnished some very keen competition. Galbraith's Garou won the aged class after a tussle with the entry of W. W. Hunter, of Olds. In three-year-olds, Galbraith repeated with the big, black, high-quality colt, Famous. Hunter's entries went second and third. Hercules Jr., won the two-year-old class for Galbraith. Garou was grand champion, and Famous, Canadian-bred champion of the breed.

Belgians brought out several classes of merit, the main competition being between A. Haazen, of Regina; W. W. Hunter, Olds; Deschepper Bros., Ville-neuve, and B. Villitard, of Beaumont.

One of the finest displays of Suffolk Pitches ever seen in Western Canada, was brought out by Baker & Hunt, of Fort Saskatchewan.

Only two Shires were forward, but light horses made an excellent showing.

The cattle classes were not as strong as they should have been. J. H. Melick, of Edmonton, and Edgar Bros., of Wainwright, were the only exhibitors of Shorthorns, both being milking herds.

Three herds of Holsteins, those of W. Ferguson, Edmonton; G. E. White, Lacombe, and J. C. Bremner, Bremner, divided honors in these classes, and W. R. Winslow, of Lacombe, was forward with an excellent herd of Ayrshires.

Some excellent sheep and swine made their end of the show very interesting, and on the whole the show was a decided success, notwithstanding the fact that the incompleteness of the new Winter Fair building made it necessary that the judging be done outside.

Gossip.

Just as the stud season opens comes the announcement, as per advertisement in another column, that the Hackney stallion, Moordale Duke (imp.), by Garton Duke of Connaught, is for sale. Look up this advertisement, and if interested, correspond with W. H. Nichols, Market Hall, Hamilton, Ont.

Nowadays, says the Farmer and Stock-breeder, we look for the animal as well as the pedigree. This practical aspect of stock-breeding should be strongly insisted upon. Viewed in the right light, the chief justification for the favor extended to blue-blooded stock is the high character of the stock bred, so that there is much that is worthy of approval in the attitude of the breeder, who looks for the animal first, and the pedigree afterwards.

The Call of the North

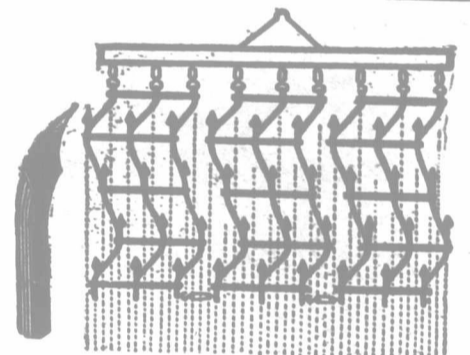
DO you know of the many advantages that New Ontario, with its millions of fertile acres, offers to the prospective settler? Do you know that these rich agricultural lands, obtainable free, and at a nominal cost, are already producing grain and vegetables second to none in the world?

For literature descriptive of this great territory, and for information as to terms, homestead regulations, settlers' rates, etc., write to

H. A. MACDONELL

Director of Colonization

Parliament Bldg. TORONTO, ONT.



Erie Lance Tooth Harrow

is the finest and most useful article that can be placed on a farm. The teeth are so shaped that they tear rough ground, and cultivate and make the finest seed bed possible. Once used on a farm, it will be the last implement parted with. Made strong and adapted to the roughest usage. 2-section set, \$10.00; 3-section set, \$15.00; 4-section set, \$20.00. Each section covers 3 feet of ground in width.

Erie Iron Works, Limited

MAKERS

St. Thomas, Ont.

Farm Help

Weekly parties of young men
now arriving. Apply:

BOYS' FARMER LEAGUE
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**PRESIDENT
SUSPENDER**
NONE SO EASY

NOTICE TO HORSE IMPORTERS
GERALD POWELL,

Commission Agent and Interpreter,
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Will meet importers at any port in France or Belgium and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking and pedigrees. Many years' experience; best references. Correspondence solicited. P.S. Nogent is in the heart of the Perche horse district.

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A safe, speedy and positive cure. The safest, best BLISTER ever used. Removes all bunches from horses. Impossible to produce scur or bleedings. Send for circular. Special advice free.

THE LAWRENCE-WILLIAMS CO., Toronto, Canada

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Artificial MARE IMPREGNATORS

You can get 2 to 6 mares in foal from each service of your stallion or jack by using our Impregnators, we guarantee it, and that'll increase your profits from your breeding stables. Easily used by anyone. Price, \$3.00, \$3.50 and \$4.00 each.

Use our improved "safety" Impregnating Outfit and get in foal irregular-breeding and so-called barren mares. Saves your stallion and you can make more money with him. Price \$5.00.

Write for our free 48-page Catalog of Impregnating Devices, Breeding Bottles, Stallion Brides, Shields, Supporters, Service Books and other Breeder Specialties. BREEDERS SUPPLY CO., Dept. 3, Cleveland, Ohio, U.S.A.

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GET RID OF Worms and Bots

You can remove every one of them. We guarantee to kill and bring from the body, dead, in from 18 to 24 hours, all pin worms and bots, with the safe and sure remedy.

NEWVERMIFUGE

Absolutely harmless. Can be given to mares in foal before the eighth month. Horse owners write us that Newvermifuge has removed from 500 to 800 bots and worms from a single horse. An animal that is wormy can't help but be ugly and thin. If your horses are troubled with worms send us your order today.

6 Capsules \$1.25. 12 for \$2.00. Postage paid. Farmer's Horse Remedy Company, Dept. C3, 592 7th Street, Milwaukee, Wis.

FOR SALE Hackney Stallion

Moordale Duke (imp.)—sire Garton Duke of Connaught, 9 years old—dark chestnut with white star and ankles—a very sure and successful stock horse—one of the substantial kind—disposition perfect, is perfectly sound—government inspected and enrolled. Price will be reasonable. Apply

W. H. NICHOLS, Market Hall, Hamilton, Ont.

DUNHAMS' PERCHERONS

are today as for the past forty-seven years the -B-E-S-T-

Fresh importation. Catalogue FREE. DUNHAMS, Wayne, Du Page County, Ill.

Notice to Importers

C. CHABOUDEZ & SON

205 rue La Fayette, PARIS, FRANCE.

If you want to buy Percheron Horses and Mares, I will save you time and money and all trouble with papers and shipment. Will meet importers at any landing port. I am acquainted with all breeders and farmers. 30 years' experience. Best reference. Correspondence solicited.

2 WELL-BRED CLYDESDALE STALLIONS

Rising three years old, out of imported dam and sire. Apply to:

Manager, Stonecroft Stock Farm, St. Anne de Bellevue, Quebec

MESSRS. HICKMAN & SCRUBY

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Imp. Clydesdale Stallions for Sale

Winsome Prince (imp.) by Baron Winsome (imp.) [9019], a big, thick, brown horse, with highest quality of bone and feet, and Diamond Cup (imp.) by Silver Cup (imp.) [5653], a bay colt of choicest quality and breeding, both imported in 1910 by the owner. For further particulars write

ARTHUR ULLYOT, St. Mary's, Ontario

Questions and Answers. Veterinary.

Azoturia.

Clyde mare stood idle and was well fed for several days. I then hitched her, and after driving a mile she showed distress, body became covered with perspiration, and hind legs became weak, and she swayed. A tense swelling appeared over the loins, and when got to a stable she voided dark-colored urine. I gave her a purgative, applied heat to the loin, and gave 2 drams nux vomica and 2 drams muriate of ammonia twice daily. What was the trouble, and was the treatment correct? N. J. M.

Ans.—This is called "azoturia," a disease that sometimes occurs in horses when worked or driven after a few days of idleness and good food. It never occurs in horses that are regularly worked or exercised. When the patient does not fall down and become unable to rise, the administration of a purgative, and the application of heat or mustard over the loins, and warm clothing, is all that is required, but when they become paralyzed to such an extent that they cannot rise, they require treatment that can be given only by a veterinarian, and even this is often unsuccessful. V.

Chronic Urinary Trouble.

For some years my gelding has passed a thickish, yellow substance, especially after urinating, and the end of his sheath is covered with small sores. There is a very disagreeable odor. The symptoms always become somewhat alleviated when he is on pasture. B. V.

Ans.—This is chronic inflammation of the urethra, and probably also of the bladder, and a cure is doubtful. Treatment is difficult, tedious, and often (in cases of such long standing) unsuccessful. The urethra and bladder should be flushed once daily with a non-irritating antiseptic, as an ounce of boracic acid in a pint of warm water, and introduced by a syringe. The chronic sores on sheath should be dressed once daily for three days with butter of antimony, applied with a feather, and after that, dressed three times daily until healed, with a five-per-cent. solution of carbolic acid. Give him 40 drops carbolic acid in a pint of cold water as a drench, or sprinkled on his food, twice daily. It will be wise to get your veterinarian to explain and illustrate the flushing of the urethra and bladder, and probably you might do it yourself afterwards. V.

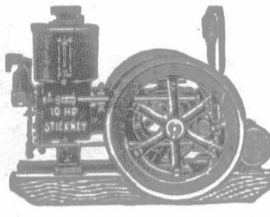
Recurrent Diarrhoea.

1. Yearling's eyes, nose, and ears swelled, and she seemed feverish. I gave her sweet spirits of nitre, turpentine, and aconite, and gave her exercise, and the swellings all disappeared in a day. She did well all winter, but had occasional attacks of semi-diarrhoea. I think she has worms. 2. Pregnant three-year-old mare, whose eleven months will be up in three days, is not doing well. She had distemper, and after recovery she broke out in little boils where the harness rubbed her. Her hair is dry, and she shows no signs of foaling. J. H., Sr.

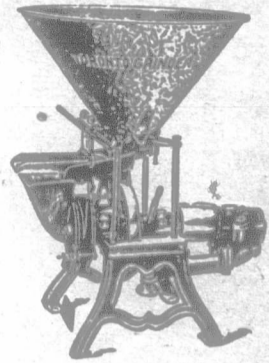
Ans.—1. The swelling mentioned was, no doubt, the result of a cold. The treatment could not be objected to, except for the aconite, which, if of good quality, is a very dangerous drug to give, and should be administered only by those who are conversant with its actions. The digestive trouble is probably due to worms. Mix 1 ounce each of sulphate of copper, sulphate of iron, and tartar emetic, make into 24 powders, and give her a powder every night and morning, and follow the last one with one-half pint of raw linseed oil.

2. The less medicine given to pregnant mares, except for the treatment of acute diseases, the better. Take good care of her, feed on easily-digested food, and exercise regularly until she foals, which will probably be before you see this. The period of gestation varies greatly, from about 10½ months, or even less, to about 13 months. V.

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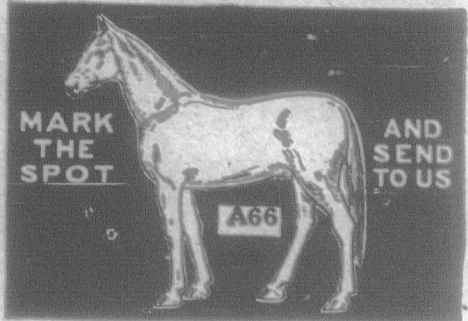
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Questions and Answers. Miscellaneous.

Heaves.

A horse about 14 years old has had heaves for some time. Lately he has contracted a cough, which affects him most after drinking, or after being driven even a short distance. Is there anything we can do to relieve the cough?

SUBSCRIBER.

Ans.—Heaves cannot be cured, but the symptoms can be alleviated by feeding small quantities of bulky food and grain in proportion to work performed. Always water before feeding, and do not allow him to drink too much at a time. Feed only the best quality of feed, and avoid all dusty or musty hay. Dampen all his feed with lime water. Give a ball every morning composed of 2 drams solid extract of belladonna, 1 dram of powdered opium, 1 dram camphor, and 20 grains digitalis, with sufficient oil of tar to make plastic. Roll in tissue paper and administer.

Fencing on Edge of River.

Along both sides of the mill-pond, or dam, the farmers used to build their fences down into the water, but no fence was required along the water's edge, as the water was so deep cattle could not go through. The dam was carried away by the flood this spring, and there is now no pond, and the river is down to its natural channel, and the cattle and other stock can cross over. How does the question appear from a legal point of view?

1. Is a farmer compelled to fence his neighbor's cattle out?
2. Is it sufficient if he fences his own in?
3. Can his neighbor be made to keep his cattle on his own side of the river? Ontario.

Ans.—1. No.
2. Yes.
3. In effect, yes. He can be prosecuted for trespass if he fails to do so.

Veterinary.

Congenitally Weak Eyes.

Colt, now three weeks old, when born its eyes were weak and discharging fluid, and sometimes a little matter. They are no better now. E. A.

Ans.—It is probable that they will gradually become stronger. In the meantime, get a lotion made of 15 grains atropia, dissolved in 2 ounces distilled water, and put a few drops into each eye twice daily, out of a dropper, or with a feather. V.

Cystic Calculi—Periodic Ophthalmia.

1. Bought a team a year ago. One had difficulty in urinating. He passed only a little at a time. He has been this way ever since. He is in good condition.

2. Horse had a scum over his eye. It got better, and then, later on, got worse. I blew burned alum in it, and it got all right, but is bad now again. N. E. J.

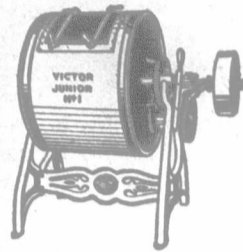
Ans.—1. The symptoms indicate cystic calculi (stones in the bladder). Medicines do no good, and an operation is very difficult, and seldom successful. He may continue as he is, and a calculus may enter the urethra at any time and may pass, but may become lodged and cause a complete stoppage, in which case a veterinarian may be able to locate it and operate. I would advise you to have him carefully examined by a veterinarian, as my diagnosis may not be correct.

2. This is periodic ophthalmia. The attacks cannot be prevented, and a cataract, causing blindness, is likely to be the result sooner or later. Treat each attack. Get a lotion made of 15 grains sulphate of zinc, 20 drops fluid extract of belladonna, and 2 ounces distilled water. Bathe the eye well with hot water three times daily, and after bathing put a few drops of the lotion into the eye. Discontinue the bathing as soon as the acute soreness disappears, but continue with the lotion until the eye becomes clear. V.

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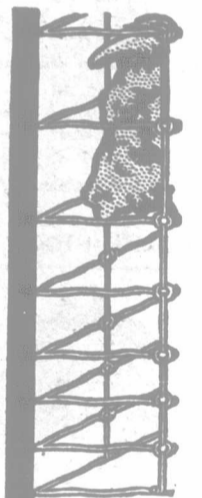
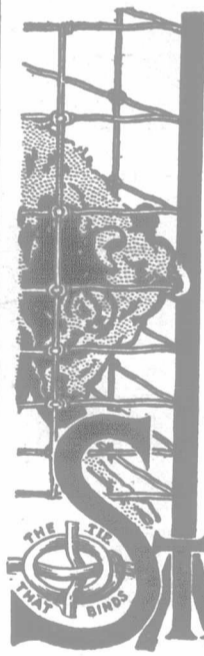
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Fire Protection.

Volunteer firemen have, on innumerable occasions, done yeoman service in protecting life and property endangered by fire in the towns and villages, and even the cities, of the settled part of Canada. In the re-awakening of the public to the danger and loss caused by forest fires, volunteer firemen have again been brought into service. The volunteers in this case are Indians, living in the district between Lake Winnipeg and the Hudson Bay, in the area traversed by the Nelson river, through, or near which, the Hudson Bay railway will run. In the summer of 1911, J. T. Blackford, Chief Fire-ranger of the Northern Manitoba Fire-ranger District, spoke to the Indians of several bands, and induced them to promise to help to prevent fires. In some cases he got them to sign the following pledge: "We Indians appreciate the work the Government is doing to prevent forest fires in our district. We pledge ourselves to do all we can to help. We promise to put out our own camp-fires every time before leaving camp. We accept the badges given by the Government as a pledge." The badges referred to are small maple leaves of metal, which can be pinned on the clothing, and the account given by Mr. Blackford of the way in which the Indians received them is interesting. He writes: "One and all were very much pleased with the badges given them. They pinned them in all sorts of places on their clothing, where each one's fancy thought the most conspicuous place. One man would not take his badge until he had first washed himself and changed his shirt, and then the badge was used as a collar-button or brooch. Hats and shirts were the favorite spots for adornment, but not a few—after carefully polishing them—would fold them in cloth to keep them for some special occasion. A great percentage of them feel that they are thus, after receiving the badge from the Government, constituted minor chiefs and guardians of the forest."

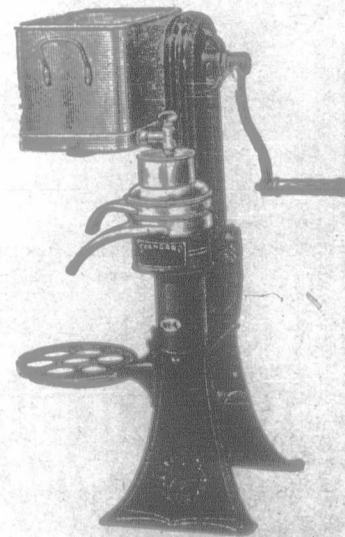
SHEEP FARMING.

John A. Craig, Professor of Animal Husbandry at the University of Wisconsin, and later at the Iowa State College, well known as the author of that great book, "Judging Live Stock," has written another book, entitled, "Sheep Farming in North America." This book, on its merits, should prove just as popular to sheep-breeders and those interested in this class of live stock, as "Judging Live Stock" has done to all those interested directly or indirectly in farm stock. This new 300-page volume, published by the Macmillan Company, of Toronto and New York, contains some fifty-five excellent illustrations, which serve to bring out the points discussed very vividly. Divided into twenty-five chapters, each discussing a particular phase of the sheep-breeding industry, the book covers all branches of the business, but lays particular stress upon the value of sheep in intensive stock farming. "American farmers, as a rule, are not prepared to give sheep the attention they will repay, or that is necessary, if the possibilities of employing them in the utilization of high-priced lands are to be realized." This volume contains many practical ideas that are the outcome of developments of recent years, and are not to be found elsewhere in book form. "The economic advantage of sheep, as compared with cattle, lies in the fact that they produce more liberally in proportion to what they consume. Though smaller in size, they consume more feed in proportion to their weight, and because of this a large proportion of what is eaten goes to increase." Especially valuable chapters are those on breeds, diseases, founding flocks, improving the flock, autumn, winter, spring, and summer management, wool, early lamb raising, fattening, and preparation for show. "Sheep-raising has passed through more serious changes during the last century than any other branch of the live-stock business. It has had its ups and downs, and for some time has not been given the attention which its importance warrants it should receive." This book is very timely, coming out just now when sheep-breeding shows an upward trend. Write to-day for this book, which may be had for \$1.60, postpaid, through this office.

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10 SHORTHORN BULLS 10

If in need of a bull those that we are offering should interest you. They range from 8 to 14 months old, and are nearly all bred direct from imported stock. We also have females of all ages. Bell 'Phone Burlington Junction, G. T. R.
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Shorthorns

Records show that cattle bought from the Salem herd won numerous ribbons the past season. We have others. Several young bulls are priced reasonably.

Elora G. T. R. and C. P. R. J. A. WATT, Salem, Ont.

5 Shorthorn Bulls 5

We have for sale at moderate prices five Scotch Shorthorn bulls, including one of our herd bulls. Also a number of high-class heifers and heifer calves.

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Four of the first-prize Shorthorns at the late Guelph show, including the champion and grand champion fat heifer, were all sired by bulls of my breeding. I have now for sale ten young herd headers of this champion-producing breeding. **HARRY SMITH, HAY P. O. ONT.** Exeter Station. Long-distance Telephone.

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2 Imported 3 years old Clyde fillies 2 mares 4 years old, in foal. 8 ponies broken to ride and drive, safe and quiet for women and children. Bulls consist of 4, from 12 to 15 months old. All this stock is for sale at reasonable prices. Myrtle C. P. R. and G. T. R. 3 1/2 miles East of Toronto.
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Questions and Answers.

Miscellaneous.

Line Fencing.

A owns a wood-lot unoccupied. If the road fence were removed, can B and C, owners of adjoining property, compel A to keep up half of the line fence?

Ontario. A CONSTANT READER.

Ans.—No.

Land for Corn.

Which would be the better ground to plant to get a crop of ensilage corn (Improved Leaming), an old pasture-field broken up last fall, or summer-fallow and buckwheat lands? The soil is mostly black.

H. T.

Ans.—The old pasture, if there are not too many grubs (cutworms and wireworms) in it.

Shed Roof.

I would be pleased if I could get a plan of a self-supporting roof that would be suitable for a closed-in shed at a church. Could such a one be built without beams, shed to be a frame, and 40 feet wide, one-third pitch on roof?

OLD SUBSCRIBER.

Ans.—We have no plans for such a building. If any of our readers have any, they are invited to submit them to "The Farmer's Advocate." A building 40 feet wide would need some kind of roof support.

Cutting Lambs' Tails.

Which is the proper way to cut off lambs' tails? Should they be cut from the upper side or under side? Do you think it injurious to the spine to cut from the upper side? Would the pressure be apt to paralyze their back or legs? We have not seen anything about the best way in "The Farmer's Advocate" for a long time.

W. M.

Ans.—In our issue of April 3rd last, there appeared a somewhat lengthy article, on page 624, explaining the best method of castrating and docking lambs.

Estate Matters.

A makes a will, leaving everything to B. But C takes care of A the last few years of A's life. A leaves money enough to pay for all.

1. Can C claim wages for nursing A?
2. How much a day, or week?
3. How long back?
4. Who has to pay doctor bills and funeral expenses?

M. A. T.

Ontario.

Ans.—1, 2 and 3. Assuming that C is a child of A, she cannot legally claim such wages unless she is in a position to prove an agreement on the part of A to pay same.

4. A's estate, through the Executor of his will.

Hens Die—Grease.

1. About 15 per cent. of my hens get sick and die in the course of a year. Pale combs and wattles, fat—a lot of internal fat—a large growth inside of a soft grayish texture; sometimes a smaller growth, too, like chewing tobacco. Sometimes the large growth is no bigger than two marbles.

2. What is the cause, cure, and scientific name of a condition of the fetlocks, something like "scratches," only the exudation is bad smelling?

H. J.

Ans.—1. The growths may be some kind of tumors, but we cannot be sure about it from the description, as you do not give location of them. Are the hens too fat? Sometimes very fat hens die of apoplexy. Would suggest that you send a bird to the Bacteriological Department of the Ontario Agricultural College for examination.

2. This is called grease heel. Curative treatment consists in purging with 8 drams aloes and 2 drams ginger, prepared by a druggist, and given as a ball. Feed bran mash until purged, and follow up with 1½ ounces of Fowler's Solution of Arsenic twice daily for a week. Local treatment consists in applying warm poultices of linseed meal, with a little powdered charcoal, every six or seven hours for a couple of days and nights, and then applying three times daily a lotion of one ounce each of acetate of lead and sulphate of zinc, and two drams of carbolic acid to a pint of water. Always feed moderately to lightly on grain, and exercise regularly. The condition is due to a predisposition.

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Of choicest imported stock and with imp. sires and dams. I am offering young cows, 3, 4 and 5 years of age; a grand bunch of imp. yearling heifers, and a particularly good pair of young bulls.

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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.

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Phone L.-D. Agincourt. **Duncan Sta. C. N. R.**

PLEASE MENTION THE ADVOCATE.

Questions and Answers.
Miscellaneous.

Buying Cattle.

What price should a drover pay, at a point sixty miles from Toronto, for cattle worth 7c. in Toronto, in order to clear expenses and leave a fair profit? Have the papers a reliable way of finding out prices of the different kinds of live stock? W. D.

Ans.—The question could be more readily answered by someone who has had experience in the shipping business. Find out the freight rates from the railway company, and the average shrinkage from a reliable drover, and then it remains for you to place an estimate on the value of the drover's time and the use of the money in buying the stock. From this, the margin in prices to produce a good profit can easily be figured. The papers have reliable expert market reporters on the spot.

Drainage Connections.

In draining my field, have I the right to connect tile on to neighbor's drain? Also, has neighbor right to charge for said connections? SUBSCRIBER.

Ans.—If the neighbor's system is already installed, and a larger tile would be necessary because of the extra drainage to be dumped into it, you would likely have to pay the full cost of the inconvenience and the extra size of tile. If his system is not already in, the thing to do is to get together and arrange the amount each is to pay, you bearing the extra expense of the tile necessary due to the larger size required to carry your water as well as your neighbor's. These are matters to be adjusted between yourselves. If it is a natural course for your water, you can run it that way, but must bear a just share of expense incurred. If after repeated efforts to come to a satisfactory settlement, you cannot agree, the engineer will have to be called to make an award, but if properly managed this should not be necessary.

Sales of Incumbered Farm.

1. A sells his farm to B. Sale is confirmed by a written agreement, with one hundred dollars paid down by B to A. The agreement provides that the settlement and transfer should be made and completed on the first day of March, 1918. It further provides that B should have possession of the farm last fall, and B took possession as provided for in said agreement, and still holds possession. B, acting in good faith on the said agreement, sold part of the farm to C, and gave C a similar agreement as the one between A and B. Both A and B signed the agreement, but A's wife did not, and now she refuses to sign the deed. What course would you advise B to take to procure the deed?

2. There is a mortgage on the farm, given by A to D. The conditions of the mortgage have not been kept by A, and D is going to foreclose the mortgage. If he does so, what effect will it have upon the agreement between A and B?

3. If B can buy the mortgage, would it be to his interest to do so?

4. Providing the farm was sold under the mortgage, and the price went higher at the sale than the purchase price agreed upon between A and B, who would have the right to the difference, A or B? SUBSCRIBER.

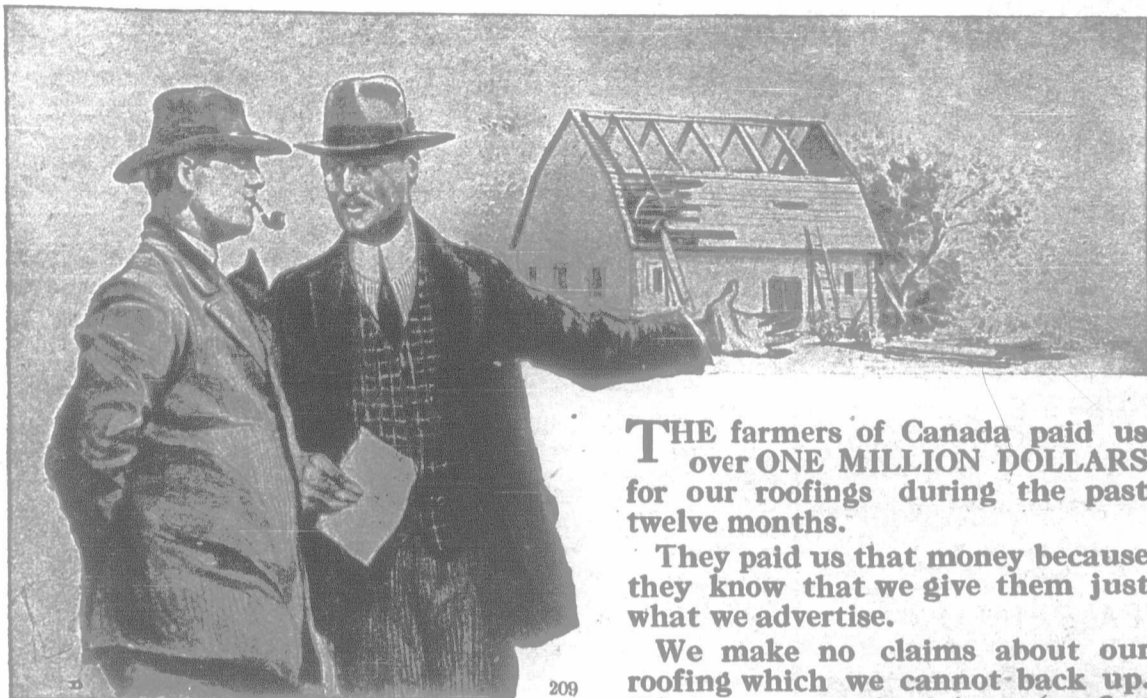
Ontario.
Ans.—1. A's wife cannot be compelled to sign.

2. We assume that D's mortgage is prior to B's agreement with A, and was registered, or, at all events, that B had actual notice of it before the agreement was made. Such being the case, D's rights as mortgagee would prevail over those of B.—B's agreement is subject to both D's mortgage and A's wife's dower interest.

4. Yes, especially if the mortgage contains a bar of dower by A's wife, and was executed by her as well as by A.

5. D would probably pay the surplus proceeds of sale into Court, and the fund would be subject to the rights of all the parties, including A's wife. Such rights would be determined by the Court, and an order made for payment out accordingly.

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Sons of Johanna Concordia Champion, No. 60575, one of the richest bred and best individual bulls of the breed. His granddams, Colantha 4th's Johanna 35.22 lbs. butter in 7 days; fat 4.32 per cent., and Johanna Colantha 2nd 32.90 lbs. butter in 7 days; fat 5.02 per cent. Average butter in 7 days 30.06 lbs.; average fat 4.67 per cent. If you want to increase the butter-fat in your herd, let me sell you one of these bulls. I can spare a few good cows and heifers bred to the "Champion." Write me your wants and I will try and please you. **MAPLE AVENUE STOCK FARM, L. E. CONNELL, Prop., FAYETTE, FULTON CO., OHIO, U.S.A.**

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Holsteins One six year old cow due this month also fine 2 and 3-years heifers, bred; also a few Yorkshire pigs ready to wean. **A. WATSON & SONS, St Thomas, Ontario.** L. D. 'Phone Fingal via St. Thomas.

Woodbine Holsteins Herd headed by King Segis Pontiac Lad, whose sire's dam is the champion cow of the world. Sire's sire is the only bull that has sired five four-year-olds that average 30 lbs. each. Dam's sire is the bull that has sired two 30-lb. three-year-olds. His two great grand sires are the only bulls in the world that have sired two 37-lb. cows. Bulls and bull calves for sale. **A. KENNEDY, AYR, ONT.**

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I am offering some young cows and heifers with A. R. O. records as high as 69.479 lbs. of butter in 30 days at three years old; I also have two yearling bulls with A. R. O. dams. Write or visit the herd for particulars. **C. P. R. Belmont. Will meet the train with short notice. 'Phone connections. H. C. HOLTBY, Belmont, P. O., Ont.**

When writing please mention The Advocate

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4 bulls, 12 mos. old, from officially backed ancestors, running from 18 1/2 lbs. at 3 yrs. to 22 1-3 lbs. as matured cows, and on sire's side from 24 6-10 to 29 lbs. of butter in 7 days. Write, 'phone, or come to **F. E. Pettit, Burgessville, Ont.**

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5 BULL CALVES fit for service, out of big milking strains, at low figure for quick sale. **THOS. B. CARLAW & SON, WARKWORTH, ONT. Campbellford Sta.**

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for sale. Count of Lakeview (9076) calved March 28, 1910. Bred by Lakeview Stock Farm, Ercote, Ont. A splendid stock-getter. Over 80 per cent of his get are males. Must sell him as I have a number of sitters from him of breeding age. He is quiet and sire. Also two young bulls now ready for service, bred by Count of Lakeview whose dams are granddaughters of Johanna Rhue 4th Lad. Straight and nicely marked. Will sell a few cows due to freshen this month. Bell 'Phone, Fenwick Sta. **V. ROBBINS RIVER BEND, ONT.**

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Offers young bulls ready for service, one from Calamity Houwtje, winner of 1st prize in cow class at Guelph, 1912; also a half-brother to Pontiac Jessie, sweepstakes heifer under 36 months; also a few females. Prices reasonable.

Write for particulars, or come and make your choice. **MARTIN McDOWELL Westwood Sta., G. T. R. Oxford Centre, Ont.**

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The Maples HOLSTEIN Herd

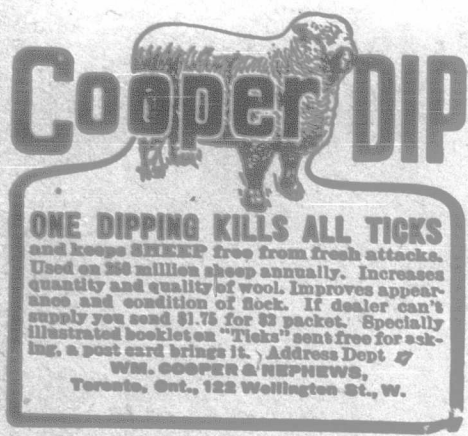
Headed by Prince Aggie Mechthilde. For sale a present: Choice bull calves, from Record of Merit dams with records up to 20 lbs. butter in 7 days; All sired by our own herd bull. Prices reasonable.

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Special offering: Bulls from 1 to 15 months old. The growthy kind that will give good service. One from a son of Evergreen March, and all from Record of Merit dams. Write for particulars. **G. W. CLEMONS, St. George, Ont. Bell telephone.**



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"That so? I've got it awfully bad. I've been afflicted now about two years. The doctor calls it neuritis insomnia paralytica."

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Questions and Answers.

Miscellaneous.

Bumble Foot.

A few years ago we had a turkey that took swelled feet, and ever since our hens have taken it. What could I do to get rid of it?
E. A.

Ans.—This is likely bumble foot, a non-contagious disease, caused very often by the birds jumping from high roosts. If taken early, wash with strong vinegar, and apply tincture of cocaine. If the abscess is well developed or long standing, open by making two cuts in the shape of an X. Wash out all pus with warm water containing carbolic acid, and apply nitrate of silver, 10 grains to one ounce of distilled water.

Miscellaneous Queries.

1. What is the cause of geese laying soft-shell eggs? I have fed two young geese all winter on wheat, barley, and buckwheat, mixed, all that they could eat, and all the eggs that they have laid are soft shelled. Can I do anything to prevent this?

2. What is the best thing to feed young ducks when first hatched?

3. What is the cause of lambs coming wrong. I have lost two lambs and one ewe. One lamb came with its head turned on its side. This ewe died. Another came with its front leg turned back.

4. The pipes in my cistern are so rusted that I cannot get them apart. What can I put on them so I can unscrew them?
J. R.

Ans.—1. This is likely due to an over-fat condition, or lack of lime in food. Let the geese have a free run, with access to the ground and grit, and they will likely be all right. Also cut the feed down if necessary.

2. Nothing is better than shorts dampened.

3. Malpresentations cannot be accounted for. They frequently occur under most favorable conditions.

4. Try coal oil.

Trees Injured—Cedars—Horse Queries

1. Last spring I planted a dozen apple trees, which grew well. One of those soft days in January the cattle got out of the yard and ate the trees off below any of the limbs. Would like to know if those will grow? If so, what treatment would they need?

2. I intend planting a cedar hedge around a lawn this spring, and would like to get information in regard to how far apart and what time of spring to plant trees.

3. I have a blood colt rising two years old. This last while a puff about the size of an egg rises on the front on the inside of the right hind leg, at the hock. The puff is soft, and practically goes away sometimes. She shows no signs of lameness.

4. Horse got kicked on the hip. Would you kindly prescribe a wash for same?
T. C.

Ans.—1. This depends upon the amount of injury done, and upon the vitality of the tree. The trees, if hardy, will likely throw out new shoots this spring. Of course, if the injury is too severe, they will likely die. If they are badly peeled on the trunks, these areas should be wrapped up to keep the sun and air from drying them out.

2. The last of May or early in June, is a good time to plant. The distance apart depends upon the size of the trees, to some extent, and to the method of pruning the hedge. Small trees are, usually, the best growers—say, trees from one to two feet high. Set these so close together that their branches touch. Have seen very fine hedges where the trees were several feet apart, but they required more training.

3. Try one of the proprietary remedies advertised in this paper. If this fails, get a blister of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces vaseline. Clip the hair off the parts; tie so he cannot bite them, and rub well with the blister daily for two days. On the third day, wash off and apply sweet oil. Let loose in box-stall now, and oil every day until the scale comes off.

4. Take 1 part carbolic acid and 25 parts sweet oil, and dress with this three times daily until healed.

Three Points

WEATHER protection is an all-important essential to a satisfactory roof, whether it be made of wood, slate or steel.

The ideal roof is one in which there is no weak point in its entire construction.

This is possible only when Steel Shingles are employed.

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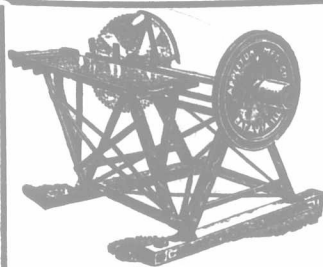
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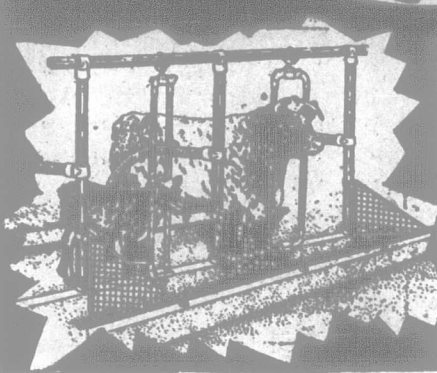
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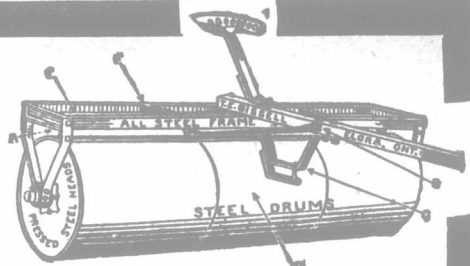
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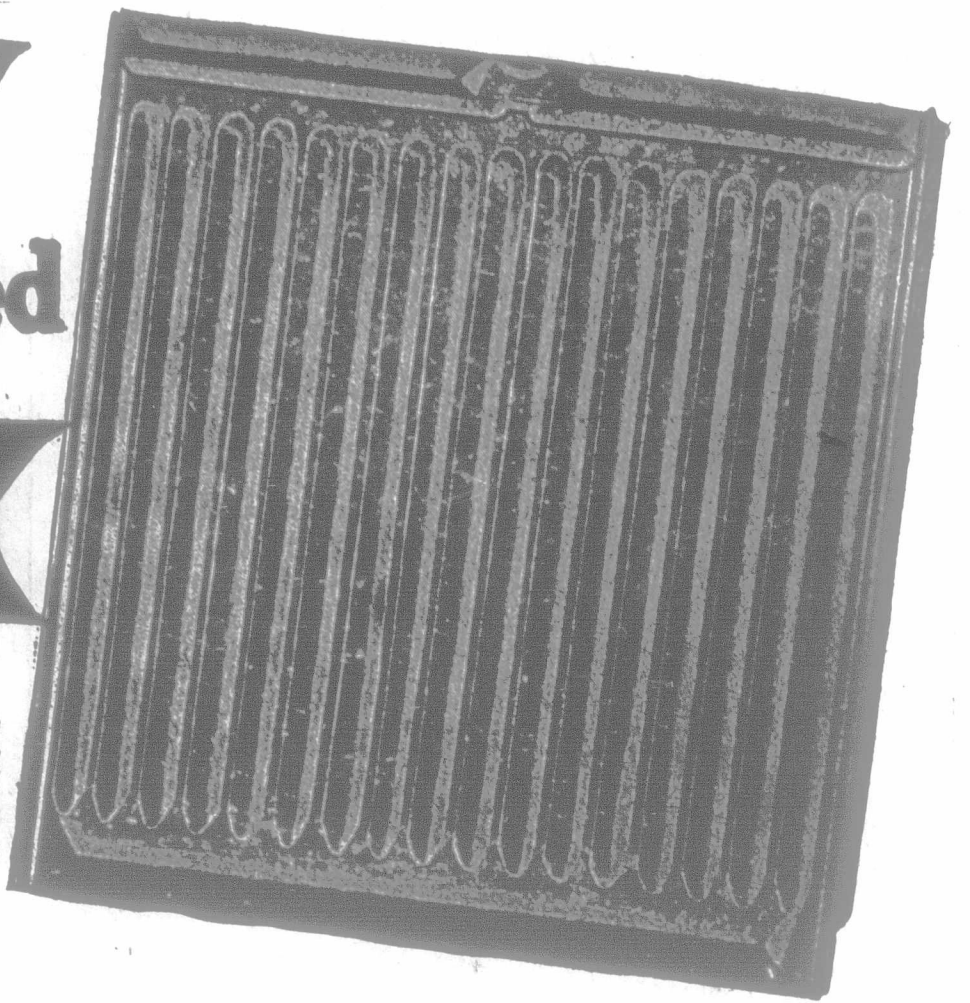
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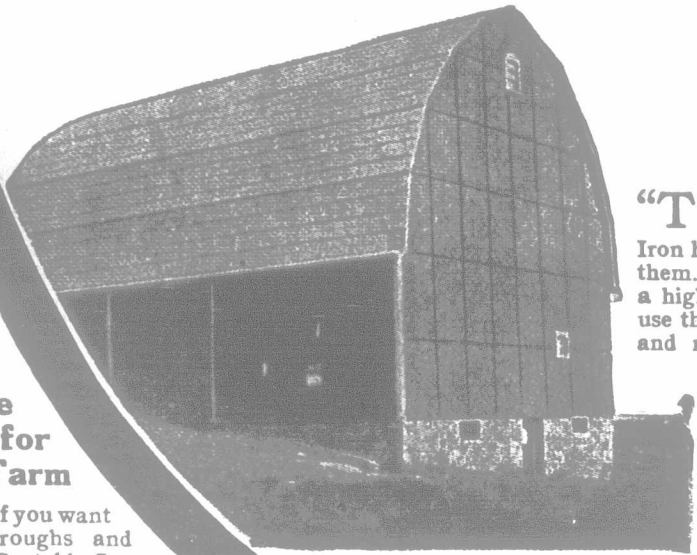
"I want to save you this money. You not only save money on

your barn roof, but you make your roof fire-proof, perfect, clean and avoid repairs or leakage or paint cost for the future. Get my new big 'George' Shingle."

"I want you to go still further in saving money and getting a better barn. Instead of wood siding, put my 'Perfect Galvanized Corrugated Iron' on your barn walls. Because it is in big sheets, labor time and cost is saved to more than pay the difference between good lumber for siding and my iron, as siding."

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the walls. Write for a copy. Make a fire-proof barn at low cost my way, with my products."

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