

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE AND SUCCEED
FOUNDED 1880

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

PUBLISHED AT LONDON, ONTARIO. APRIL 20, 1905. WINNIPEG, MANITOBA. No. 656

Money Makers



These are our NEW

Combination Moulds

Rapidly producing Concrete Drain Tile and Well Curbing, with telescopic or plain joints. Sizes, from 4 to 36 inches in diameter. Every municipality needs such tile. Send for particulars and prices.

Sawyer & Massey Co.,
ROAD MACHINE DEPT.,
HAMILTON, CANADA.

Windsor Salt

is the Salt for Butter-Makers. It dissolves evenly, works in quickly, and gives a delicious, appetizing flavor.

Windsor Salt is the purest, most economical Salt. And every one who uses it says so.

Ask your Dealer about it.

A good investment that pays dividends all through life is a course of training in any of the Departments of the

NORTHERN Business College

Owen Sound, Ont. Four complete courses of study. Best equipped Business College premises in Canada. The only Business College owning its own College building. A large staff of competent and painstaking teachers. Our graduates are most successful. Just ask them. Full particulars sent to any address free. C. A. FLEMING, Principal.

Paterson's Wire Edged Ready Roofing

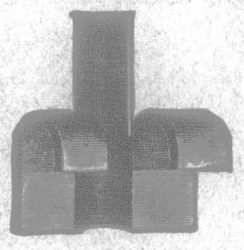


Don't cost as much as shingles. Made in Canada for 20 years. Fireproof and sanitary. Easy to put on. Hard to wear out.

Isn't that the kind of Roofing Material you're looking for? For sale by hardware merchants everywhere. Samples, testimonials and other information from :

The Paterson Mfg. Company,
TORONTO. Limited, MONTREAL.

The Tie that Binds



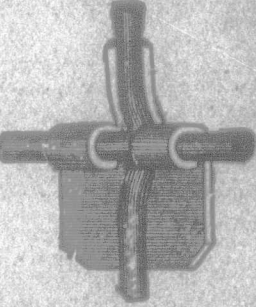
Anchor Clamp before using.

ANCHOR Wire Fences

owe their strength to the famous Anchor clamp. It securely fastens the cross wires and uprights, thus consolidating the strength of the fence. It can be constructed by any intelligent person. Write for information.

Agents wanted.
Esplen, Frame & Co.,
Stratford, Ont.

It Never Slips



Anchor Clamp after closing.

HIRST'S PAIN EXTERMINATOR

THE GREATEST PAIN LINIMENT KNOWN

Melotte CREAM SEPARATORS

With their spiral skimming device and frictionless, self-balancing bowl,



ARE SIMPLEST AND BEST. Write now for booklet.

R. A. LISTER & Co., Ltd.
MONTREAL.

Louden's Food & Litter Carriers.



Our Double-beaded Steel Track can be curved and switched in any direction. Hundreds of them in use, and all giving satisfaction. Manufactured by Louden Machinery Co., Guelph, Ont., manufacturers of Hay Carriers, Barn-door Hangers; in fact, everything for a barn or stable. Write for catalogue and prices.

Farmers' Boys

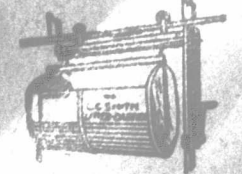
should have a thorough knowledge of the law of Notes, Drafts and Checks, and should also be familiar with Contract Law. The

FIRST CITY BUSINESS & SHORTHAND COLLEGE, LONDON, ONT.

Y. M. C. A. makes a specialty of preparing young people to do business according to business principles. Catalogue B for a postal.

J. W. Westervelt, Principal.

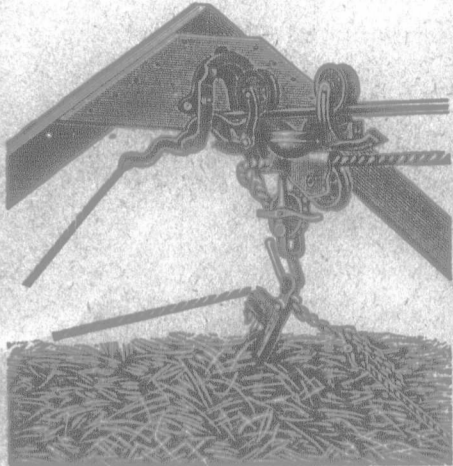
THE L. O. SMITH FEED & LITTER CARRIERS.



Patented June 16th, 1895. Can be adapted to any barn or farm building. Write us for particulars.

LYMAN C. SMITH,
OHAWA, ONT.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.



THE OSHAWA ROD TRACK CARRIER FOR 1905

Manufactured by
THE OSHAWA HAY CARRIER WORKS,
OSHAWA, CANADA.

Agents wanted in unrepresented localities.

GRAND TRUNK RAILWAY SYSTEM

Special One-Way Excursions

FROM LONDON TO

Billings, Mont.....	\$34.25
Colorado Springs, Denver, Col.	38.75
Helena, Butte, Mont.; Ogden, Salt Lake City, Utah.....	39.25
Nelson, Rossland, B. C.; Spo- kane, Wash.....	39.75
Portland, Ore; Seattle, Wash; Vancouver, Victoria, B. C.	42.25
San Francisco, Cal.....	42.25

Proportionately low rates to other points.
Tickets on sale from March 1st to May 15, '05
For tickets, and full information call on
Agents Grand Trunk Railway System.

FARM LABORERS

Farmers desiring help for the coming season should apply at once to the **Government Free Farm Labor Bureau.** Write for application form to

Thos. Southworth
Director of Colonization, Toronto.

**Trees! Trees!
Trees!**

We have a full line of Fruit and Ornamental Trees for spring, 1905, at lowest possible prices.

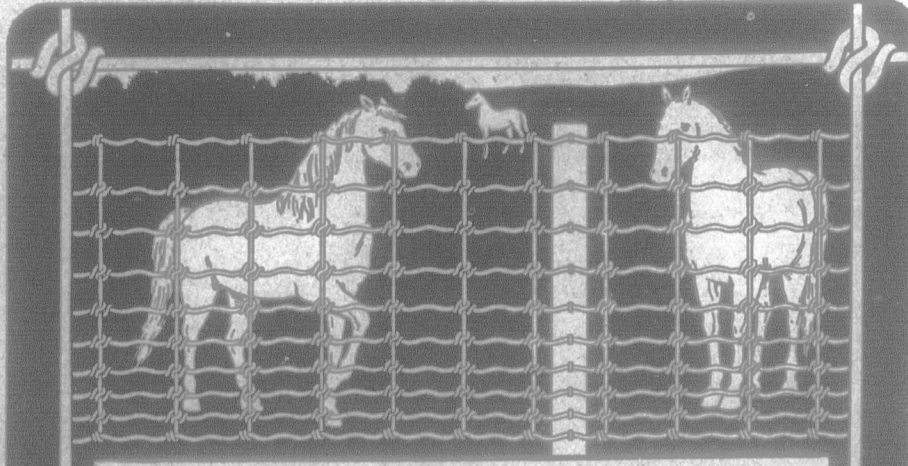
Headquarters for packing dealers' orders.

Farmers wishing to buy first-class stock absolutely first hand and without paying commission to agents, should write to us at once for a catalogue and price list.

Don't wait until the last minute, as you will be disappointed. Place order early and secure the varieties you want.

Correspondence solicited.

WINONA NURSERY CO.
WINONA, ONT.



IDEAL WOVEN WIRE FENCE

Gives Absolute Satisfaction.

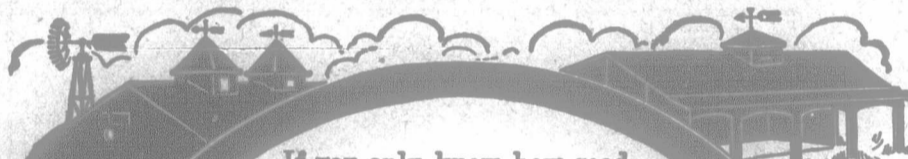
The practical man knows what makes a good reliable fence. The IDEAL is made of the best No. 9 steel wire throughout, with the famous Ideal lock that can't slip. No animal can go over or under it. We believe it is by long odds the best fence ever built.

We want to tell you all about it, how it is built, and other things you ought to know about the fence you ought to buy.

This fence once built on your farm will end fence troubles for you. It will last a lifetime. It is made on a good common-sense basis by men who know what the farmer needs.

If you want to know why all the leading railroads use the IDEAL fence, write for our catalogue.

THE McSREGOR-BANWELL FENCE CO., LTD., Walkerville, Ont.



If you only knew how good, now durable, how satisfactory

Paroid Roofing

really is; if you only knew how easily it can be put on and how long it lasts; if you only knew what a good all-round roof it is, you would save money by using it for every building on the place. Weather proof, wear proof, contains no tar, slate color, any one can lay it. Let us prove to you what the genuine Paroid Roofing will do.

Send for Free Sample

and book on "Building Economy." It will save you money. Don't take a cheap imitation. Get the genuine—the roof that lasts.

F. W. Bird & Son, Makers,

(Originators of the complete roofing kit—fixtures in every roll.)

Hamilton, Ontario, Canada.

Established in U. S. 1817.



**Selected Farm Lands for Sale
In Manitoba**

ALL SUITABLE FOR MIXED FARMING. UNIMPROVED

No. 1.	320 acres, near Swan River, C. N. R.	Price.....	\$3,200
No. 2.	240 acres, near Poplar Point, C. P. R.	Price.....	1,700
No. 3.	160 acres, near Oakville, C. N. R.	Price.....	2,400
No. 4.	240 acres, near Willow Range, O. N. R.	Price.....	3,000
No. 5.	240 acres " " " "	Price.....	3,000
No. 6.	160 acres, " " " "	Price.....	2,500
No. 7.	320 acres, near Portage la Prairie. This farm has house, stable, and other buildings, with over 100 acres cultivated.	Price.....	5,000
No. 8.	160 acres, near Patrick station, C. P. R., Pheasant Hill Branch, Sask.		

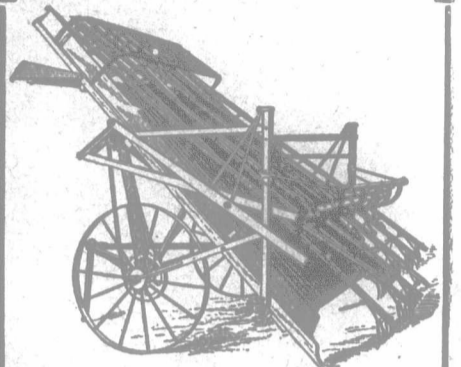
These farms will be sold on reasonable terms. For further particulars, address

THE G. B. HOUSSER LUMBER CO., LTD.
PORTAGE LA PRAIRIE, MAN.

HAY LOADER TALK No. 4

BY THE DAIN MAN.

Did you ever load hay on a windy day? You know how the hay blows. You can scarcely use a return carrier loader in the wind at all. The hay has so far to drop, the wind blows it off the side of the rack, and back over the Loader. This is a fault, isn't it?



The DAIN LOADER overcomes this trouble. We have an adjustable drop gate at the top of our machine.

We let the hay out of the machine about three feet from the upper end.

The wind has no chance to get at it.

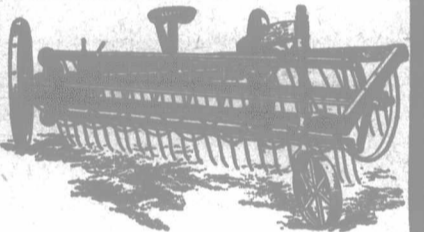
This gate is adjusted instantaneously. Is raised as the load comes up, and when your load is completed the machine is closed to the top.

Helps in starting a load, too.

Remember all these good features when you think about purchasing:

- 1st.—Our Loader rakes clean.
- 2nd.—Is 8 ft. wide.
- 3rd.—Has a hinged tongue.
- 4th.—Has an adjustable gate for windy weather.
- 5th.—Pushes the hay forward onto your load all the time. No drawing down the hay.
- 6th.—No ropes or slats to break and get out of order.

There are lots of others.



A Dain Side-Delivery Rake and a Dain Hay Loader make haying a mighty easy job.

No backaches.

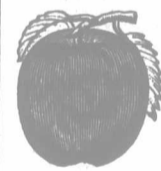
Better hay for less money.

Our supply of circulars is still hanging out. Send for one if you are interested. FREE.

Dain Manufacturing Co.,
PRESTON, ONT.

Apple Trees That are Apple Trees.

Write for Special Prices from 100 up.



Fruit and Ornamental Trees, Shrubs, Roses, Vines, Berry Plants; Seed Potatoes, Eureka and others.

None Better. 25 years direct dealing with satisfactory results. No agents. Send at once for Central Nurseries' best Catalogue; it's Free. There is splendid value in it for you when ordering early. Try us to-day.

A. G. HULL & SON, St. Catharines, Ont.

Every Farmer Should Have a

2,000-lb.

KING EDWARD SCALE

Manufactured by



Get our special prices this month

C. Wilson & Son, Ltd., Toronto, Canada.

BRIGHT YOUNG MEN WANTED

To qualify for positions as telegraphers on Canadian railways at from \$40 to \$60 per month. Our new telegraph book, giving Morse alphabet and full particulars, mailed free.

DOMINION SCHOOL OF TELEGRAPHY

9 Adelaide Street East, Toronto. The only perfectly-equipped Telegraph School in Canada, in which a really competent staff of teachers is employed.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Page Metal Gates—Good—Cheap

Page Gates have the best quality of steel frames, and are put together in a superior way. The filling is galvanized steel wire, and this filling is so fine in mesh that chickens or smallest pigs cannot get through. They have double steel braces, each having a strength of 3,500 lbs. Hinges and latch are of the best known design.

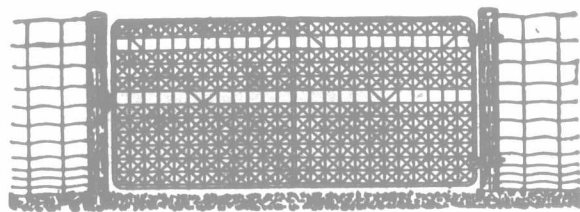
These are some of the reasons why Page Gates are the best.

We are now supplying these gates at only a little more than you would pay for hinges and latch at a store to make your own gate. THINK OF IT:—A complete Walk Gate all metal, everlasting, ornamental, perfect, for \$2.00 (see price list), or a large Farm Gate for \$5.25. At these prices you should show good business sense by using our gates everywhere on the farm that gates are needed. To prove what we say, look at the following prices for delivery at any station east of Port Arthur, at which we or our local dealer can supply you.

PRICE LIST OF SINGLE GATES

HEIGHT Being actual height of gate	Width of Gate, including Hinges and Latch, being exact distance Posts should be set apart													
	3 ft.	3½ ft.	4 ft.	4½ ft.	5 ft.	6 ft.	7 ft.	8 ft.	10 ft.	11 ft.	12 ft.	13 ft.	14 ft.	
36 inches.....	\$1 75	\$2 00	\$2 25	\$2 50	\$2 75	....	....	....	....	....	....	....	....	....
42 inches.....	2 00	2 25	*2 50	*2 75	3 00	....	....	....	\$5 00	....	....	....	....	....
48 inches.....	2 25	2 50	2 75	3 00	3 25	\$3 75	\$4 00	\$1 50	5 25	\$5 50	\$6 00	\$6 25	\$6 50	6 75
57 inches.....	2 50	2 75	3 00	3 25	3 50	4 00	4 50	4 75	5 50	6 00	6 25	6 50	6 75	7 00

The * indicates that we manufacture but do not keep in stock. Prices of odd sizes made as ordered at 75 cents above a proportionate price. Price of double gate same as that of two singles. Scroll tops 20c. per running foot extra.



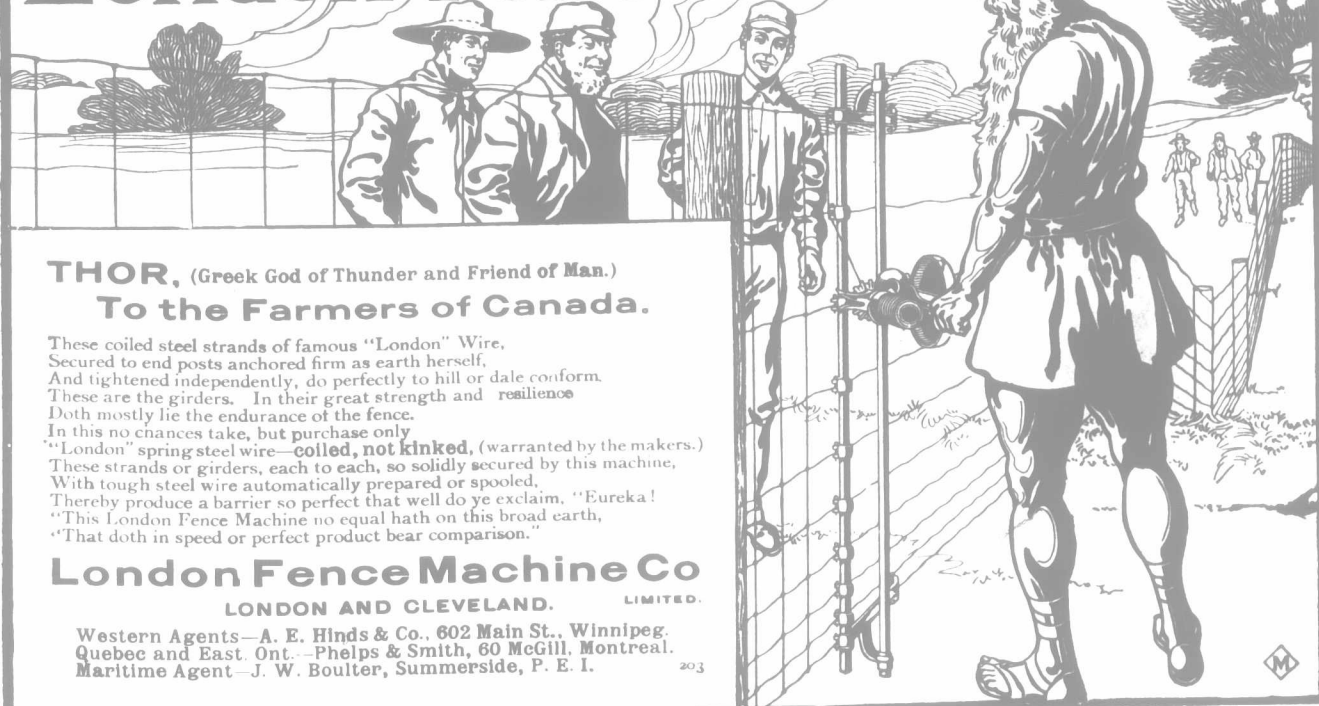
NOTE.—All Page Gates and Fences are now painted WHITE. We have adopted this as a distinguishing mark for our goods. Remember, get WHITE Fence and Gates, and you will have PAGE Fences and Gates—the best.

THE PAGE WIRE FENCE CO. LIMITED
WALKERVILLE, ONT.

BRANCHES: MONTREAL TORONTO ST. JOHN WINNIPEG

"Page Fences Wear Best."

London Fence



THOR, (Greek God of Thunder and Friend of Man.)
To the Farmers of Canada.

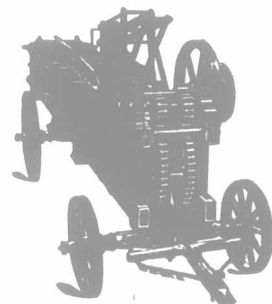
These coiled steel strands of famous "London" Wire. Secured to end posts anchored firm as earth herself. And tightened independently, do perfectly to hill or dale conform. These are the girders. In their great strength and resilience doth mostly lie the endurance of the fence. In this no chances take, but purchase only "London" spring steel wire—coiled, not kinked, (warranted by the makers.) These strands or girders, each to each, so solidly secured by this machine, with tough steel wire automatically prepared or spooled. Thereby produce a barrier so perfect that well do ye exclaim, "Eureka!" This London Fence Machine no equal hath on this broad earth, "That doth in speed or perfect product bear comparison."

London Fence Machine Co. LIMITED.
LONDON AND CLEVELAND.

Western Agents—A. E. Hinds & Co., 602 Main St., Winnipeg. Quebec and East Ont.—Phelps & Smith, 60 McGill, Montreal. Maritime Agent—J. W. Boulter, Summerside, P. E. I.

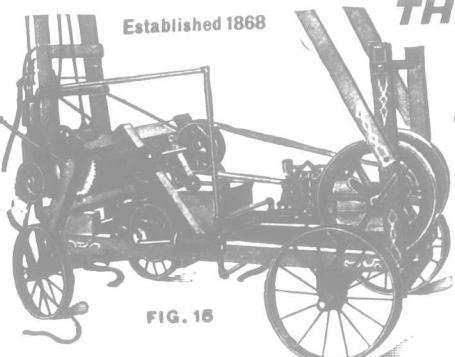
Write for our new book, "Practical Economy in Wire Fence Construction." Free to farmers. Reliable agents wanted in every section to sell London Machines, Wire and Fence Supplies. Write quick.

Columbia Hay Press Co., Kingsville



Our customers are unanimous in praises for the Columbia Press. They say it will do all we claim for it and even more. It has a record of 60 tons in 16 hours. We will guarantee it to do at least 4 tons per hour. Write for full description, with testimonials of reliable persons.

Stock Farm for Sale—Burnbrae Stock Farm, containing 149 acres, basement barn, dairy, hen ice and engine houses, two dwellings, up to date in all respects, together with all thoroughbred stock, implements, etc. Holstein and Jersey stock for sale. Write for particulars. Apply J. W. ROBERTSON, Vankleek Hill, Ont.



THE AMERICAN WELL WORKS,

Aurora, Illinois, U. S. A.
Chicago, Ill. Dallas, Tex.

MANUFACTURE FULL LINE
Jetting, Rotary, Coring, Rock Drilling and Prospecting Machinery.

Any Diameter or Depth. Strong and Speedy.

CATALOG MAILED ON REQUEST.

TO SECURE THE BEST RESULTS Place an Ad. in the Farmer's Advocate

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

TRADE TOPICS.

AMERICAN WELL WORKS, AURORA, ILL.—Our readers all have interest in pure water, and the mineral resources of mother earth. In most parts of the country, pure water is yet difficult to find. The health of the entire country would be much promoted, if all could use the sparkling water from beneath the solid rock, 100 to 500 feet below the surface. Only recently the country is learning the mineral possibilities that are discovered by the use of prospecting machinery. Many farmers now sell more product in oils and mineral from beneath the surface, than the yield of their surface fields. Any of our readers interested in prospecting for water or minerals should consult the American Well Works, whose advertisement appears from time to time in our columns. They are convenient for access at Aurora, Ill., or their branch offices, Chicago, Ill., and Dallas, Texas.

"MADE IN CANADA."—A few years ago, when the International Harvester Company of Canada, Ltd., was incorporated, it was apparently just another manufacturing industry that had been organized to supply the Canadian farmer with reapers, binders and other agricultural implements. That it would prove to be truly international was not suspected. Attention is now being directed to the large and larger-growing plant at Hamilton by reports showing what is being done. Instead of the Canadian farmer buying his farm machinery imported from the States as formerly, his harvesters are now made in Canada. The labor is Canadian; the iron is from Canadian mines, dug from the ground by Canadian workmen; the lumber is from Canadian forests, felled by Canadian lumbermen. This would be a great deal if it were all, but there is more. The policy of this great company is now shown to be to make the Hamilton factory the manufacturing center for harvesting machinery, not only for Canada and Canadians, but for England and all her colonies, Russia and other European nations. The Hamilton works already employ hundreds of hands at good wages, as is shown by the monthly pay-roll, which aggregates hundreds of thousands of dollars annually. In short, the International Harvester Machine Co. of Canada, Ltd., promises to raise Canada to the position where it is recognized as a large manufacturing and exporting country. It is to be no longer merely an importer and buyer of the products of the manufacturers of other nations.

A GREAT CANADIAN INDUSTRY.—Canada has well earned her other name—"The Bread-basket of the World"—but she is also showing her ability to do more than simply to raise feed-stuffs for hungry mouths. She is able to supply other wants, not only of her own people, but of other peoples as well.

A notable instance of this is found in the great manufacturing plant of the International Harvester Company, of Canada, Limited, at Hamilton, Ontario, where harvesting machines and seeding and tillage implements are manufactured in large quantities, both for the Canadian trade and for export. Already are these machines of Canadian manufacture finding their way to Russia, South America, and every nook and corner of the British Empire, giving a new outlet for the products of Canadian enterprise and industry.

Although as yet the company's plant is comparatively in its infancy, it has already assumed immense proportions, and has become a decided factor in industrial Canada's affairs. Hundreds of men are employed, and the pay-roll distributes hundreds of thousands of dollars annually among Canadian people, to say nothing of the immense sums paid for iron, steel, lumber, coal and other raw materials.

As Canadian agriculture develops, and as the export trade grows, it is not too much to expect that this will become one of the chief industries of the Dominion, and that agricultural implements will be counted one of the staple products of Canada, as surely as pelts and furs were a century ago.

Elsewhere in this issue is a statement of this company, concerning its "Made in Canada" machines, which we commend to our readers' attention.

Simmers' Seed Catalogue FOR 1905

is now ready. The largest and handsomest Canadian catalogue, describes hundreds of new and standard varieties of Farm, Vegetable and Flower Seeds, etc.

This beautiful 1905 guide is

Now Ready

and gives full directions for successful gardening. It tells all about Simmers' reliable Seeds, Plants and Bulbs.

Why they are preferred and planted by experienced field, vegetable and flower growers.

Just the garden book you will be glad to receive and study.

All our customers will receive a copy without making application.

Sent to any one interested in farming, gardening, etc., **FREE.**

J. A. SIMMERS,

143, 145, 147, 149, 151 King St., East
TORONTO, ONT.

CANADA'S PREMIER SEED HOUSE

QUEENSTON CEMENT

Sold direct from the manufacturer to the consumer.

Don't be misled by statements of agents handling cement paying large commissions. Go yourself and see Queenston walls and floors built in your own locality. Our barrel contains as many cubic inches as any other cement, and as cement is gauged by measure, not by weight, your cement will go as far. Write us for all information. Freight rates and estimates cheerfully given. 70c. per barrel, strictly cash, f.o.b. cars Queenston. Go in with your neighbor and get benefit of carload rates. o

ISAAC USHER, Queenston, Ont.

WRITE FOR
CIRCULAR FOR RAW FURS
To **McMILLAN FUR & WOOL CO.**
MINNEAPOLIS, MINN.
DEPT. 30

ONE FOR THE MONEY

DeLAVAL CREAM SEPARATORS

Your Money's Worth

Grand Prize, St. Louis, Buffalo, Paris

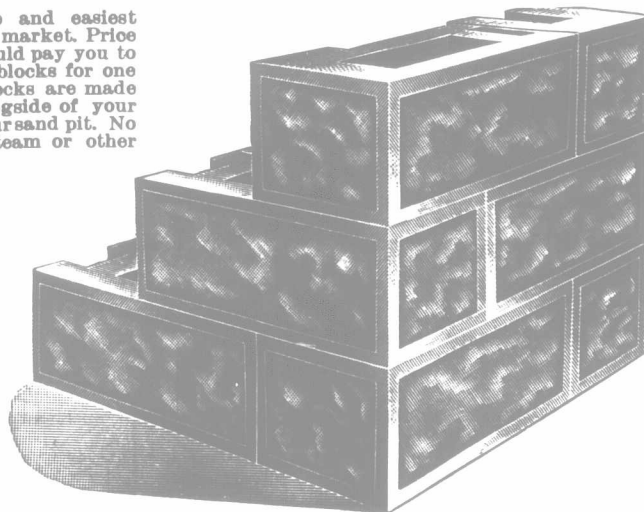
THE DeLAVAL SEPARATOR CO.
77 York Street
WINNIPEG TORONTO MONTREAL

Dunn's Hollow Concrete Block Machine

Most compact, portable and easiest operated machine in the market. Price so reasonable that it would pay you to buy one if only to make blocks for one fair-sized building. Blocks are made out in the open air, alongside of your building, or down by your sand pit. No firing or baking; no steam or other power required. Skilled labor not necessary. Full directions furnished with machine.

MAKES BLOCKS for houses, bank barns and buildings of every description. Cheaper than brick or stone and much handsomer. Warmer in winter; cooler in summer; and indestructible.

Write for particulars to Dept. O. om



The JAS. STEWART MFG. CO., Ltd., Woodstock, Ont.

THE WILKINSON PLOUGH CO., Limited, - Toronto, Canada.
Manufacturers of

THE GREAT WESTERN ENDLESS APRON MANURE SPREADER

YOU WANT IT BECAUSE OF

The ENDLESS APRON—Always ready to load and no cranking back necessary. The WHEELS TRACKING—Ensuring light draft and greater strength. The NON-BUNCHABLE RAKE and large cylinder, certain even distribution. The SPREADING CAPACITY can be adjusted from two to thirty loads per acre, and a dozen other reasons, which our catalogue will tell you. Write for our catalogue (free) and do it NOW.

Joseph Rodgers & Sons Limited,
SHEFFIELD, ENGLAND.

Please see that this EXACT MARK is on each blade. om

James Hutton & Co., Montreal, SOLE AGENTS IN CANADA.

CANCER

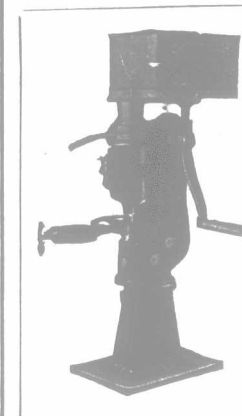
R. D. Evans, discoverer of the famous Cancer Cure, requests any one suffering with cancer to write him. Two days' treatment will cure any cancer, external or internal. No charge until cured.
R. D. EVANS, Brandon, Man. o

CORN THAT WILL GROW

Canadian-grown Seed. White Cap Yellow Dent, testing 92 to 100; Learning, testing 88 to 94; North Dakota, testing 90 to 94; Eight-Row Yellow Flint, testing 94 to germinate. Write for price list.

DUKE & BRUNER, - Ruthven

Farmers and Dairy men



It would be well to see the **OXFORD Cream Separator** before buying. Do not be persuaded into buying an old-style Separator, but get the Low-Down OXFORD, which is new and up-to-date. Write for catalogue.

Durham Mfg. Co.

Agents for Eastern Ontario:
Mr. G. A. Young, 74 Maple Street, Ottawa, Ont.

Agents for Quebec:
Messrs. E. Kenney & Co., 143 McGill St., Montreal, Que.

DO YOU KNOW

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

NOW IF YOU HAVE A PIECE OF LAND THAT WONT GROW ANYTHING BUT WEEDS, TALK WITH US ABOUT IT AND LET US SUGGEST THE RIGHT FERTILIZER.

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

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

Go Slow!

Do not think of buying a machine for drilling for water, oil or any other purpose without first investigating our great

"CLIPPER"

and "Advance" Machines.

They are by far the greatest Drills ever produced.

LOOMIS MACHINE CO., TIFFIN, OHIO.

THE EXCELSIOR LIFE INSURANCE COMPANY.
HEAD OFFICE: TORONTO.

Insurance in force \$7,646,798 35
Total Assets for Policyholders' security \$1,253,216 05

Best Company to insure in. Best Company for agents to represent. Agents wanted.

E. MARSHALL, Secy. DAVID FASKEN, President

CURES SCIATICA and RHEUMATISM WESTERN RHEUMATIC POWDER AND BLOOD PURIFIER.

New vegetable remedy, giving wonderful results. Send for one box, two weeks' treatment, and know that it will benefit you. We guarantee it. \$1 a box, or six for \$5, prepaid to any place in Canada. Sold only direct to patients. Send to us.

RHEUMATIC REMEDY CO., Peterboro, Ont.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

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The

Farmer's Advocate

and Home Magazine.

"PERSEVERE AND SUCCEED"

ESTABLISHED 1866.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

Vol. XL.

LONDON, ONT., AND WINNIPEG, MAN., APRIL 20, 1905.

No. 656

EDITORIAL.

Revive Interest in Arbor Day.

Arbor Day, the first Friday in May, a red-letter day on the school child's calendar, is approaching, and many a pupil is doubtless counting the days until the half-holiday. Unfortunately, the keeping of Arbor Day is, in many cases, a mere perfunctory observance. Inertia of trustees, indifference of parents, and resulting lack of enthusiasm in teachers is naturally reflected in the attitude of the children, who meet with but half-hearted response the teacher's appeal for effort that previous experience has proven unproductive of permanent results. An annual cleaning up of play-grounds which become littered again, planting of some flower beds on which little bloom ever appears, and setting out an occasional tree whose existence is perpetually jeopardized by boys and other natural enemies, or the piling of some fuel into the woodshed, is about the usual round of the day. Little permanent improvement is attempted for lack of facilities.

A general awakening is necessary to an appreciation of the need of Arbor Day, especially on the part of ratepayers, without whose co-operation little can, and less is likely to be accomplished. The importance of having uplifting influences surrounding our children during the formative period of character growth, should require no demonstration, and yet such is the public indifference on this vital question, that almost any other claim is considered first. Lately an instance was recounted to us of a couple of fine old shade trees, the only ones in the play-ground, being cut down, without so much as a word to pupils or teacher, because a neighbor had complained that they injured his apple trees, although shade trees of his own on the other side of the orchard were left standing. The resentment of the pupils at this inconsiderate act of vandalism, we submit, was justifiable. Think of it, the influence of those trees upon the characters of several generations of children coolly sacrificed for a few barrels of apples!

In cities the value of æsthetic school surroundings and of school gardening by the pupils is being realized, caretakers and gardeners are employed, and nature-study specialists engaged on the teaching staff. In the rural districts such things are not so easy, although the Education Department in the Province of Ontario has sought to encourage school gardens by providing in its regulations for an initial grant, not exceeding \$100, to any rural school board which provides a school garden, comprising at least an acre of land besides the regular school-ground area, with the necessary equipment and accommodation, and promising a subsequent annual grant of \$10, provided the appropriation made by the legislature will warrant such payment. Several such gardens have been established in Carleton Co., Ont., and have received the grant of \$100 the first, and \$10 each subsequent year. In Nova Scotia, we understand, there are upwards of seventy rural school gardens, and in Prince Edward Island some work has been carried on under the supervision of the Macdonald nature-study instructor. But for many rural sections we fear that consolidation after the Macdonald system will be necessary before gardening can be suc-

cessfully prosecuted. Culture of fruits and vegetables would certainly be most desirable in a country school, but summer vacation, ravages of poultry and depredations of stock, would be likely to interfere with plans in this direction.

What can and should be done, though, in every case, is to level the school-yard, filling up unsightly swamps, and thus giving the children a chance to do something to ornament their play-ground. This work, though, would probably better be left until autumn, so as to permit seeding to grass without delay. Early May, however, is a good time for tree planting. Some assistance should be afforded in choosing and transplanting. Help the boys to get trees large enough to make a little showing and give promise of reasonably early benefit. It is asking rather too much to expect the pupils to plant merely for the good of the next generation. Having planted the trees, encourage the children to care for them, keeping the ground cultivated or mulched. Too often they are stuck in a hole in the sod, and nature left to do the rest.

Perhaps, also, there are stumps, rocks, or scrubby trees in the yard, which a team of horses is needed to remove. In such cases let the trustees hire a man, or arrange for some ratepayer to take his team for a few hours and assist in the clearing up. Or, perhaps, some of the older boys could be trusted with a steady team. Country boys like to handle horses, and work with twice the will where horse power is being used. Let them feel you are anxious to see them improve the school-grounds, and they will do their part, while with such a starter there will be no lack of co-operation by the girls.

Besides trees, every play-ground should have a good carpet of grass. If there are any bare spots they should be seeded in early spring, or even yet in May, with a good seeding of grass and white clover, say in the proportion of one pound Kentucky blue grass, one pound Canadian blue grass and one pound clover, the seed, if sown late, to be raked into a pulverized seed-bed. While ordinarily children are prone to trample up an inviting piece of mud, it is by no means impossible to enlist their interest sufficiently, particularly if they feel a proprietary interest in the cause, to permit the seeds to make a start, and clothe the bare spots with grass, instead of weeds. A school-ground should and may be a miniature park, attractive at all seasons.

The school is the nursery of the nation. The example set, the ideals presented will influence the careers of the future citizens, and it is just as important that we train them to live well and make attractive homes, as to teach them English and arithmetic. We spend money to give children pleasures and provide them with good clothes and comfortable homes. Why not a little to adorn the school which is their home a large part of their youthful days?

We quite sympathize with the farmer whose planting and seeding is pressing, and who is tempted to keep his boys at home to work every spare moment, but would like to ask each farmer individually what can represent a better investment than a moderate amount of expense and time, especially the children's time, spent in school-ground improvement? Do not, then, keep the boys at home on May 5th, but rather talk up this matter to trustees, teachers and pupils. If every reader of the "Farmer's Advocate" would try to set on foot in his section a movement for whole-hearted Arbor Day observance, what a transformation would be effected in the school-grounds of this country, and, ultimately, also in the homes!

Shall we Grow More Roots?

The question has been asked through our columns by several enquirers recently. What crop can we grow as a substitute for roots? The reasons for this enquiry are that roots require a good deal of labor in their cultivation and handling, and help is scarce and dear. There has been, we regret to notice, a growing tendency in the last few years, in many districts, to reduce the area of root culture, and in some sections to drop it out of the programme of farm operations. This is especially noticeable in those sections and on the part of those farmers who have adopted the growing and storing of ensilage corn. Silage is undoubtedly the best available substitute for roots, if the latter must be abandoned, as it furnishes an abundant supply of succulent food for stock in the winter months; but we are convinced it is a grave mistake to depend upon corn to the exclusion of roots in the feeding of young animals, and we are by no means persuaded that corn will take the place of turnips and mangels in the fattening of beef cattle or in the production of milk in the case of dairy cows, while for the healthy growth of sheep and hogs there is no question but that roots are eminently preferable to silage. There is good ground for the belief that the signal success of British breeders of pure-bred stock, in attaining and holding the pre-eminent place freely accorded them as leaders in the improvement of the various classes of live stock, is very largely due to the free use of roots in the feeding ration, and if Canada holds the second place in the production of high-class stock, as we believe she does, it is in no small degree due to the same system of feeding.

Where corn is cheaply and plentifully grown, and is convenient for feeding purposes, the tendency is to feed it exclusively or nearly so, with the inevitable result that an excess of fat is produced, lowering the value of the meat product, impairing the procreative powers, and leading to uncertainty of reproduction, and in many cases to sterility or barrenness. The highest type of animals and the best quality of meat is produced where roots form a considerable proportion of the feeding ration, and Canadian breeders will certainly lose ground in the race for supremacy in live-stock production if, for any reason, they abandon the cultivation of the juicy, succulent turnip and mangel, which have contributed so largely to the fame of the motherland and our own in this respect.

Turnips and straw constitute the principal, and in many cases the entire winter fare of the beef breeds of cattle in Scotland. Turnips are the mainstay of sheep-raising in England, and the feeding of sheep on the land is the most profitable system of maintaining its fertility. With good management, the root crop is not unduly expensive to raise, while the yield may figure out at a thousand bushels per acre under judicious cultivation, which, at the low valuation of five cents a bushel, makes about as profitable a return for the labor and use of the land as any other crop, besides leaving the soil in ideal condition for the succeeding crop.

The preparation for, and sowing of the seed for roots, comes in after the spring grain seeding; the singling and cultivation may generally be done before harvest or in the morning hours when the dew prevents working at haymaking; the storing of the crop comes at a time when other work is not pressing, and, with a cellar full of such feed the farmer feels safe in case any of the fodder crops have proved deficient, and doubly so when all have yielded plentifully. The

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prejudice against turnips as a feed for milking cows, on the ground of their tainting the milk, has little foundation if they are fed after milking and in moderation, and the same objection may be urged against silage, as it is in some instances. Mangels, however, are free from this objection, are easily grown, yield abundantly, and keep fresh until grass grows. Ensilage from well-matured corn is excellent and cheap feed, and we commend its cultivation, but for the best results in feeding, we cannot afford to neglect root-growing, though, with the silo, we may well do with fewer roots than where silage is not provided.

Export Tax on the Farmer's Raw Material.

According to the Statistical Yearbook of Canada, the value of ashes exported from the Dominion in 1903 amounted to \$117,326. As most of these are used by American farmers, who pay transportation and middlemen's charges, and consider they are still getting good value for the money, it requires no expert to calculate that their potential value to the Canadian farmer must be at least double this estimate. Meanwhile, our lands are being gradually depleted of available potash that must be sooner or later replaced at three times the price for which we are now selling it in the form of ashes. How long shall we thus continue to enrich our neighbors with our own resources? Fertility is a raw material just as is timber or minerals—a raw material which, although extensive, is by no means inexhaustible, and which it therefore behooves us to conserve. It is universally agreed that of all forms of fiscal protection, export tax on raw material is by far the best. Why not place such a duty on ashes, so that if we cannot wholly stop the export of them, we may at least realize a revenue, instead of magnanimously permitting the American farmer to enjoy the benefit of cheap potash at our expense?

A similar argument applies to the by-prod-

ucts of the packing-house, for instance, bones, of which, according to the above-quoted authority, we exported in the same year (1903), 49,211 cwt., appraised by the customs at \$32,228, which figures, if they mean anything, indicate that a lot of phosphorus has been sold at a price away below its agricultural value.

Again, the agitation for an export duty on wheat could be quite justifiably met by a demand for similar customs toll on by-products of the mill. It will be no difficult task to persuade the stockmen and dairymen of Canada that the 351,641 cwt. of bran that left our ports would have been better fed at home than sold to competing stock-feeders in the United States and Great Britain. For years the Canadian manufacturer has been clamoring for cheap raw material and conservation by fiscal legislation of the supplies we have. Is it not time the farmer had a schedule framed in his favor, and what better move is there than an export tax on fertility and feeding stuffs?

An English lord, in conversation with his head gardener one day, said: "George, the time will come soon when a man will be able to carry round the manure for an acre of land in one of his waistcoat pockets."

To which the gardener replied: "I believe it sir, but he will be able to carry all the crop in the other pocket."

HORSES.

Care and Feed of the Mare at Foaling.

We have been asked for information on the feed and care of a mare for two weeks before and two weeks after foaling. The subject is both timely and important, as upon this period depends in a very large measure the development and value of the future horse. The younger an animal, whether it be a colt, calf, pig or lamb, the greater the effect of favorable or adverse conditions upon ultimate development.

The food and care of the mare during foal development is likewise important. A great many colts are born handicapped by ill nutrition, and such colts are permanently stunted. Good feed after birth cannot make up for pre-natal starvation, nor for setbacks at birth. Good after care may alleviate, but can never overcome this handicap. From the above it is sufficiently clear why the mare should be well nourished and cared for from the time of conception till she is through suckling her foal. This does not mean that she should do no work; on the contrary regular exercise and moderate work will improve her health, harden her muscles, and increase the chance of getting a hardy, strong-muscled colt. With precautions, then, to prevent slipping, severe strain or injury in backing, the mare may be advantageously worked up to within a day or two of foaling. Some horsemen work her until signs of immediate parturition, but the plan is not to be commended.

The feed during the last two weeks will depend, of course, upon the exercise. Good hay, consisting of part clover, should be supplied. Clover is rich in protein, which is needed to nourish the foetus. It is also laxative and conducive to the mare's health. The grain feed should consist of oats and bran, with an occasional evening feed of boiled oats or barley. As foaling approaches substitute more and more bran for oats, till the former constitutes about one half the grain feed. Give the dam a daily bran mash, and pure, moderately cool water, in small but frequent libations.

Anticipate parturition with a warm, roomy box stall—light, and free from drafts. See that there is no manger in which the foal could be dropped during a standing delivery, and use plenty of clean dry bedding. It is a good plan to sprinkle a little lime on the floor before bedding down the stall.

The attention required by the mare prior to and during delivery has been so thoroughly covered in these columns by "Whip" that anything further here would be superfluous, but we cannot refrain from adding a plea to spare the mare for a few days after the colt's birth. Foaling is necessarily accompanied by a more or less severe constitutional disturbance, and time should be allowed for the system to resume its normal tone before subjecting it to the double tax of work and milk secretion. When the dam is put to work, shut the colt up in a box stall, and allow it to suck at as short intervals as possible, taking care always that it is not allowed with the dam while the latter is heated. The mare must be fed with particularly good judgment. Commencing with a bran mash, she should be gradually raised to her full feed, the quantity of oats being increased as she is called upon to work. When grass comes, a bite of something green will

stimulate milk flow, improve her condition, and keep her blood cool. The more natural, congenial and wholesome the conditions, the greater the chance of getting a strong colt, and the less likelihood of requiring interference or administration of medicines.

Constipation in Foals.

Constipation, or retention of the meconium in foals, is probably responsible for more fatalities than any other abnormal condition. During foetal life there is an accumulation of faecal matter in the intestines. This is dark, almost black in color, of a gummy, sticky nature, and exists in lumps, and is called meconium. Under normal conditions its expulsion commences soon after birth, and continues at intervals, and is all expelled in twenty-four hours or less, when the excrement becomes yellow. The passage of yellow excrement indicates that the meconium has all been expelled, and the faeces now passing are the excreta from nourishment taken after birth. While retention of the meconium may occur under any and all sanitary conditions, it is more frequently observed in early foals, whose dams have been fed on dry fodder and had little exercise during the winter. The foals of mares that have had regular exercise or light work, and been fed liberally on soft, laxative, easily-digested food, do not so frequently suffer, but the condition is liable to occur even under these circumstances, and is not by any means unknown in late foals, whose dams have been on grass for a greater or less length of time before parturition. Again, the condition is very liable to occur in the foals of dams from whom milk has been escaping for some time before parturition. The first milk or fluid that escapes from the mamma of a female after or shortly preceding parturition is of a different character, both as to appearance and constituents, from real milk. It is of a clear, viscid color, and resembles oil. It contains a greater percentage of fat than milk, and hence has a slightly laxative action. Its function is to nourish the young animal, and at the same time exert a slightly laxative action upon the bowels. It is called "colostrum," and if from any cause the young animal is deprived of it, there is greater danger of retention of the meconium than under other conditions. At the same time, it must not be understood that it is necessary, or even desirable, to substitute purgatives when the colostrum is absent. The administration of purgatives in such cases, unless in very small doses, usually complicates matters and renders incurable, a condition that in all probability could have been successfully if properly treated. The meconium, as stated, exists in lumps of a tough, gummy nature, about the consistence of putty. In the majority of cases where it is not spontaneously passed, these lumps, with which the rectum is full, are so large that the little animal has not sufficient muscular power to force them through the anus. In such cases it is obvious that purgatives will have little effect, as they act upon and render fluid the contents of the anterior intestines, increase the backward action (called peristaltic action) of the same, but have little or no action upon the contents of the rectum. We can readily see how this, by increasing the action of the anterior intestines, without removing the obstruction to the escape of faeces which exists in the rectum, will increase distress and lessen the hopes of successful treatment. Hence we should be very careful about dosing the foal with purgatives or laxatives, but depend largely upon mechanical treatment. The symptoms of necessary interference are plain. The foal will arch his back, elevate his tail, and make ineffectual attempts to defecate. At first the distress is not great, but as time goes on these ineffectual attempts will become more frequent and longer continued; he becomes restless, rolls on his back, takes little nourishment, becomes tucked upon in the flank, grinds his teeth, becomes weaker and weaker, suffers intense abdominal pain, looks around to his sides, and eventually expires.

TREATMENT.—As stated, purgatives should seldom be given. When the first symptoms are shown, the attendant should oil his forefinger, get an assistant to hold the foal, introduce the finger carefully into the rectum and remove all the lumps he can reach. In the meantime the foal will press, and as the meconium is removed by the finger, a fresh supply is forced into the rectum, and it is not unusual to be able to remove a pint or more at one operation. An injection of a liberal supply of soapy warm water, or warm water and raw linseed oil in equal quantities should then be given, and in the course of 2 or 3 hours the operation should be repeated, and every few hours, until the faeces become yellow. When the meconium continues to reach the rectum and can be removed with the finger, it is not wise to give any medicine whatever by the mouth, but when this is not the case, it is well to give an ounce or two of castor oil or raw linseed oil, the former preferred, but in no case should drastic purgatives—as aloes—be given, except in very small doses, as diarrhoea is very easily excited, and very quickly weakens the foal. I consider it good practice to remove the meconium in this

way from all foals. The operation, if carefully performed, so as to not irritate or scarify the parts (the nail of the finger used should be cut close), does not injure the foal in the least, and in all cases saves more or less exertion, and, while in many cases it is not needed, it is better to be on the safe side, and anticipate trouble, rather than wait for its symptoms. The lives of many foals would be saved if this little precaution were taken. Foals should be carefully watched in this respect until the faeces passed are of a yellowish color, after which there is little danger of constipation if the mare be properly fed.

"WHIP."

Look to the Bit.

"If owners would only lay out a little money in the purchase of bits," says the English Live-stock Journal, there would be fewer bad mouths and more comfort amongst their horses. As it is, most people appear to be weeded to one pattern of bit, and if so, are extremely disinclined to adopt any other. The result is that the manners and mouths of their horses are permanently injured, and accidents occur which might otherwise have been avoided. If horse owners, breakers, and stud grooms would only remember that there is a vast difference in mouths, and many a horse is driven half mad by an unnecessarily severe bit, a good deal of money could be saved and many an equine reputation would be spared. It by no means follows that a horse which pulls will lose the habit if he is driven in a severe bit—very often it is just the reverse; and therefore the study of their horses' mouths should be the care of every owner."

The Origin of the Thoroughbred.

The scientists who delve and dig with a view to tracing the ancestry of man and subservient species, have recently announced that, as a result of their investigations, the conclusion has been arrived at that the Thoroughbred and Arab have not a common origin with the British and Continental horses. Recently a letter appeared in the Times, dated at the British Museum, written by a Mr. R. Lydekker, asking that the skulls of pedigreed horses be sent to the museum. He says that it was "recently discovered that a horse skull from India, in the museum, showed a slight depression in front of the eyes, evidently representing the pit for the face gland (like that of a deer), which existed in the extinct three-toed hipparion or primitive horse," and a similar depression has been noticed in the skulls of the racers Stockwell and Ben d'Or, and an Arab horse, and Mr. Lydekker and Professor Lankester had, on the day the letter was written, ascertained that it exists in the skulls of Eclipse, Orlando, and Hermit, and knew that it existed in a less rudimentary condition in the fossil true horses of India.

They had, however, failed to find it in the skulls of any of the ordinary English or Continental horses, and it appears to be lacking in horses' skulls from the drift and turbarry of Europe.

Briefly stated, this face-gland rudiment exists in the skulls of all Thoroughbred and Arab horses that have come under our notice, and it is absent in those of European horses. The presumption accordingly is that the Arab and the Thoroughbred (as has been suggested on other grounds) have an origin quite apart from the horses of Western Europe, presumably from an Eastern form related to the fossil horses of India.

To convert this assumption into a certainty requires a much larger series of pedigree-horse skulls than the museum now possesses.

STOCK.

The Dressed Beef Trade.

Sir,—I noticed in last week's "Farmer's Advocate" an article on the "chilled meat" trade, which I think timely. In the first place, as long as we have the dairy interests we are sure to have a lot of second-class stockers to put in for feeding every winter, as it is almost impossible to get a bunch of feeders that one would like. If you go to a farmer who has, say, six steers, four good ones and two slabby ones, you have to take the bunch to get the good ones, or else pay more than the good ones are really worth. Now, if we had a "chilled-meat" trade, those second-class steers could be slaughtered and sent to England frozen. In this way some of our large companies could build up a profitable trade, and help solve the space problem, as it costs as much to send a second-class bullock to England as it does to send a prime one. This is no doubt one great reason why the Americans are beating us in the English market. They send nothing but prime cattle there alive, and kill all the light weights at home, in that way keeping up the reputation of their beef. It would also help the cattle interest in Western Canada, by cutting the freight bill in two—no small consideration.

A good dressed-meat trade should help the cattle trade all around, as we would not then have those periodical jams of butchers' stock at the different points.

Lambton Co., Ont.

Sheep as Scavengers.

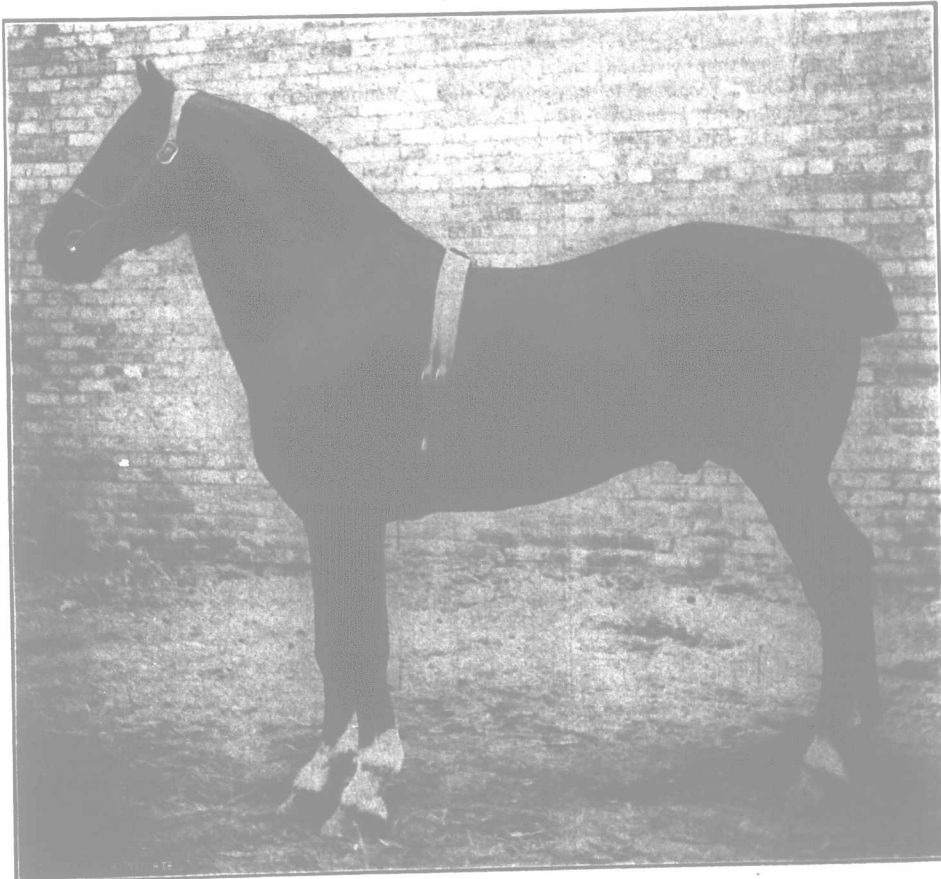
It has been rightly said that the sheep, on most farms are not making as rapid progress towards ideal type and purity of blood as could be desired. One reason for this state of affairs seems to us to be the fact that sheep are very commonly kept on the farm to act as weed eradicators and brush trimmers. We hear a deal said, too, about sheep having "golden hoofs," meaning that they tend to enrich land by spreading their droppings everywhere. It is a good thing, of course, that sheep will trim brush and eat weeds, as do goats, and also commendable that they fertilize land as no other animal does, but it is all wrong that farmers should look upon sheep as they do goats, and consequently give them as little attention. The true purpose of sheep-keeping should be to produce fine mutton and some wool, or fine wool and some mutton. Incidentally, it will be true that the sheep will fertilize the land and tend to keep down weeds, but these results of sheep-keeping should be considered merely incidental to the main object of their maintenance. There was a time many years since when flocks of sheep were rented out to farmers on shares, and at that time the flesh was little liked and in small demand, so that the renter merely allowed the sheep to fend for themselves, and paid little or no attention to proper feeding and management. Times have changed, however, and to-day there is little profit in keeping sheep to act as scavengers and fertilizing agents upon the farm. We want to see sheep made as important as the other animals upon the place; given their fair share of good food; sheltered as

this view of the subject prevails we can look for real improvement in our farm flocks, but not till then. The brush-trimming and manure-spreading sheep is no better than a goat, and less valuable, in that scrub wool is less valuable than mohair. Everything possible should be done by sheepmen to educate the average farmer to the appreciation of sheep as mutton producers and wool bearers, and to desecrate the old-fashioned and detrimental idea that the chief value of sheep generally is that they can clean up a brush- and weed-infested farm, and fertilize it by spreading manure as they graze about the place. There is a proper place for both goats and sheep, but they should be separated while alive.—[Live-stock Report.]

The British Breeds of Sheep.

Commencing with the issue of November 3rd, 1904, the "Farmer's Advocate" has weekly presented to its readers a portaiture and descriptive article on one of twenty-four distinct British breeds of sheep. It may seem inexplicable to Canadians generally, who know of less than half that number of breeds of the ovine race, why so many varieties are maintained in so small a country as that of the British Isles. The explanation, doubtless, lies partly in the conservatism of the people, and largely in the more marked variation in the climatic conditions and character of the soil within the limits of more circumscribed areas. It is rare in England to find two counties adjoining, the soil of which is nearly similar in composition, and in some counties rare to find two parishes of similar soil, while in many cases

adjoining farms and fields are made up of soil of entirely different character. Observation and experience on the part of farmers and breeders in different localities, has led to the production of distinct types, found suitable to the environment, and when these types have become fixed, local pride and ambition has contributed to their maintenance, to the exclusion of a trial of other varieties which might have proven more profitable. This extreme conservatism has grown less in later years, with the result that some of the principal, more modern and improved breeds have spread over wider territory than formerly in the home country, and have found a very much wider field in the colonies and foreign lands. Sheep



Gay Rosador, Imp., (7089).

Hackney Stallion, owned by the West Elgin Hackney Breeders' Association St. Thomas, Ont. (See Gossip.)

they ought to be in inclement weather, and deemed to be factors in the achievement of agricultural success everywhere. When this conception of sheep husbandry prevails we shall see more attention paid to the using of pure-bred, pedigreed rams of individual excellence of form and quality, and at the same time farmers will commence to weed out the poor specimens from their flocks, and so improve the general quality of the lot. As it is, every sheep is kept for breeding purposes, and the standard of excellence is necessarily low, for when it comes time to market a bunch of sheep the scrubs and the tatterdemalions in the flock set the price. The good ones are apt to be lost sight of, and the buyer does not do the sorting for the seller. The sorting should be done upon the farm, but the best time to do it is in the fall when the ewes are being set apart for breeding to a selected ram. Every poor ewe that is bred, tends to lower the standard of future excellence, and the quality of the flock is naturally kept below par by such practice. Where sheep have been long kept for brush-trimming and weed-killing, they are apt to be kept right along for such purposes, for they never wholly succeed in eradicating brush, and weed seeds are spread as well as manure in their wanderings. It would be far better policy to clean up the farm by energetic labor and to eradicate the brush with the grub hoe and brush scythe than to employ sheep for the purpose, and when this has been done sheep can be profitably kept upon every farm for the production of mutton and wool, and without taking their other value into consideration. When

play a much more important part in farming operations in England than here. There, not only the professional breeder, but the general farmer, depends very largely upon sheep for the double purpose of growing mutton and wool and of manuring the land, the flock being enclosed by hurdles on green crops, sown for the purpose of being eaten off, the hurdles being moved further into the field as each section is cleared, while the droppings of the sheep, evenly distributed, enrich the land. This system may not be considered practicable in this country, though we see no good reason, except the labor problem, why it might not be successfully adopted. One thing certain is, that the climate of Canada is much better adapted to the healthy growth of sheep. They prefer a comparatively dry climate, while that of England is generally the opposite, and there they are subject to many more diseases than here, and require much closer attention. Sheep have been sadly neglected in Canada in the last fifteen years, partly owing to the rapid extension of the dairy industry, and partly due to the low prices prevailing for wool and mutton. Both of these commodities have greatly advanced in price in the last two years, and sheep-raising should now be found a profitable branch of farming. No class of farm stock requires so little attention or makes better returns for the labor and expense attending their rearing, and we hope to see many new flocks established in the country before the close of the present year, and existing flocks improved and strengthened by the infusion of new blood.

There is plenty of available material in the flocks of our home breeders for founding new flocks, if farmers make their selections early in the season, before they are picked up by the U. S. speculators who will be here in strong force this summer, owing to the good prices being realized in that country for lambs and wool, and which will be followed by a proportionate advance on this side of the line. A small flock of sheep may be very profitably kept on nearly every farm in this country, without seriously interfering with any other branch of farming, and the proceeds of our farms might thus be augmented by millions of dollars in a very few years.

Prof. Grisdale and His Critics.

To the Editor "Farmer's Advocate":

Sir,—In your edition of the 2nd February, 1905, page 152, I am reported as having said: "From one year to two and a half years is the ideal age for feeding for beef. The relative cost of a pound of gain is as follows:

From birth to six months	\$0 02 per lb.
Six months to one year	05 "
One year to two years	08 "
Two years to three years	17 "

There is something in the young animal that enables it to make better use of its food than when it gets older.

With one slight error, or, probably, I had better say modification, of my utterance, or at least intended to be uttered, remarks, the report is correct.

The line, "Two years to three years, 17c. per lb.," to correctly report what I said should have read, "And so on through the third year, till at the end of that period it is costing about 17c. per lb."

The article appearing in your edition of February 2nd, 1905, was not, as you are aware, either written or edited by me, so, Sir, I may not be held responsible for any slight variation from the text of what I really said, or, at least, supposed I said, and intended to say.

Now, Sir, permit me a few words as to the experiments on which these statements were based, for, judging by various letters that have found space in your columns since the first appearance of the above oft-quoted quotation therein, your readers are not willing to accept my statement unquestioned.

In the spring of 1900, some dozen or so bull calves, grade Shorthorns, were purchased, castrated, and the horns roots killed. They were then fed for beef production. They were divided from the beginning into two lots, as nearly equal as possible as to size and quality. Both lots were fed as good a ration as could be devised (whole milk excluded) until about six or seven months old, when one lot was gradually shortened up on the meal part of the ration, until at seven or eight months old no meal was being fed. The other lot continued to receive a fairly liberal mixed meal ration (save whole on good grass for two months in summer) until ready for the block, at 22 months old.

The lot weaned off meal at eight months were fed on roots, ensilage, straw and clover hay in winter, and were on fair grass in summer, till 30 months old, when they were brought in and fed as any other 2½-year-old steers intended for beef the next spring would be fed.

This experiment, with slight variations, has been repeated annually since 1900, so that there are usually 25 or 30 steers of these lots on hand at any given time, and there have been between 60 and 70 different steers in all under this experiment.

A record as accurate as possible is kept of food of all descriptions fed the different lots, and upon these records, with feeds valued as below, were based the statements made as to the cost of production of beef at different ages:

Roots and ensilage	\$2 00 per ton.
Clover hay	7 00 per ton.
Straw	4 00 per ton.
Skim milk	15 per 100 lbs.
Meal and grain of all kinds	20 00 per ton.
Pasture	2 00 per month.

Various kinds of grain were fed—bran, shorts, corn, oats, barley, peas, gluten meal, oil meal and flax-seed meal—some of which cost more than 1c. per pound, but others cost considerably less, so that on the average cost for several years being made up, it was found to be as nearly as possible 1c. a pound.

As to weights, the steers have, in the case of the short-fed lots, run from an average 700 to an average of 825 per steer per lot at one year old, and from 1,200 to 1,300 at 22 months or two years old. Odd steers have weighed 1,400 at 22 or 23 months, but then others have run only about 1,100 at the same age.

The long-fed steers usually average about 600 at one year old, about 1,000 at two years old, and about 1,500 at three years old.

Steers fed as above described for two years, and making such gains, cost about 2c. per pound for gains made in the first six months, from 4c. to 5c. per pound the next six months, and from 7c. to 8c. per pound the second year. They cost in all about \$50 per head to feed for the two years, or till ready for the block, and have usually sold for from \$65 to \$80 each, an average of about \$70 I think.

The lots for three years cost about the same for gains during the first six months and second six months; for the second year of their lives they cost about 6c. per pound, and during the third year gradually increased in cost, till during the last month or six weeks they

were costing (while being fattened) about 16c. or 17c. per pound.

Since seeing my figures questioned, I have, Sir, looked this matter up in some of the best authorities on such questions, and find that in the case of animals fed up to one year the average cost per pound gain was 4.05 cents; in the case of animals fed from one to two years old, the average cost per pound gain was 8.04 cents, and in the case of animals fed from two to three years old, the average cost per pound gain was 12.46 cents. The figures agree with our findings here, as you will notice, save that in the case of from two to three years old the average is given, while I gave the final rate of cost per pound gain.

Now, Sir, in your edition of March 9th, 1905, Mr. John Kennedy states that he can feed a steer for about six months for from \$20 to \$24; and Mr. Simpson Rennie is quoted as saying that he can put on 300 lbs. in six months for about the same sum, \$24.52. I agree with these gentlemen, and think we have done even better here, having made gains more cheaply with 2½ and 3½ year old steers, because we used less meal. We find that an average of about five pounds of meal per day from start to finish gives the cheapest gains. For the first month or six weeks no meal at all is fed, but all the roots and ensilage, equal parts, the steers will eat and five or six pounds of clover hay daily. The meal when first given is fed in very small quantities—1 lb. per day for the first 10 days, then 1½ lbs. per day for the next week or 10 days; 2 lbs. for the next week, etc. Steers so fed cost us from 6c. to 8c. per pound for increase in live weight.

But, Sir, this might be taken as indicating that I am mistaken in my original statement, that the older the steer the more expensive the production of beef. It does not, however, as I think I can clearly show. The steers fed by Mr. Kennedy, Mr. Rennie and Mr. Baty were steers that were bought up in October and November for feeding purposes. They were, for some reason or other, not fat enough to go forward to the block off the grass, and, hence, were in good shape to put on gains cheaply, and the seller was forced to sell them

ever, always the home market for all coarse forage, and a plentiful supply of the very best kind of barnyard manure, that indispensable factor in successful Canadian farming.

In your edition of April 6th, 1905, both Mr. T. Baty, on page 499, and "T. A., of Perth Co., Ont.," page 500, refer to the superior value of aged cattle as consumers of coarse forage. I may say that we have found but very little difference between cattle of different ages, as to their comparative powers of utilizing coarse feeds.

We have fed steers, aged from 8 to 12 months, from 18 to 24 months, from 30 to 36 months, and from 42 to 48 months at the same time, under similar conditions, and have found the young steers do quite as well as the older steers, so far as weight of gain was considered, and considerably better so far as cost of 100 lbs. gain was concerned.

The coarse forages fed were mangels, turnips, corn ensilage, oat straw and clover hay. The rations have varied slightly from year to year, but an average ration might be said to have been made up as follows: Oat straw, 6 to 8 lbs.; roots, 50 lbs.; and ensilage, 50 lbs. All the steers would eat up clean of this mixture. This was fed in two equal portions, night and morning, followed by from 2 to 4 lbs. of long clover hay after each portion. The steers from 8 to 12 months, and those from 18 to 24 months, received no other feed, neither did the older steers for about two months. During the two months, when all lots were on roughage alone, they all averaged about 2 lbs. a day, but later on, in order to keep up the 2 lb. a day rate of gain, it was necessary to feed meal to the 2½ and 3½ year old steers. The 8 to 12 months and the 20 to 24 months lots were allowed to continue without grain, and usually did from 1 to 1½ lbs. per day till grass was ready.

J. H. GRISDALE,
Agriculturist.

Rape in Stubble.

In an address, delivered before the South Dakota Sheep-breeders' Association, by W. F. Kelly, of that State, he said: "We have been for some years practicing the plan of sowing rape with our oats in spring, with the best results. I presume many of my hearers have already tried sowing rape with grain. I do not presume to teach these people anything on this subject, but to those who have not tried it, with their permission, I will give them my experience with rape in stubble.

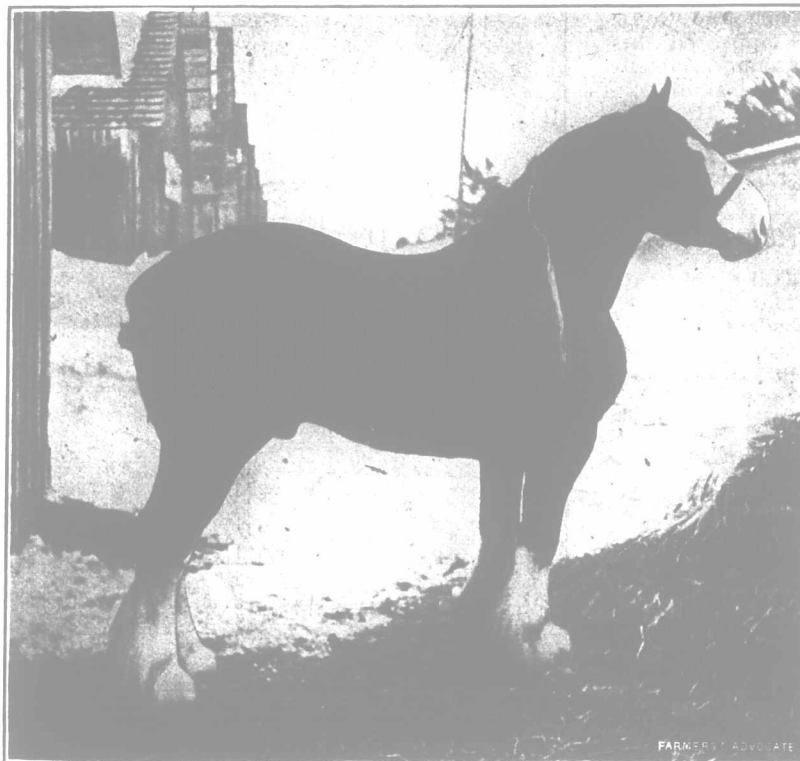
"I would choose a grain field, and let it be a large one, that I intended planting to corn the following year. Then you need not plow till spring, thus giving the sheep the run of the field the entire fall. I would sow ten acres of that field by mixing the rape seed with the first grain that is sown in the spring, at the rate of two and one-half to three pounds to the acre, but do not sow it this early with barley, for if you do so, the chances are that you would harvest more rape than barley. I would sow the rest of the field anywhere from the 15th to the 25th of May, going over the field thus sown with a light harrow.

"Do not be afraid of damaging the grain by harrowing it, for I assure you you will not, but the very opposite will be the result. You will benefit your grain, you will kill very many weeds, and cover your rape seed at the same time. That's killing three birds with one stone. I will admit, that after harrowing your grain, your field will look bad. It will look as though it had lost its last friend, and you will probably curse Kelly for advising you to try such a plan, but just you wait a few days, and see that grain field get right down and hump itself and grow.

"My reasons for sowing ten acres with the grain is this, that acreage will make a rapid growth and furnish an abundance of feed, even if the late summer should prove to be very dry, but I would not care to risk sowing the whole field then, because, if the reason should prove favorable for the growth of rape, it might make such a strong growth that it would be nearly as high as the grain, and bother like everything at stacking time.

"I remember once, some years ago, I sowed some rape with oats, and I was obliged to go over the field and knock down every shock so the wind and sun might dry out the rape that was in the butts of the bundles, but that oat straw with the dried rape in it was next to alfalfa hay, the finest sheep fodder I ever fed.

"The rape seed sown in May will usually be from four to eight inches high at harvest time. The sickle will sometimes snip off a few leaves,



Prince of Scotlandwell, Imp. (11860).

Clydesdale Stallion, rising 5 years. Imported by Smith & Richardson, Columbus, Ont., and sold to T. A. Brown, Carp, Ont.

cheaply. Now, Sir, either the seller (who was quite likely also the raiser) raised those steers on very, very cheap land, or he got very small prices for the feed he gave them. Such excellent farmers as Mr. Kennedy, Mr. Rennie and Mr. Baty know this too, or they would do more of the raising of steers to three-year-olds themselves before feeding; they know it either by experience or intuition, we know it by experience.

Here, Sir, is one item of experience. Steers kept on the Experimental Farm here from birth till they reach the age of three years, as described above, cost about \$80 to feed, and sell for from \$65 to \$75. These figures refer to not one steer alone, but to several lots, an excellent reason for buying rather than raising feeders, is it not, especially when it is remembered that steers kept till two years old made a clear profit of from \$15 to \$20, and steers bought in and fed for six months usually made a profit of from \$4 to \$8 under exactly similar conditions.

Now, Sir, let me say further that I believe there is money in beef production in Eastern Canada, but the practically only certain clear-profit-making system of beef production in this part of the country is, in our experience and opinion, the finishing off of beef at 2 or 2½ years old; in short, baby beef. This plan of producing beef will, or at least is likely to, always leave a profit. The usual method of buying up steers in the fall, feeding through the winter and selling in the spring, will, we find, frequently leave a small clear profit, although sometimes there is an apparent loss after paying for feeds at quoted prices. There is, how-

but not enough to make any difference with stacking the grain, and unless the season be very dry will make a rapid growth after the grain is cut, and by the time stacking is done will be one solid mass of green, the finest sheep pasture in the world. My friends, your sheep will feed upon this in preference to the earlier sown rape, but will attack that later in the season. With this pasture you need have no fear of stunting your lambs, but they will swell and grow, and your heart will be glad at sight of them.

"In first turning in the sheep in the rape you will need to be careful, but there is not so much danger of bloat as is generally supposed. Before turning in I would fill them on some kind of food they will relish. They must not be turned in when they are hungry. I would leave them in the rape an hour or an hour and a half the first day. I would follow the same course the second and third days, only the third day I would let down the bars, and I would not put them up again the entire fall. I would give them free access to the rape field all day and all night, too, for that matter. I have not lost but one sheep by bloat since following this plan.

Those Stock-feeding Figures.

I think it only in the cause of humanity, that someone should come in and shield the much-criticised agricultural lecturers. Prof. Grisdale has unwittingly, by simply looking at things from a business standpoint, a method which very few farmers pursue, aroused the righteous indignation of Mr. Fawcett, of N. B. They are both good men, of sound judgment and successful in their work, but it strikes me very forcibly that the latter gentleman has allowed his zeal to swallow his reasoning power in this matter. This is a matter in which I have had some experience, for I cannot yet see the time when I shall come under the yoke of the extreme dairy cow. Like Mr. Fawcett, I believe the dual-purpose cow exists to the satisfaction and prosperity of her owner, but she has her drawbacks. Her steers DO NOT MAKE BEEF AT A PROFIT, when seen from a business point of view. I am learning in the costly school of experience something at least about making beef, and my experience has taught me that Prof. Grisdale is nearer right than Mr. F. would have him appear. The first pair of steers I ever fattened sold at three years of age for \$75. Estimating the cost at market prices, of all the food consumed by those steers during the three years, I found they had eaten about \$170 worth. Now this is hard fact, and I can prove it by figures kept. Though I am reducing that debit balance every year, I have not yet sold a fat steer which, actually on the basis quoted above, i.e., charging up market prices against them, has given an absolute profit, and still the live stock part of the farm is paying its way. As Mr. Fawcett very truly says, hundreds of farmers have been doing this for years, and still have enjoyed prosperity in a considerable degree. He cannot seem to explain the matter, except by the impression that Mr. Grisdale is wrong in his figures. How is it then that Canadian farmers are selling for 8c. per pound what cost them 17c., and still making money? Prof. Grisdale in his findings has charged to the steers, and rightly too, everything they consume at prices which the foods cost to produce, and not in any case as high prices as we pay for them here in the Maritime Provinces. Why, we would consider the conditions almost millennial if bran could be bought for \$16 or \$17 per ton; clover, \$6 to \$7, etc. Now, our brother farmers, in very few cases, keep any account of what their feed costs to produce, consequently, when they sell a beef for \$50 you could not persuade them that it may have cost them \$65. Most of our stock farmers would not credit the statement that from three-fourths to four-fifths of the year is spent in working one way or another to produce that beef. The time spent in feeding them is a mere bagatelle compared with the days and weeks spent in raising and harvesting the roots, making and storing the hay, fencing, milking, driving to and from pasture, etc. Why, the average farmer and his whole family are slaves to the stock barn the year round. Is this time worth nothing? Don't you think, Mr. Fawcett, that the same amount of muscular and brain energy which every farmer spends during the year, the planning, the long hours, etc., if put into almost any other vocation under the sun, would yield a much more handsome return than it does from beef-raising; or, in fact, from any branch of farming? The same principles pertain to dairying in too many cases. In summing up the profits of the year, the average farmer never stops to reckon in his own and his family's wages, the interest on capital invested, etc.

I think if Mr. F., or any other farmer, will look at the matter as above, he will find that he has turned off very few fat steers that have given him an absolute profit over the cost of production.

Annapolis Co., N.S.

R. J. MESSENGER.

Spare the Calf.

To the Editor "Farmer's Advocate":
Sir,—Could you (or would you) write an article about the practice of buying up calves a day or two or more old, and sending them away to be made into "canned chicken"? And don't spare the farmer, for he really holds this thing in his own hands in a way. If he would not sell the calves, no canned chickens could be made of them. I think all the leading papers should

take this question up, and cry the dirty business out of our country.

FARMER'S DAUGHTER AND "FARMER'S ADVOCATE" READER.

Pulp in a Cave.

I liked sugar-beet pulp all right from the start. I found it to be the handiest and best root feed I have ever used. I fattened two head of cattle, and fed five others on pulp and cut straw mixed. They always ate it up clean, and are looking well. Of course the ones I fattened were fed on cut oats mixed with the pulp and a little meal. They did remarkably well. I also fed two brood sows on it; about three pails per day mixed with one-half gallon of barley meal. One of them farrowed this month; the pigs are strong, and doing well. I continued feeding her on it, two pails per day, mixed with two gallons of corn meal. Both the sow and her pigs, nine in number, are doing well. I kept part of it in a cave, which was not too warm; the pulp froze a little on top, and the rest of it I kept in a mow of a frame barn, covered with cut straw. I found the cave to be the best place to keep it for feeding to pigs.

J. J. MORAN.

Simcoe Co., Ont.

FARM.

A Chat with Neighbor Johnston.

Neighbor Johnston called in at the barn to-day while we were doing the chores. He was pleased with our turnips, and asked how we managed to have them keep so well. I replied, "I think the principal reason is that we pulled them by hand, the old-fashioned Scotch plan. They were nice and clean, no rootlets and no bruises or scratches, which would have been evident if they had been dragged out by the harrows. And then we keep the hatchways open, except in very severe weather. Perhaps it may be harder work to



"Mary had a little lamb,
Its fleece was white as snow."

pull turnips by hand, but there is a great deal in knowing how to do it."

We were discussing the fencing problem, and in reply to my neighbor's questions regarding the hedge fence, I said that quite a number of years ago I was on a deputation that went to a distant part of the county to inspect some portions of hedge fence that had been plashed and finished for a short time, and that I was so much pleased with the fence that I wrote it up very favorably for the local newspaper. I thought then that it appeared to be a good fence (it certainly looked well), and if adopted generally would tend very much to add to the beauty of our fine county. But there have been changes since those days. Farm help is high priced; in fact, costs more than it is really worth, and is hard to get, and so farmers who have hedge fences find it impossible to get them trimmed, and instead of growing up to be a thing of beauty and a joy forever, it is getting to be an unsightly nuisance, collecting snowdrifts on the road. Our Township Council have already paid one farmer to cut down his hedge fence, to get it out of the way, and others have applied for a bonus to cut theirs down also. A friend from a distant county was telling me that the hedge fence was also a source of trouble in his neighborhood; but he said the cutting down was only a temporary relief, as it would grow up again very fast. The best plan was to take a barrel and a sprinkler, in the fall of the year, when the grass was long and dry, and sprinkle it liberally with coal oil, after taking due precautions against the fire spreading. Set fire to the grass, and there would be enough heat generated to completely kill the hedge plants, if they were not quite burnt up. Besides all the drawbacks already men-

tioned, the mice are getting in their work, and I have seen long stretches of hedge fence where there was scarcely any bark left on the plants.

So far as we know at present, there is nothing better in the line of fencing than the smooth, coiled, woven wire fence. It is good to prevent drifts, and is practically safe. There are so many horses in the country disfigured for life by the cruel barbed wire, that we don't like to see it any more.

JONAS.

Claver Ha Lea.

Corn-testing Methods.

To the Editor "Farmer's Advocate":

Sir,—I have just noticed in your issue of April 6th a slight criticism by Mr. J. S. Pearce, on the system of testing seed corn which I had outlined in a recent issue. Mr. Pearce claims the system to be too "intricate and quite unnecessary," as it involves the testing of each individual ear. He goes on to say, and rightly so, that you cannot judge the vitality of the corn by the appearance of the ear, yet he advises the taking of but 15 or 20 average ears from the whole lot, shelling off the grain, and testing 100 kernels of the same. Having this spring tested large quantities of corn on the ear, and having seen the great difference in vitality that exists between the individual ears, I am forced to conclude that the best way, and the only way, to ensure a satisfactory stand of corn is to follow out such a system as I have already outlined. Were I to compromise to any extent, it would be where large quantities of corn were to be sown, that instead of testing every ear, the first one hundred ears might each be tested and taken as the basis upon which the vitality of the whole lot might be determined. Where these ears are found to possess good vitality, the whole sample may be sown with a very fair degree of safety. Were a number of good appearing ears to be shelled, however, as Mr. Pearce suggests, and a number of kernels chosen indiscriminately and tested, you might or you might not, as that gentleman admits, get a fair test. I have such samples give very good germination tests, and yet, when the corn which they were supposed to represent was planted, a very poor stand was the result. In any case, it is only by chance that one can get a representative sample to test in this way, and, furthermore, what is of greater importance, you cannot trace back and discard those ears the kernels from which will not grow. I have talked with a great many of the larger corn-growers in the great corn states across the line, who have adopted this system, and who testify as to its utility. One grower in particular can I recall, who plants 8,000 acres of corn each year, and who has recently adopted this system; as a result, he claims his stand of corn to be at least one-third better. Can we accept any better evidence than that given by these bright, intelligent and progressive corn-growers who make their money out of this great cereal? In thinking this matter over, we must also keep in mind the following facts:

- (1) That the grain from 100 ears of Dent corn, or 200 ears of Flint corn, sown in hills 3½ feet apart each way, with three kernels in a hill, will plant between five and six acres.
- (2) That for every 20 ears of Dent or 40 ears of Flint corn that are discarded because they will not grow, approximately one acre of corn is saved, providing such ears are substituted with others of good vitality.
- (3) According to a time test made at the Illinois Experiment Station, one man, in five hours' total time, can test every ear of seed corn required to plant 32½ acres.

With these facts before us, therefore, I am willing to let the system stand on its own merits. It is not my intention to urge anything unreasonable, and I am not doing so. It is certainly not unreasonable to assert that every corn-grower ought to know, without there being any doubt about it, just exactly what kind of corn he is planting, and the principle involved, as I have already said, is the only one that I know at the present time to be effective.

Our object should be to make agriculture an exact science. The testing of each ear of seed corn, whenever necessary, will certainly be a step in that direction.

LEONARD H. NEWMAN.

Seed Division, Dominion Department of Agriculture.

Clover Ensilage.

At the last meeting of the Farmers' Institute, held at Waterdown, Ont., Mr. Richard Attridge, of East Flamboro, Wellington Co., favored the farmers present with his experience with clover ensilage. The "Farmer's Advocate" has pleasure in presenting its readers with his experience upon this interesting matter.

"Early last summer I was convinced that the season was not likely to be favorable to the growth of corn, and I made up my mind to use clover as a substitute for filling my silo. I made what enquiries I could, but I was unable to find anyone who could direct me. Accordingly, I made up my mind to do a little experimenting in this direction. I waited till the clover was in full bloom—till what some would consider the earliest cutting time, but when others would believe was too early to begin the clover harvest. I engaged men and teams as I would for filling with corn, and on the day appointed waited till the dew was off the hay before starting the mowing machine. However, just about noon a heavy shower of rain came on, and nothing was done till after dinner. The first clover put into the silo was, therefore, quite wet. This part of the ensilage when I began using was quite black and useless; indeed, it was simply manure. The next few loads of clover were much drier, and this turned out to be very good ensilage. In the meantime the sun and wind had thoroughly dried the standing clover. This was cut and hauled at once to the silo. The ensilage resulting from this proved to be thoroughly sweet and good, and desirable in every particular, having all the good points of good corn ensilage. The cattle eat it greedily, thrive well on it, and it does not taint the cows' milk. I may say that I followed the usual methods of filling a silo with corn. I cut it the usual length, and had it well tramped in the silo.

Do Not Use Formalin Solution too Strong.

A subscriber from Gorrie, Ont., states that he sprinkled his seed wheat last fall with diluted formalin, $\frac{1}{2}$ pint to five gallons water, two days before sowing, and that, as scarcely any of the wheat sprouted, he had to sow the field the second time. Two neighbors had the same experience. He asks whether he used it too strong, the $\frac{1}{2}$ -pint in solution having been sprinkled on fifteen bushels. He also raises the question as to whether the difference in thickness of hull between wheat and oats would have anything to do with the effect of formalin on the germ of the grain, and wonders whether he could treat his seed a couple of days before sowing.

We feel safe in stating that the solution was decidedly too strong. Those who read the article on "Treatment of Seed Grain for Smut," in the "Farmer's Advocate," of issue March 9th, will remember the caution that it had been thought formalin delayed somewhat the germination of the seed. Recent results from Guelph, Ont., and Purdue University, Indiana, seem to indicate that if used too strong it injures the germ of the seed and reduces the yield. All agree, however, that it is perfectly safe if used in proper strength, and that of all the remedies for smut formalin is the best. The strength used in 1904 by Prof. Zavitz, of the O. A. C., was $\frac{1}{2}$ pint to five gallons water for sprinkling, and $\frac{1}{2}$ pint to 21 gallons water for twenty-minute immersion. The percentage of smutty heads was nil in each case, but sprinkling with the strong solution somewhat reduced the yield, as compared with that from other treatments. Our correspondent, by the way, used a 50-per-cent. greater strength. Taking everything into consideration, Prof. Zavitz concludes immersion of oats for twenty minutes, by using $\frac{1}{2}$ pint formalin in 21 gallons water, has given excellent results. The treatment is easily performed, comparatively cheap, and very effectual.

The Purdue Station found a much weaker solution sufficient. The method they recommend is to sprinkle the seed oats with a solution of formalin of the strength of one pound (a little less than a pint) of formalin to fifty gallons of water until nearly moist enough to pack in the hand, shovel into a pile and cover. After two hours or more the oats are ready to sow, or can be spread out and dried and kept for future sowing. Formalin is a gas dissolved in water, and the reason for covering the oats is to keep it confined and give time for the gas to penetrate between the chaff of the grain, and thus reach every spore of the fungus. The cost of the material for this treatment is about $1\frac{1}{2}$ ¢ a bushel—less than 5¢ an acre.

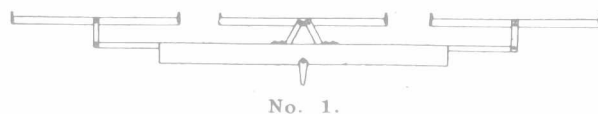
From the foregoing, our caution, based mainly upon our own experience, was well advised. Though possessing no data upon the point, we regard it as not unlikely that the germ of the wheat grain would be more readily affected than that of the oats, but do not think anyone need be afraid of sprinkling on any grain the solution recommended by the Purdue experimenters. A word of caution might be added—to dry thoroughly, by means of shovelling of any grain that is to be put back into the bin after treatment, and to

take care that treated seed is not re-infected with smut spores by contact with other grain, or with bins, sacks or drills bearing the spores, as a few spores go a long way towards infecting a bushel of grain.

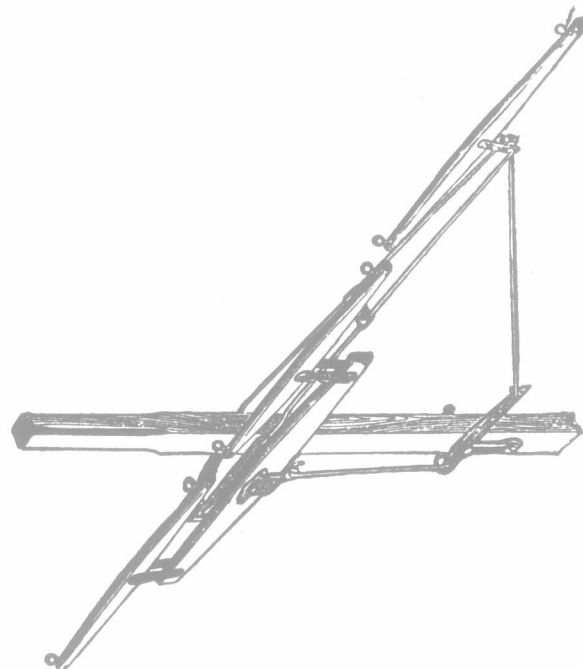
Eveners to Burn.

Below will be found a further assortment of three-horse eveners. The first cut is from a sketch sent us by W. L. Lockhart, Westmoreland Co., N. B. The second illustrates the Deering style of evener, which may be seen in almost any locality. The third cut is from a drawing sent us by Milton Rose, Dundas Co., Ont.

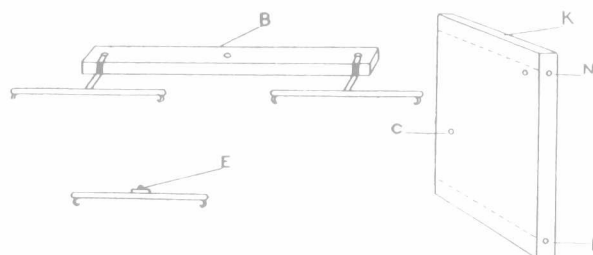
K is oak upright 14 inches long, 2 inches thick, 6 inches wide; bolted with two bolts, N and P. B is two-span 6 feet long. C is a hole



No. 1.



No. 2.



No. 3.

2 $\frac{1}{2}$ inches back and four inches above a hole A (which should be shown in the lower, right-hand corner of cut, corresponding to the hole in the upper corner, which should be labelled D, D and A being 12 inches apart). E is the whiffletree of center horse. Attach two-span B to A; attach center horse E to D; attach plow to C. K will stand perpendicular to B when all are drawing.

N, B.—Bolts N and P are in line with horses.

Effects of Bluestone Upon Various Plants.

To the Editor "Farmer's Advocate":

In reply to your enquiry re effect of bluestone spraying for mustard upon pea vines, I beg to state that our experiments here and elsewhere show that pea vines are not affected by a two-per-cent. or even by a three-per-cent. solution of bluestone.

On the other hand, potatoes, turnips, rape and beans are somewhat injured by a two-per-cent. solution. Wheat, rye, barley, oats, corn and sugar beets are not injured by this solution. As to the weeds which are killed by the use of this solution, I may say that we found but few weeds readily injured, the most sensitive being shepherd's purse, dandelion, annual sow-thistle, burdock, bull-thistle, Canada thistle, spring sow-thistle, blue wood, stickseed, and white cockle, and flowers of bindweed.

Few of these were killed outright, as might have been expected, from the fact of their having strong taproots or underground stocks. The following were practically uninjured: Hound's tongue, rib-grass, broad-leaved plantain, mallow, couch grass, purslane, catnip, pigweed and chicory.

From the above results we cannot hope to gain much by spraying with bluestone for weeds other than wild mustard.

W. LOCHHEAD

O. A. C., Guelph, Ont.

The Value of a Pig Pasture.

The value of a pig pasture can hardly be over-estimated. Yet the majority of farmers are keeping their pigs in confined quarters and feeding them high-priced feed and making small profits, sometimes even on the wrong side of the ledger.

According to some of Prof. Day's experiments at the Agricultural College Farm, Guelph, he found that pasture was equivalent to one-third the grain ration in promoting gains. Four and one half to five pounds of meal are alleged as necessary to produce one pound weight in the pig. Then, pasture would be equivalent to one and one-half to one and two-thirds pounds of meal, besides producing healthier pigs.

Pigs do well on a certain amount of bulky food, and when they are growing bone and muscle pasture helps produce it very economically.

If I could have the pig pasture as I would like it, it would be divided into three main divisions, in which the central part would be a permanent pasture, and be the lane to the pastures on either side.

On this permanent pasture lot I would disk in some clover seed occasionally, when the ground was in good shape for such work early in the spring.

On one side of this permanent pasture I would have a piece of fall rye, alfalfa and red clover. If all would not do well, then whatever would. On the other side I would sow a piece to a mixed crop of barley, oats, wheat, peas and rape seed; another piece to corn and rape, and then some pumpkins for fall feed. I would feel that I had made ample provision for the wants of my pigs all through the summer season, so far as the green food was concerned. Of course I should want these divisions fenced off with portable fences, so that when one portion was eaten off, the other would be coming on fresh again.

At one end of the feed-lot, near the barn where the feed was kept, I should like a tight platform, nearly surrounded by a tight-board fence, high enough to shelter the hogs while eating their grain, corn in the ear, etc., from the wind. If this had an evergreen wind-break on two sides of it, say the north and west, so much the better.

Cheap shelter could be provided (as I have this winter) by making a rail pen under the straw stack, with an opening to the south large enough for the pigs to run in and out, and two or three together. Wigwam pens, placed in a sheltered place and banked up with stable manure, might be provided.

The platform should be large enough for the number of pigs to be fed at any one time. It might be made of concrete, but should be raised about a foot from the ground, in order that it might be scraped off occasionally, and flushed off after a rain.

In this way one man might take care of a large number of pigs. If he looks after the details closely he can make some clean money as well. I believe I can sell my barley for 75¢ per bushel in the shape of bacon hogs.

In the winter time bulky food can be supplied in roots, clover hay or alfalfa, and silage.

T. G. RAYNOR.

Harrowing Grain.

To the Editor "Farmer's Advocate":

I noticed in your paper a couple of weeks ago a letter from a contributor, rather severely criticizing an article that appeared some time previously, suggesting the advisability, under certain circumstances, of harrowing the spring grain after it has sprouted, and even when the blades have appeared above ground. If I understood the writer of the first article correctly, the recommendation was to harrow after seeding on clay land which had been packed by a heavy rain after being finely pulverized, and had baked and crusted when dried by the sun and wind so that the blades could not all force their way through, or had become so bound that for want of air and "elbow room" they could not make healthy growth. Now, under such circumstances I have practiced harrowing with very gratifying results. In one case a field of fall wheat was sown the last of August on a well-prepared summer-fallow; a heavy rain fell a few days after sowing, and the ground got packed very closely; a dry time followed; the wheat came up very thinly and looked sickly. A neighbor advised harrowing the field. I concluded the outlook spelled failure as it was, and I harrowed the field with heavy iron diamond harrows two ways, and had about made up my mind to sow again, so hopeless was the prospect, but in a couple of days, on a dewy morning, I could see green blades shining all over the field; in a week the prospect was entirely changed, and the next summer a crop of thirty bushels to the acre was harvested. And more than that, the timothy seed that had been sown with the wheat came up as thick as hair on a dog's back, and made a splendid crop of hay the year following the wheat crop. After that I was not afraid to harrow a crop, and more than once on clay hills where the grain has been bound by the running together of the fine particles of soil, making the field look patchy, I have harrowed those places with satis-

factory results, making the crop appear more uniform and the yield as good on the hills as in the hollows. The objection raised by your critical correspondent that, in case the field was seeded to clover, the harrowing would destroy the clover, has little point, when we reflect that the condition of soil that prevents the grain from forcing its way up will have the same effect on the clover, which, from its very nature, is more likely to be strangled in its birth by a hard crust on the surface than is the grain, and I have seen just as good a crop of clover on those hills that had been harrowed as on the lower ground that was not harrowed. In one case a high portion in a field sown to peas had become packed and looked bare, as compared with the rest of the field. One would naturally think that if harrowing would be fatal to any crop it would be peas, but I rashly ventured in where your correspondent, I presume, would fear to tread, harrowed this portion with the same heavy harrows both ways, and in a few days the crop here was catching up to that on the rest of the field, and it panned out satisfactorily.

If there is any sense in the theory of creating a dust mulch by surface cultivation for the conservation of moisture, why should it not apply to grain crops as well as to garden, root and corn culture? If freedom from binding and the access of air favors the growth of the latter, why not the former? And if weeds are destroyed in their incipient stage by cultivation in one case, why not in others? The only objection of any weight urged by your correspondent against harrowing grain is that of the labor involved in reopening ditches or water-furrows that may be filled in, and even that may, in many cases, be avoided by harrowing lengthwise of the cross furrows which are the mains, but even if they have to be shovelled again it is not a serious matter, as compared with a crippled crop for want of relief from a crusted surface.

I am not advising indiscriminate harrowing. Every farmer should use his own judgment, and act intelligently according to the circumstances, but I feel safe in advising a trial of this practice on a limited scale and where there seems to be most need of it, especially on clay land. And do not wait until the land has become dry and hard before harrowing, for then the harrows may have little effect, owing to the hardness, but harrow as soon as it is seen that the soil has run together, while it is yet moist and will crumble—that is, as soon after the rain, or a rain, as the land will work without sticking. Then you effect the double purpose of relieving the pressure on the plants and of conserving the moisture that will contribute to their healthy growth.

Peel Co., Ont. S. C. J.

A Bumper Corn Crop.

To the Editor "Farmer's Advocate":
In the Middle West "Corn is King." Corn-growing has become the principal topic for conversation almost everywhere among the farmers. An Institute without a corn talk would not be complete.

While many farmers appreciate and understand the value of a good corn crop in Ontario, there are more who do not. It is with a view of stirring up more interest in this subject that I am now writing. I realize that the best is not being accomplished by our farmers, or anywhere near it.

THE SEED.—In the first place, what constitutes good seed corn? To be good seed corn it should have undoubted vitality, which, when tested under favorable conditions, will not only germinate quickly and grow fast, but which, when put in the soil outside, will grow in the face of difficult conditions. Such corn must be thoroughly dried before hard freezing weather, and when properly dried it will stand a test of 60 below zero without having its vitality destroyed. I know of no better place to dry the seed corn well than in the chamber above the kitchen. I favor growing the seed corn by itself, at least 40 rods from any other corn, on a rich well-cultivated piece of ground. If half an acre, say, were thus planted and special cultivation be given it, the tassels on barren stalks removed, and this planted with selected seed corn to start with, I believe we could greatly improve upon the yields we are now getting from the varieties in common use. In selecting seed corn from any source, I like the idea advanced by a Minnesota farmer, who said "he selected the largest ears, with the deepest kernels, which would ripen before frost came." The ground to be planted should be made rich. I find that clover sod which has previously been top-dressed with a liberal application of stable manure and plowed in autumn, makes a good chance. In the spring, on this seed-bed, thoroughly pulverized and well cultivated, the corn should be planted in hills, so that cultivation may be given both ways.

TIME TO PLANT.—I don't believe in any fixed time, nor do I plant by the moon, but whenever the ground is dry and warm enough to grow the corn. This may be as early as the middle of May, and as late as the 10th of June.

CULTIVATION.—I believe in cultivating be-

fore the corn is up. Whenever the weeds start, that is the time to start the weeder or harrow. I find that it is better to do this work in the afternoon, as the sun kills the weeds much quicker. When the corn is pricking through is a critical time. I don't believe in breaking off those tender shoots, and yet, if the ground had baked after a rain, I would feel like sacrificing some of the corn to let the rest through, by harrowing it. The amount of harrowing given to a corn crop must be determined by the judgment of the operator. He must take into consideration the character of his soil and its humidity. No hard and fast rules can be laid down for the use of the weeder or harrow on corn. The weeder works well in a dry season, but it isn't satisfactory when the ground is wet.

I believe in deep cultivation at first if the soil needs it, but as the corn grows I want the cultivation done shallow enough to prevent any root pruning, and deep and often enough to destroy weeds and keep a good dust-blanket to conserve the soil moisture. I approve of a late cultivation, about the time the corn is silking out, and if any late weeds have come up, I find the knife shares are very useful in disposing of them.

The greatest care should be taken that we have at least three stalks to every hill, and that in cultivating the corn we do not plow any out, or cover it so that it will not grow. I wonder how many have figured on what yield should be obtained in a good corn season with good seed, good land, good cultivation, and, in fact, all the links in the chain good and strong. If a check-row planter were used, they are usually set to plant 3 ft. 8 in. each way. This would give 3,240 hills to the acre. Allowing the crows or something else to take the 40 hills, and supposing we could get three good-sized ears to the hill, averaging 11½ oz. in weight, this would mean about 100 ears would make a bushel of shelled corn. We have 3,200 hills x 3=9,600 ears, and ÷ by 100 ears, = 96 bushels shelled corn per acre. Who gets it? Isn't the average away below 50 bushels? Should it be so? I claim we should aim for better things. T. G. RAYNOR.

DAIRY

Effect of Cow Food on Dairy Products.

There has been much discussion as to the effect which the fodder fed to cows may have on dairy products, and with a view to settling the question so far as cheese is concerned, the Agricultural Department of the University of Wisconsin has undertaken of late years a series of experiments which have thrown some light upon the question. The experiments were carried on with rape, clover, cabbage and green corn, the most scrupulous care as to cleanliness being observed in milking and handling the milk, so that, as far as possible, extraneous germs which might cause flavors of other kinds might be prevented from entering the milk. During the time of investigation the cows were kept on good pasture during the night, and stabled during the day; given pure water to drink, and fed a little grain twice a day.

EXPERIMENT WITH RAPE.

The rape experimented with was Dwarf Essex, which was sown in drills, three pounds to the acre being used. The first piece was sown early in May, other sowings being made at intervals of a few weeks, so that a supply at various stages of maturity might be available. The rape was cut and fed to the cows while still fresh and green, and experiments were made in feeding it half an hour before and immediately after milking. In every case it was found that the most objectionable flavor was produced when the young rape was given; also that better results were obtained when the rape was fed after milking than before. Curing the cheese at a low temperature (40 degrees) was also found to produce cheese of a better flavor than that cured at a higher temperature. Upon the whole, however, rape was not recommended highly as fodder. The cows ate it greedily, and the flow of milk was increased, but the cheese had an offensive smell and a somewhat sharp rancid flavor, which "cannot be eliminated by any art known to the cheesemaker at the present time." Ever so limited quantity of rape fed to the cows was found to produce a taint in the milk.

OTHER STRONG FOODS.

Cabbage was also found to be an inferior fodder, the cheese made from the milk of cabbage-fed cows being invariably found to possess a disagreeable flavor, which became worse as the ripening advanced. Milk from cows fed exclusively on green clover, too, produced cheese of an off-flavor, which became sharp and disagreeable as the cheese became old. Green corn, however, was found to give milk of a most excellent quality, the cheese made from it being of fine texture and good flavor at all stages of ripening. "Without exception," the report states, "this cheese was free from offensive odor and taste." Ostensibly then, judging from the result of these experiments, farmers who raise cattle for the sake of dairy products, will make no mistake in making provision for a good corn-field this season.

Answers to Questions for Dairymen.

My favorite breed of dairy cow is the Ayrshire and Ayrshire grades, because they give a large amount of milk, containing a good amount of butter-fat. Their milk is adapted to any line of production—milk and cream for city trade, or for the production of cheese and butter. They beef readily when required, and make a choice quality of meat, with a small per cent. of waste. They are a hardy, thrifty breed, and will produce more profit for amount of feed consumed than any other breed.

I send cream to City of Montreal. Milk and butter record of my herd of 26 cows, from January 1st, 1904, to January 1st, 1905, is as follows:

Reg. No.	Name	Age in years.	Pounds of milk.	Average p.c. of butter-fat.	Estimated lbs. of butter.	Value at 22c. per pound.	
11129	Peace	6	7828	4.1	378	\$82 06	
6264	Minnie May	12	7955	3.8	352	77 44	
13044	Jessie of Kelso	4	7366	4.1	352	77 44	
11124	Infelice	6	7292	4.1	348	76 56	
11132	Irena	6	7525	4	350	77 00	
11118	Delta Maid	6	7954	3.7	338	73.26	
8881	Miss Violet	7	7357	3.8	324	71 28	
11125	Lady Ethel	6	6756	4.1	322	70 84	
	Miss Millie	4	6853	4	320	70 40	
11119	Dinah	6	6025	4.3	301	66 22	
11402	Ruth of Kelso	5	6295	4	293	65 56	
11130	Peggotty	6	6478	3.8	286	62 92	
8886	Iona	7	5670	3.9	259	56 98	
17611	White Rose	4	5764	3.9	248	54 56	
17197	Miss Vernie	3	5773	3.8	249	54 86	
17605	Jess	2	5180	4	241	53 02	
17602	Constance	3	5208	3.9	236	51 92	
	Gipsey	8	8450	4.1	403	88 66	
	Flossie	8	8775	3.7	380	83 60	
	Spotty	8	7416	4.2	357	77 22	
	Carrie	12	6805	4.1	308	67 76	
	Maggie	3	6604	3.7	281	61 82	
	Topsey	3	8530	3.8	286	61 60	
	Ann	8	5204	4.2	254	55 88	
	Jenny	10	5220	4.1	248	54 56	
	Doll	2	4970	4.1	236	51 92	
Average per cow....				6646	3.9	306	\$67 07
Total amount of milk					172,808	lbs.	
Total amount of butter.....					7,928	lbs.	
Value at 22 cents per pound					\$1,743.94		
Value of skim milk, at 15c. per cwt.					222.16		
Returns per cow, including value of skim milk					75.58		
Profit about \$31.58; cost of feed about \$36, and labor, \$8 per cow.							

We weigh every milking with a spring balance scale; take composite samples every four or six weeks, and have them tested at our creamery.

This is very interesting work. By doing this the farmer takes greater interest in his herd, and it is said "interest in our work lightens it." By this system he knows what his herd is doing per week, per month, and per year; and he is able to spot out his unprofitable cows. He can also, if he wishes, keep an approximate estimate of the coarse foods fed—hay, ensilage, straw and pasture—and can keep a close account of the grains fed, and thereby know about the cost of keep, also, of his herd per year.

We select only deep-milking, high-testing females; mate these with a pure-bred sire, from a family with a good milk record; rear only the best heifer calves; see that they are well fed when young with whole milk for two or three weeks, and then skim milk for six months at least. Mate them with a pure-bred sire of the same breed, so that they will drop their calves at from 30 to 36 months of age. Let the first lactation period be not less than ten months, so as to form the habit of long milking. Feed them liberally with foods rich in protein; weigh and test the milk, as to know the value of a cow, her annual yield of milk must be known. Huntingdon Co., Que. W. F. STEPHEN.

The Milking Problem.

Commenting on a recent article by Prof. H. H. Dean, in the "Farmer's Advocate," the American Dairymen says:

"If there is any one thing which would prove a boon to the dairy interest, it is a practical milking machine which would do the work as well as it can be done by hand. Many milking machines have been tried from time to time, but none of them have proved an entire success. Yet the dairymen has not lost heart. He prays for the day when a machine may prove a success, and when he and his family may be relieved from the drudgery and expense of milking. Nor is this the only consideration. It is well known that poor milking runs many cows—and the number of good milkers is few and far between. If a perfectly satisfactory machine can be invented, which will do the work as well as the best milker, it will mean an added profit to the cow owner."

Care of the Bull.

A large part of the success of a breeder of any kind of cattle depends on the bull which he places at the head of his herd, or the quality of the animal and his care and management. A man may add a fine cow to his herd, and her individual calves will slowly improve it, but the influence of a fine bull is immediately perceptible in the calves from the whole herd, and a fair percentage should be superior to their dams. While individual merit is necessary in the bull, that which lies back of him in his ancestry on both sides is equally so. Particular attention should be given to the dam of the bull, for he is more likely to impress her qualities on his offspring than those of any individual animal, not excepting his own. The care of a stock bull should begin with his birth. He should be kept growing steadily and fed that kind of food which will produce a good growth of bone and muscle without becoming fat. Milk, new or skimmed, ground oats, bran or middlings, and good hay and grass are the best foods for a bull that is intended for a long life of usefulness. Also he should have exercise by a run in a pasture or yard until he is eighteen months or two years old.

He should have kind treatment, but no familiar petting. Never on any account allow anyone to play with him. The bull should be kept in the barn where he is near the cows, and as near as possible to one of the main passageways. If near the cows he is contented and more quiet, and if he stands where he constantly sees the men passing him he becomes familiar with them, and is not so liable to become vicious. But on no account should the men pay any attention to him in passing, either to quarrel with him or caress him. Let them understand that they are to let him alone and pay no attention whatever to him. He should be frequently let loose in the yard with the cows, and after two years old it is better to hood him when turned loose. He then gets the exercise without endangering any lives or molesting the fence. In this way the bull may be kept many years without finding out his strength, is much healthier and safer, and a surer stock-getter, and is, I believe, much more liable to be the sire of quiet, pleasant offspring. In serving cows one service is enough, even better for the cow than two, and certainly better for the bull. A cow with one service is more liable to have a calf than if more are allowed. A yearling bull may serve three or four cows a week with no injury to himself, if allowed only one service to the cow, and a day or two between cows. A two- or three-year-old bull need not be so limited if treated in this way, and his calves will be uniformly strong. It is the injudicious treatment and worse than unnecessary overwork that injures the vitality of the bull and causes him to sire weak calves and to have an early decline of power. A little good judgment and common sense would keep almost any bull in active usefulness as long as it seemed desirable to retain him. C. M. WINSLOW.

Province of Quebec Dairy Outlook.

The season of 1905 opens up with every promise of higher prices both of butter and cheese than were realized during the season of 1904. Stocks seem to be completely cleaned up in Montreal, and prices should be above the average from the start. The number of factories in operation will be about the same, and it must be considered a favorable sign if an increase of business is done, for one of the weakest points in the dairy industry of this Province is the excess of small, badly-equipped factories. However, the progress of the past few years gives great encouragement, and the improvement in the cold storage at the creameries and the curing rooms in the cheese factories has already greatly enhanced the value of our dairy products.

Greater attention requires to be given to the appearance of the finished article. Butter-boxes are not uniform in size, shape or quality, and are not always clean; cheese vary in size too much, and still more in finish; many good cheeses are passed by on account of their disreputable appearance. An increase in the number of dairy boards throughout the Province would be advantageous, but there is no need for them to become competitive, as the case is already in some districts.

Undoubtedly, the crying need to-day is the official grading of all our dairy produce at Montreal by a Government (Federal) expert.

The St. Hyacinthe Dairy School has had another very successful term; opening in November, the last course ends on April 29th.

These regular courses are from 12 to 26 days' duration, and are intended for makers or apprentices who have already had some experience in making. The following comprises all the courses, with duration, attendance of pupils, etc.:

1.—Nov. 14th to 26th, 1904: Butter and cheese; French only; 4 pupils.

2.—Nov. 28th to Dec. 23rd, 1904: Candidates for inspectorship; English and French; 23 in attendance.

3.—Jan. 9th to 28th, 1905: Special cheese course; English and French; attendance 21.

4.—Jan. 30th to Feb. 18th: Special butter course; English and French; attendance 41.

5.—Feb. 20th to March 14th: Butter and cheese, French only; attendance 48.

6.—March 6th to 25th: Inspectors' course; English and French; attendance 48.

7.—March 27th to April 19th: Butter and cheese, for apprentices; English and French; attendance 24.

8.—April 24th to 29th: Butter and cheese; French only.

It will thus be seen that the courses are of shorter duration than those of the Ontario dairy schools, so that a large number of students, in the aggregate, attend. Special work has been done in connection with the Leclair process of churning non-acidified cream, and it seems to be only a question of time when this process will be recognized to be the simplest and most efficient by which to attain that great desideratum of the export buttermaker, uniformity.

There will be 55 syndicate inspectors employed during the coming season throughout the Province. These are under two inspector-generals, one for butter and one for cheese. The inspectors organize their own syndicates, which are limited to 30 factories. Reports are sent in monthly, a certain fee is levied from each factory for the season, and the Provincial Department of Agriculture provides one-half of the expenses. The strong point of our syndicate system of inspection is that every qualified inspector must return to the Dairy School at St. Hyacinthe once every two years, in order to re-qualify. By this means there is no going backward, and all are kept up to the times.

H. WESTON PARRY.

The Model Farm, Compton Co., Que.

Western Ontario Dairy Instructors' Class.

The special course for the benefit of the instructors employed by the Western Ontario Dairymen's Association was held at the Dairy School in connection with the Ontario Agricultural College, from April 3rd to the 8th. There will be eleven instructors employed by the association for 1905. Seven men will devote their attention to the cheese factories, two men will look after creameries only, one will have a combination group of creameries and creameries, while Mr. Geo. H. Barr will superintend the whole district west of Toronto, assisted by Mr. G. A. Putnam, Supt. of Farmers' Institutes. The course consisted of five lectures on general and special dairying, by Prof. Dean and Mr. Ruddick, Dairy Commissioner, of Ottawa; two lectures were given on dairy chemistry by Prof. Harcourt, combined with two afternoons in the chemical laboratory, making tests for preservatives, etc., in milk and cream; three lectures and three afternoons of laboratory work on dairy bacteriology were given by Prof. Harrison; three forenoons were devoted to practical discussions, led by Mr. Barr, regarding the best methods to adopt in securing good results during the season; and one forenoon was given to the practical judging of cheese and butter. We are indebted to Messrs. Robt. Johnston, St. Thomas, President of the Western Dairymen's Association; to Mr. Thos. Ballantyne, Jr., Stratford, and to Mr. Ruddick, for their valuable assistance in this work of scoring cheese and butter.

Mr. Ruddick in his lecture emphasized the importance of improvement in factory buildings, and the need of cool-curing rooms at or near cheese factories. He also mentioned that expansion in Canadian dairying is likely to be along butter lines rather than cheese. In connection with the latter he said they were trying to improve the refrigerator car service, and asked the co-operation of the instructors in securing exact information regarding any irregularities in the service.

It was felt by all that greater attention should be given to the creameries branch of dairying in Western Ontario. In order to improve the quality of butter made in our creameries, it is necessary to secure an improved quality of cream. This can be accomplished by having the instructors visit the farms at the time the cream collectors get the cream. However, as there are only two men who will be devoting all their time to this work, it will be readily seen these men can touch only the fringe of the patrons. That this method will work wonders in the improvement of the cream delivered was proved last year. Since this plan has been adopted nearly all the creameries are making application for the services of an instructor. Formerly, they were very backward about making application. We know from our experience at the Dairy School last winter, that the plan of going to the farm and spending a few minutes with each patron does a great deal of good. Before we adopted this plan we found it impossible to secure a quality of cream suitable for our work. After a friendly call upon the patrons by our instructor in the farm dairy, Miss Rose, we noticed a marked improvement in the quality of the butter made from cream collected on the farms. We are safe in saying that the value of the butter was increased at least two cents per pound as a result of these visits. Another point emphasized was the need of correct glassware for use in Babcock milk testing. Some method should be devised for stamping all glassware in use as correct by an official, the same as is done with weights and measures. It was also pointed out that the oil test opens up a means whereby a great deal of fraud may be practiced on patrons. Not only this, but the test is inaccurate under the most skillful management, and its use should be discouraged as much as possible.

In order to facilitate the introduction of the Babcock test, the use of a convenient spring balance should be sanctioned by the Government. There is no reason why a spring balance inspected at suitable intervals should not be allowed for weighing cream at the farm.

The writer emphasized the need of an instructor having confidence in his own ability, in order that he may be able to impress himself upon those with whom he comes in contact. Confidence is the result of knowing. Knowledge is the result of experience, thought, and close observation, and should be combined with good sense, in order to know how to do and say the right thing at the right time. To get such a man requires almost a special act of creation. An instructor needs special providential care in his work.

Mr. Barr, in his parting word to the men, laid special stress upon the importance of cheerfulness and an optimistic character in order to succeed. An instructor should leave the impression upon the maker, management and patrons, that things look brighter and better as a result of his visit. He went so far as to say that a pessimist should not engage in the work at all.

Cheery optimism is certainly a great help to a man in any line of work, and especially in the work of instructing and assisting the men concerned in the dairy business. An instructor is very apt to grow discouraged and downhearted, hence needs to cultivate a cheerful disposition. Hail to the cheerful man in any walk of life! H. H. DEAN.

POULTRY.

The First Lay of the Pullets.

Said the old mother hen, with a satisfied cluck:
"My children, don't fancy these eggs are mere luck;
Remember my care when you were wee things,
How I kept you all warm 'neath my motherly wings,
How I taught you to scratch and hunt worms, all the tricks
That help to make sturdy and vigorous chicks."

Crowed the old father rooster, as soon as he knew:
"Now you see what a great Cock-a-doodle can do;
You have watched me with profit, from morning till night,
As I strutted and scratched to your mother's delight;
And I've crowed by the yard, when you sat on the nest,
And explained all the methods considered the best."

Quoth Good Farmer Brown, when he came in that day:
"Wife, the early Minorcas are startin' to lay;
Well, I've given 'em powders an' ground bone an' meat;
An' watched 'em right smart, an' kept the nests sweet;
They're good stock, but then I've a 'knack,' an' I say
I ken beat all creation at makin' hens lay!"

But the proud little pullets paraded the sheds,
And turned up their combs, and flirited their heads,
And laughed in their feathers, and said, saucy elves,
"We know that we laid those eggs all by ourselves!"
—Mary L. C. Robinson, in Globe-Democrat.

Sick Turkeys.

J. G. N. writes: "I have two pure-bred turkeys. About three months ago they swelled up between the eyes and mouth, so much that it seemed to prevent them breathing, and they would sneeze every little while. I took my knife and cut the swelling open in the one that was ailing the longest. The inside of swelling appeared just like the white of an egg boiled hard. I scraped it all out, and for anything I can see this turkey is all right. The swelling in the other one was like the white of an egg raw. This last one had not got as far on, and has not recovered like the other. The swelling has come back again. I would like to know what it is, and what is the cause and cure?"

Ans.—The turkeys are affected with one of the forms of roup, sometimes known as swelled head. The second turkey would have developed the same as the first, had not the swelling been opened at an early stage. The swelling in most cases is due to the small duct leading down to the nose becoming filled with pus, thus preventing the discharge from the nostrils.

The following treatment has been successfully used by a noted turkey-raiser: Make a strong solution of salt water, as hot as you can bear your hand in comfortably, and dip the turkey's head in this, completely immersing it. It would be well before doing this to wash the bird's nose out slightly, so as to make the passage as clean as possible. The bird's head would require to be held under water for some little time, in order to induce the bird to draw up more or less of the salt water in the nostrils. As soon as the bird's head is removed from the water, and it gets breathing naturally, try and clean all the discharge from the nose. The following ointment, if rubbed over the throat, face, and the upper portion of the mouth, is also said to help the disease: Make a salve of carbolized vaseline, to which has been added a few drops of spirits of camphor. If there was only a slight swelling, I would be inclined to use the following treatment: Take a sewing machine oil-can and nearly fill it with warm water; add to this a few drops of tincture of iodine. After washing the head with salt and water, inject the water and iodine from the can up the bird's nostrils and the roof of the mouth; at the same time, try and remove the pus from the nose. In all cases, birds should be isolated from the rest of the flock, and I am not sure

that it is good policy to try to treat breeding stock. As a general rule, it is unwise to breed from birds that are not healthy, although there are exceptions to this rule.

W. R. GRAHAM.

Poultry Dept., O. A. C.

The Incubator and Brooder on the Farm.

We have noticed several advertisements of incubators, used but one year, for sale cheap by farmers who have tried them and decided to go back to hens. We have interviewed some of them, and find that in every case the dissatisfaction is not from inability to hatch chicks with the incubator, but to raise them after they are hatched.

Failure to raise the chicks is due chiefly to two things; first, for fear of scaring the purchaser out, most poultry supply companies put the number of chicks which a brooder will accommodate away beyond its real capacity (if chicks are crowded a large number of them will die). Second, a beginner does not understand the needs of a chick as a hen does, and he makes several mistakes. He usually feeds the chicks as soon as they are hatched. The chick gets from the egg enough nutriment to last it 48 hours if necessary, and even longer, and should never be fed or given water till at least twenty-four hours old. Up to that time it should be allowed to pick up coarse sand or fine grit, but no food. At first they should be fed every two hours, as much as they will eat in five minutes, the feed placed in flat dishes or small wooden troughs, and removed at the end of that time. As they grow older they should be fed more at a time and less often, till at four weeks of age they may be fed what they will eat up clean three times a day. They should be fed chick food or cracked grain, dry. They should have access to clean water.

The temperature of the brooder should be watched carefully, and the chicks not allowed to get too hot or too cold. To save the expense of many brooders, some successful breeders take a number out of the brooder as they grow large enough to crowd, and place them in a small coop made of a dry-goods box, which is kept warm by a gallon jug of warm water wrapped in old woollen cloths. If the boxes are kept in a building while the chicks are less than a month old, or even out of doors after the weather gets warm, these boxes heated by hot water will raise chicks successfully without lamp-heated brooders. A woman of our acquaintance went through the last season in this way without losing a chick.

Most people are surprised to find that experienced breeders think they are doing well when they bring twenty-five chicks to maturity for every hundred eggs set. Count the eggs set under hens for a season and the birds matured, and you will find that they do no better. Don't expect too much of the incubator. The fact that one can hatch all his chicks early and so get winter layers, is an advantage in favor of the incubator.

W. I. T.

For What Purpose are the Poultry Association Grants?

The passing of the estimates by the Ontario Legislature would be an opportune time to do a good stroke of work for the rank and file of poultrymen, by instituting a much-needed inquiry into the uses to which the Eastern and Western Ontario Poultry Associations put the two thousand-dollar annual grants expected again from the Provincial treasury.

In the 1903 report of the Western Ontario Association, we find in the financial statement an item of \$1,913.65, prizes paid for the Winter Fair (Guelph), besides sundry other expenses in connection therewith. Similarly in the accounts of the Eastern Association we find the sum of \$1,395, cash paid for prizes, most or all of which we presume was for the Ottawa Winter Fair. It would be interesting to know how much of this aggregate amount of \$3,308.65 (of which \$2,000 was public grant) went to the substantial encouragement of the Canadian poultry industry, and how much to line the pockets of a few fanciers of non-utility breeds? In the prize-list of the Ontario Winter Fair, December, 1904, prizes were offered for no fewer than 82 breeds of fowl. Among these were included eight varieties of Polands, five of Hamburgs, six of game bantams, and thirteen of ornamental bantams, besides Houdan, Creve Coeur, La Fleche, Sultan and Japanese Silkies, each of which is entitled, under the regulations, to as much prize money as Plymouth Rocks or Wyandottes, excepting, indeed, that provision is made for an extension of prizes in numerous sections. Thus prizes were awarded for the best cock, hen, cockerel and pullet, of \$2, \$1, and 50 cents, respectively. In sections where there were between 12 and 19 entries (inclusive), the prizes were \$3, \$2, \$1, and 50 cents; where there were twenty or more entries, prizes were \$4, \$3, \$2, \$1, and 50 cents. As the entry fees were 50 cents apiece in each case, an excellent chance was afforded the professional exhibitor to make pretty good money exhibiting a lot of rare varieties, which for all

practical purposes might better be out of the country. Nor is this all. Prizes of \$2, \$1, and 50 cents, respectively, were offered for four varieties of pheasants; and of \$1.50 and \$1 for 43 classes of pigeons, besides smaller amounts for rabbits and birds. A somewhat similar condition obtains in the prize-list of the Eastern Ontario Poultry Show.

We are familiar with the arguments advanced in justification of these prizes for non-utility breeds, that they are necessary to "draw attendance," to "stimulate an interest in poultry," etc. Passing them by as unworthy of reply, we submit that the explanation of this squandering of money on fads is found in the desire of a few fanciers to enrich themselves through funds ostensibly devoted to agricultural purposes. It seems to us time to put on the brakes by the Provincial Department of Agriculture, making its grant contingent upon a revision of the prize-lists at the Provincial shows, with a view to restricting the excessive



Why the Hens Don't Lay.

number of breeds recognized, and insuring for the utility breeds some of the money that is now being diverted to the encouragement of poultry fads. Referring to this matter, a correspondent says: "As it is, cheques might be written out and handed to certain men before the shows, and much expense and trouble saved, for these men will get the money anyway." As for the farmer, he is supposed to be tractable, to pay his quarter and admire the useless but beautiful birds which win prizes that his money pays for. By cutting down the premiums on the rare varieties, money would be available for more and larger prizes in the utility classes in which the farmer is interested, to the great advantage of the poultry industry.

Selecting Eggs for Hatching.

A number of important points have to be attended to by poultry-keepers who raise their chicks in the incubator, if satisfactory results are to be obtained. Of course there are incubators and incubators, and the modes of working one make may be very different from those of working another, but in every case there are certain fixed principles upon the observance of which depend the chances of success. One of these golden rules relates to the selection of the eggs which are destined to yield live chicks. This is, needless to say, a point of first importance, not only in regard to incubators, but also in regard to hatching by nature's method, for it is a very great mistake to suppose, as some poultry-keepers are inclined to do, that one egg is the same as another, and that no great discrimination is therefore



Spring Pets.

needed in selecting a supply for incubation. It may be safely laid down that an egg cannot be too fresh when placed in the tray or under the hen. Many breeders seem to forget, or, at any rate, overlook, this fact, and seldom think of straining a point to have the total number of eggs needed made up quickly, and started on the hatching process as soon as possible after they are laid. In making a selection abnormally large eggs should be avoided, as in many instances these contain double yolks, and are, therefore, most unsuitable for hatching purposes.

APIARY.

The Farmer and His Bees: No. 2.

Everybody is, or should be, familiar with the saying, "Anything that is worth doing is worth doing right," for it is one of the rules to which there are no exceptions—it even applies to the keeping of a few hives of bees by the average farmer. The only right way to keep bees is to keep them in movable comb hives, whether there be only one colony or one hundred kept. If the farmer with a colony or two in box hives decides he has not the price or inclination to provide them with proper lodging, the next best thing for him to do is to sell them, or else change his mind; and to persuade him or convince him that the latter is the better alternative, is what the writer wants to do. It may strike the man who is busy with his farm work that it is a lot of extra work running bees properly—more than he has time for. This is where he thinks beyond his knowledge, for a colony of bees in a proper hive, and properly managed, need not have more than a few hours' attention during the busy season. An expert beekeeper can manage two or three hundred colonies without help when he has them in hives where he can see what they are doing, whereas if they were in box hives he would be unable to do anything with such a number. A very little reading and study will give the farmer all necessary knowledge for the management of a few hives, so that he can have his swarming (the bugbear of the farmer-beekeeper) when it is most convenient for him, or not at all if he doesn't want any increase. With box hives there can be no control of swarming—the bees have it entirely in their own hands (or wings), and come out when they are ready, regardless of the fact that their owner may be half a mile away in a hayfield, hustling to get ahead of approaching rain. And when a colony has swarmed seven or eight times, as these big colonies in box hives sometimes do, Mr. Farmer decides that bees are a bother, and take more time than they are worth, especially when he examines his numerous small swarms in the fall and finds only one or two with enough honey to make it worth while brimstoning them (the only way he knows to get the honey from them), and, perhaps, none with sufficient to carry them through the winter. With movable comb hives all this is changed. He can have control of swarming, as stated above, can take his honey off without killing a bee, and can, if his colony is light in the fall, put enough honey back into it in five minutes to winter it safely. Think it over, Mr. Farmer with a few bees, and you will probably conclude that you can't afford to keep your bees in the old way any longer. If you don't come to this conclusion, then think it over again, for you've made a mistake somewhere.

F. F.

GARDEN AND ORCHARD.

Top Grafting.

Mr. C. A. N., St. George, Ont., asks: "About how large an apple limb can one profitably cleft-draft? What is the best time to graft? Would you advise top-grafting 25-year-old Greening and Seek trees with the Hubbardston and Nonsuch variety?"

Ans.—I would not advise top-grafting good, thrifty Greening or Seek trees with any other variety. The Greening is certainly one of the leading varieties for market or home use, and the Seek also is not inferior to Hubbardston, although Hubbardston is an excellent variety. Top-grafting may be done any time now after severe frosts are over, and is sometimes practiced as late as the first of June, although it is best to do it in April, before growth starts. Most any size of limb may be grafted, but the larger the limb removed the more severe will be the check to the tree, and the greater the loss of valuable wood. The most satisfactory size is one about an inch in diameter. This is large enough to accommodate two scions, which is sometimes an advantage.

H. L. HUTT.

Ontario Agricultural College.

Bridge Grafting—Girdled Peach Trees.

R. W. S., Forest, Ont., writes: "We have a nice orchard of three-year-old peach trees, which have been badly girdled by mice during the winter. About sixty of the trees are girdled all around, and about forty more partly girdled. Will peach trees graft like a pear or apple tree?"

Ans.—The peach tree may be grafted the same as the apple or the pear. Your best plan, if the trees have been entirely girdled, would be to put in three or four bridge-grafts in each tree. The scions for this bridging should be strong shoots of last year's growth. They should be cut with a bevel on each end, so as to bring them in close contact with the wood when inserted just underneath the bark. All that is necessary is to insert the scions above and below the girdled part, so as to bridge over the injury and convey the cambium from the top to the roots. After the scions are inserted, the injured parts should be covered with grafting wax; or, if the injury is close to the ground, it is best to bank up with earth, so as to cover all of the girdled portion. Banking with earth may be all that is necessary for those partially girdled, but where the injury extends at least one-half way round the tree, it would be better to insert one or two bridge grafts.

Ontario Agricultural College.

H. L. HUTT.

The Child and the Garden.

Love of working with the land is by no means confined to as limited numbers as some people imagine. On the contrary, there seems to be a something about stirring up the warm, brown soil, freighted with pleasant odors and promise of coming fruitfulness, that appeals to nearly all normal people. There is a genuine pleasure in it, and if you are normal you dig, and hoe, and rake, and put in the curious little seeds of so many different shapes, with more satisfaction than you do most other things in the world. You are getting the exercise that is good for you, and the pure air of God's heaven; you are doing nothing that can ever rebuke you, and are lured on by visions of the goodly results that are to follow. Should you ever feel inclined to look contemptuously upon the work of "mucking in the soil," or those who are interested in it, you may take it for granted that there is something wrong with you, either with your training, your judgment, or some other branch of your mental make-up—you are abnormal, or else you have never given it a trial. Remember, the most eminent among men have been by no means ashamed to be interested in good old mother earth and her products. The King of England and the King of Italy are both enthusiastic agriculturists. Granted that they do not do the manual labor part of it with their own hands; they cannot despise that in which they are interested. Passing them, however, what of Thoreau, university graduate, philosopher, naturalist, writer and "farm hand"? What of Emerson, with whom he worked side by side in the garden? Of George William Curtis, who was "also a farm hand out at the Lowell Road, but came into town Saturday evenings—taking a swim in the river on the way—to attend the philosophical conferences at Emerson's house"? What of those other gifted idealists of Brook Farm—Hawthorne and Charles Dana? What of the British novelists, Haggard and Buchanan, practical farmers; of Tolstoi, the great Russian; and of Paderewski, the famous pianist at present touring Canada, who, on his estate in Poland, goes about in a rough suit superintending, and lending a hand here and there? A long prelude, yet useful, maybe, in establishing what we wish to establish, viz., that interest in the soil is normal, beneficial, and worthy of the greatest minds of our own or any day.

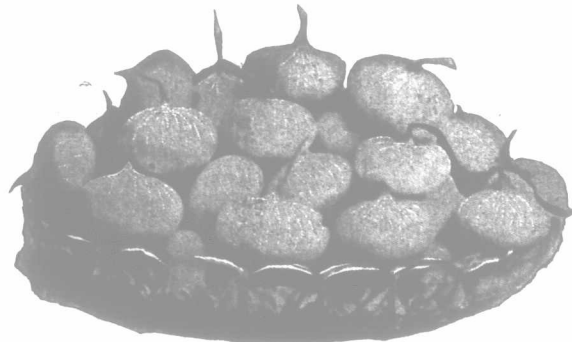
Now, to come to our more immediate subject, that of the "Child and the Garden": In many respects children are in no way different from grown people. They enjoy doing the same things that grown people do, so far as they are able; they like work that absorbs them; they receive the same sense of satisfaction as older folk in habits of diligence, order and economy, provided these be developed in them—not forced upon them. Now, few systems of discipline supply all these conditions more perfectly than the working of a little garden of the child's own. In the first place, he loves gardening because it is something that his father or mother does; he feels of some use and importance when engaged at it. In the second place, the work, if he enters into it enthusiastically, keeps him busy and interested, essential conditions to happy, progressive child-life. Last of all, the care and attention necessary, if wisely directed and encouraged, must, of necessity, train his powers of observation, and develop in him habits of industry, system and neatness.

Taking it for granted, then, that work with the soil is a good thing for the child, the next question is how he may be induced to begin it, and how he may be so directed and encouraged that it will be of positive benefit to him. In 99 cases out of 100 the chief burden of directing the child's development falls upon the school. Recognizing this, and the value of the garden as a "developer," the educationists of the day have not been slow to advance the claims of the latter. There have been, however, many drawbacks. In

so far as consolidated schools, with paid caretakers who will look after the plots during the long summer vacation, are concerned, the problem has been solved. But the ordinary rural school presents very different conditions. Let its garden be never so gay with flowers and vines, once the vacation comes, with its almost inevitable neglect, there is another story. Weeds grow up, flowers die out for want of water, a stray pig or cow breaks in and accomplishes disaster—little wonder it is that the children return to school discouraged, and with the determination never to try another school garden.

About the only way of obviating this difficulty in many schools, in so far, at least, as keeping the school-yard attractive is concerned, is to provide trees in plenty, and "plunge" (submerge in earth to the rim) flower-pots in the beds. When vacation time comes the pots of geraniums, etc., may be taken home and cared for until the reopening of school.

This species of gardening, however, is useful



A Dish of White Onions.

only to a limited extent. It provides for the child little opportunity of seeing the various kinds of seed sprout and grow from the first tiny leaflet to the mature plant, rich with flower or vegetable or fruit. There is a much better plan, which has been successfully carried out in several of the United States schools. The plan is this: The parents of each child are requested to provide him (or her, as the case may be) with a small garden-plot at his home. Each child is then given a list of names of flowers and vegetables which are known to be easily-grown varieties, and is given his choice of three kinds of seeds—flowers or vegetables, as he chooses. He is supplied with the seed at the school, and told how to plant and care for them. Stimulus to good work is provided by periodical visits of the teacher to the various gardens, and by the arrangement to have special exhibits from the children's gardens at the fall fair. Every child who exhibits is given an exhibitor's ticket, allowing free admission each day, and proud indeed are the possessors of these privileged passes. The accompanying cut shows the result of the children's labor at one of these schools, as shown at the Worcester, Mass., fair. The cut was printed originally in the Nature Study Magazine.

In the great majority of cases it has been found that the enthusiasm of the children did not flag throughout the season. In accounting for the few failures, one prominent teacher says: "The gardens which were indifferent belonged to the class of children who delight in beginning new things, but who have not the moral stamina to push on to a completed result. However, the lesson probably was helpful so far as it went." The same teacher also tells of the wholesome delight of the young gardeners in their work. "Mothers," she says, "told me their children did not wish to go away even for a few days, because the garden would need attention during their absence."

To some it may seem nonsensical that children

should be given charge of garden-plots on farms where there are already, as a rule, gardens filled with all necessary vegetables and flowers. It should be remembered, however, that these gardens are made, not for their material but for their educational value. They afford, in effect, a species of manual training, whose worth consists in its effect upon hand, mind and will.

Since so easy a solution of the school-garden problem presents itself, why should not our teachers in Canada introduce the scheme, and follow it up with the enthusiasm which alone will bring success?

The Onion.

By Mrs. Anna L. Jack.

Soon after the sowing and rolling of the onion-bed, weeding will be needed, and this process must be carefully done, so as not to disturb the rootlets by loosening the earth too much about them. If the land is mellow, a wheel hoe is the best implement, and it is easier to keep the weeds down by its early application than to have to pull them out after they grow large enough to have a firm hold of the ground. In regard to soil and fertilizers, this vegetable seems able to assimilate any amount of food of a stimulating nature, and will soon show the result in quickened growth, that puts it beyond the reach of its enemies.

When about three or four inches high, the onions should be thinned out, to two or three inches apart, and the ground must be constantly stirred to keep up growth until August, for after that season the bulbs do not ripen so well. The onion is a valuable vegetable medicinally, and acts on the system as an expectorant, diuretic, stimulant, and diaphoretic. It is highly beneficial in cases of asthma and oppressive breathing.

The onion has been known and cultivated as an article of food from the very earliest period. In Scripture we find it one of the things for which the Israelites felt a backward longing, during their wanderings in the wilderness, and at the present day the people of Western Asia are large consumers of this pungent vegetable. While some tastes repudiate its flavor, it was a pleasant sentiment expressed by Dudley Warner, who wrote, "Happy is that family which can eat onions together."

[Note.—Those who have been troubled with the onion maggot will be benefited by knowing that a good preventive is to change the onion-bed every year. Contrary to the too prevalent opinion, this will also conduce to a larger yield. During the growing season, remove any affected onions, recognizable from their sickly, yellowish appearance. These will have worms in them, which should be destroyed. Another remedy that has been recommended is to sprinkle kerosene emulsion near the onions.—Ed.]

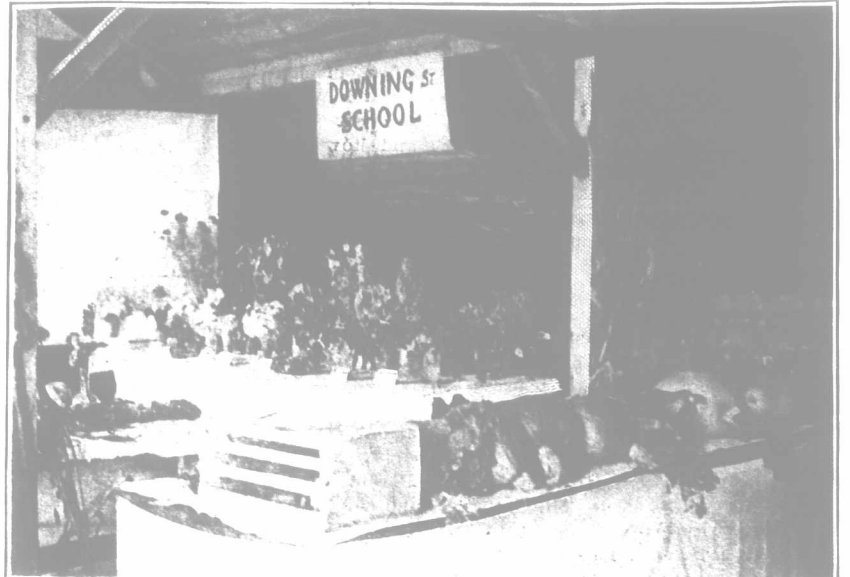
Cellars for Storing Apples and Eggs.

A British Columbia subscriber, asks information how to construct a good, dry, properly-ventilated root cellar, as he purposes building such a cellar for apples, and another for eggs. Believing that the columns of the "Farmer's Advocate" are the best medium for collecting original and modern ideas on such subjects, we throw the question open to our readers, with invitation to send us plans, descriptions and specifications of the construction and elevation, as well as interior arrangements, of any such buildings in satisfactory use.

The Fruit Division, Ottawa, has received notice through its fruit crop correspondents, that apricots were in bloom in Lytton, B. C., the 31st of March. The peaches were just ready to bloom last week, and the prospects up to date in that section are all that could be desired. There is, however, yet a danger of a late frost, and, therefore, for a week or two the prospects cannot be very definitely estimated.



A Home Garden Planted and Cared For by a Girl of Twelve.



Fall Fair Exhibit of School at Worcester, Mass.

NEWS OF THE DAY.

Canadian.

Another valuable oil well, yielding two barrels a minute, has been struck at Leamington, Ont.

One million whitefish fry have been placed in Lake Erie, at Port Stanley.

Six hundred more farmers left Toronto on the Home-seekers' Excursion to the West last week.

Mr. George McKenzie, who has been exploring in Northern British Columbia, reports having found a vast coal area in that vicinity.

A disastrous fire, causing losses amounting to \$30,000, occurred at Manitowaning, Manitoulin Island, recently.

Sir Wilfrid Laurier has assured Mr. Nosse, the Japanese Consul-General, that the anti-Japanese acts of the British Columbia Legislature will be vetoed by the Federal Government.

At the half-yearly meeting of the Grand Trunk Railway held recently, the President said the company would fight any attempt in Ontario to increase its taxes.

Signor Marconi and his bride are in Canada. Marconi will inspect the wireless telegraph station at Glace Bay, C. B., and will make arrangements for the stations which are to be erected at Sable Island and various inland points.

Rider Haggard, who has come as an Imperial delegate to investigate immigration conditions, with a view to finding homes for the unemployed British, is at present in Canada. A scheme is afoot for putting buildings on lands sold to British immigrants, and allowing the latter to pay for them on the instalment plan.

British and Foreign.

The total number of deaths resulting from the recent earthquakes in India is now placed at 14,000.

Four hundred Spanish workmen have been buried by the collapse of a reservoir at Madrid, Spain.

The sum of \$100,000 has been accepted as a gift from John D. Rockefeller by the American Baptist mission.

Since the beginning of the Russo-Japanese war, 22 vessels bound for Vladivostok with contraband trade have been seized by the Japanese, with a consequent gain of over \$6,000,000 to the Japanese.

In a recent encounter between the troops of the Sultan and the rebels in Morocco, the Sultan's troops were compelled to retire with much loss of life. The retreat would have been an utter rout had it not been for the services of the French officer, Lieut. Mongin, who, with his French frontier forces, interposed.

The great Russian fleet is still steadily bearing northward, and Rojestvensky has sent his last message to the Czar: "I will not telegraph you again before the battle. If I am beaten, you will learn it through Togo. If I defeat him I will announce it to you." This great battle may, possibly, have taken place before this paper can reach its readers; where and how are still matters of vaguest surmise, even to the greatest neutral naval experts. The strength of the two fleets which will thus meet in what will probably be one of the most terrific sea encounters on record is as follows: The Japanese have five battleships, of a total of 69,800 tons, with 14.6-inch armor, and throwing a total broadside of 20,766 pounds. The Russians have seven ships, of 85,094 tons, with from 10.5 to 12.5 inches of armor, and with a total broadside of 26,966 pounds. In armored cruisers the contrast is overwhelmingly in favor of Japan. She has eight such ships, of 73,552 tons, with a total broadside of 13,766 pounds, to Russia's two ships, of 14,393 tons, and of only 1,388 pounds broadside. In the third class, of protected cruisers, Japan has also an enormous advantage, having 14 ships, of 52,543 tons, and of 10,969 pounds broadside, against Russia's six ships of 26,818 tons, and 2,532 pounds broadside. Upon land progress is being made but slowly, and it is now thought that Marshal Oyama will have to fight another big battle before he can take possession of Harbin. From St. Petersburg come rumors that the Czar has become insane. The report, however, has not yet been confirmed.

The Lewis and Clark Exposition.

Mr. M. D. Wisdom, Superintendent of the Live-stock Department of the Lewis and Clark Exposition (this year's World's Fair), to be held at Portland, Oregon, in commemoration of the 100th anniversary of the exploration of the Oregon country, announces that the live-stock show in connection with the exposition will be held August 28th to September 29th. Liberal cash prizes are being offered in all the leading classes of live stock, but there will be no dairy test. The exposition will be opened next month, and will continue for six months.

THE FARM BULLETIN

The Dominion Agriculturist on "Stock Food" Experiments.

Sir,—In your issue of the 23rd of March appears a letter, purporting to be written by one E. B. Savage, evidently an employee of, or an agent for, the International Stock Food Co. In this letter your correspondent undertakes to criticise the experiment with stock foods recently conducted here. I am sorry to have to ask you to afford me sufficient space in your valuable paper to enable me to reply to the various claims put forward and charges made by your correspondent, but I think you will admit that some of the statements made by Mr. Savage call for rebuttal or explanation.

Permit me, therefore, to consider in turn some of the points taken up in the above-mentioned letter.

1. Your correspondent claims that International Stock Food should be fed as a tonic to live stock suffering from indigestion or other ills, and I admit that it is just possible that fed for this reason International or any other stock food may prove profitable (for a time). But your correspondent a few lines further on says: "Secondly, it should be used as an addition to the grain rations of all fattening stock, for the purpose of STIMULATING the digestive organs." Scientific and practical men interested in animal nutrition (animal in its broad sense) are agreed that the continuous use of stimulants is degenerative in its general effects, usually having for particular effect the enfeebling of the organ or organs more highly stimulated, and the creating of unnatural appetites. Again, a preparation or prescription that is tonic in effect and likely to prove helpful in time of ill health is, if its use be continued after the restoration of health, likely to prove a detriment rather than a benefit, and is certain to prove useless and expensive.

2. Then Mr. Savage states: "It is a well-known scientific fact that the average farm animal has impaired digestion to a greater or lesser extent." I have made a study of scientific agriculture for many years, and have devoted special attention to animal nutrition, and, Sir, never, save in stock-food advertisements, have I come across the above quoted foundationless remark. Further, I have not been able to meet anyone who held that opinion, or had heard it or seen it advanced, save in the above-mentioned connection. I am sure the average farmer will bear me out in this, that under normal conditions of food, water, air and light, 99 per cent. or more of the live stock of this country are in perfect health, so far as digestion is concerned.

3. As one of the staff of the Dominion Experimental Farms, I was glad to hear that Mr. Savage was not prejudiced against us. We have no ambition to do the International Stock Food Company, or any other stock food company, any harm. We are anxious to find out what we can about stock-feeding problems.

The markets in Canada to-day have many stock foods on sale. Does it not seem reasonable that we should try to find out what we can about the value of these stock foods? If our first experiment along this line had resulted in showing a decided advantage from the use of them, would not the companies have been glad to see the result published? Why should they object then when the results are against them? If in future experiments results more favorable to the use of stock foods are secured, they too will be published.

4. Mr. Savage makes light of the heaviest gains made by any of the lots fed. Had he taken the trouble to look up data on this matter, he would have found that an average gain of 1 lb. per day is considered very good feeding. The average daily gains of all the 32 pigs fed on the experiment was 1.15 lbs. per day. Pigs making such gains would be ready for the block in about 5½ months from birth. Now, it is well known that the average Canadian pig is not ready for the best market (180 lbs. live weight) till about seven months old. It is evident, therefore, that these pigs were fairly thrifty.

As to the large gains mentioned by Mr. Savage, while I do not say that they are never made, I do say that they are the exception and not the rule, and are usually made for a short time only. We have records of such gains here, but some particular reason can usually be given for their showing up. Besides, the production of first-class bacon and the very rapid fattening of pigs do not go well together; are, in fact, opposed to each other.

5. Mr. Savage says the report is "in the form of a statistical table," and as statistical tables are no good, therefore this report is no good. The report took the form similar to a statistical table for the sake of conciseness. It is not a statistical table, as Mr. Savage very well knows.

Then, again, Mr. Savage compares "ordinary practical conditions," and "conditions found on an experimental farm." I spend a good deal of time on one experimental farm, and have visited some score or more other experimental farms more or less frequently, and have never noticed any particular difference between the foods, the air, the water, the buildings and the attendance found on experimental farms and on ordinary farms, and these conditions are, I take it, the chief factors affecting the growth of pigs.

6. Your Mr. Savage says, "The pigs on which the test was made differed widely in weight to start with." The heaviest lot, the one on meal alone, averaged 75 lbs. each to start; the lightest, 45 lbs. each to start on meal and skim milk;

The lot on International Stock Food averaged 52 lbs. each.

The lot on Anglo-Saxon Stock Food averaged 51½ lbs. each.

The lot on Herbageum Stock Food averaged 55 lbs. each.

The lot on meal outside averaged 51 lbs. each.

The lot on meal outside, with pasture, averaged 62½ lbs. each.

Not a great deal of difference after all, is there? Further, the results of very many authentic feeding trials with pigs go to show that the younger the pig the cheaper the gains. This being the case, it is evident that the lot on meal alone inside labored under something of a handicap when compared with the lot fed on International Stock Food. The lot fed on meal alone put on 100 lbs. gain live weight for \$4.38, while the younger lot, on International Stock Food, that might have been expected to make gains somewhat more cheaply had meal alone been fed, cost, when International Stock Food was fed, in addition to a similar meal ration, \$6.17 per 100 lbs. live weight. The pigs on meal alone outside, starting at 51 lbs. (practically the same weight as the lot on International Stock Food), made 100 lbs. gain in live weight at a cost of \$4.31, slightly cheaper than the gains made by the lot on meal alone inside. Supposing the fact of being inside or outside of no consequence (and I believe it to be but a small matter, judging from other experiments), these results go to show that the lot fed on International Stock Food should have made gains more cheaply than the lot fed on meal alone alongside of them in the pen. They did not do so.

7. As to Mr. Savage's contention that it would be practically impossible to get together 32 pigs that would take on flesh with equal rapidity, I may say that all the pigs were bred on the Experimental Farm here, where from 20 to 30 brood sows are kept. The pigs were of different breeds, Yorkshire, Berkshire, Tamworth and Large Black, one of each breed in each lot as nearly as possible. The individuals in the lots were uniformly in size, which fact accounts for the average weight of some of the lots being greater than the average weight of some other lots. It has been found better to have the pigs in one pen of uniform size, rather than have the average weights of different lots equal where arranging pigs somewhat uneven in size or age for an experiment. As will be readily understood, the breeding of 32 pigs to be of exactly the same weight and the same age at a given time is very difficult, if not quite impossible. However, while there was as much as a four weeks' difference in age between the largest and smallest pigs, the individuals were, with the exception of the lot fed on skim milk, healthy and vigorous. The lot on skim milk was made up of the smallest pigs from four litters. The result speaks volumes for skim milk as a food for pork production.

Probably Mr. Savage's fear that all pigs would not put on flesh with the same rapidity explains the otherwise apparently inexplicable fact, that, so far as I can find out, no really comparative feeding test has been conducted by any of the Stock Food Companies to demonstrate the exact value of their preparations as meal savers.

8. Mr. Savage states that "the same amount of grain was not fed to each animal." Each lot was fed all it would eat up clean. If the supplementary food was of a character to enable "more of the feeding stuff to be taken into the system and go towards building up the body so that less of it needed to be fed," the supplementary feeding stuff (not we) was responsible.

In conclusion, I may say that we do not, as stated in our report, intend to let this matter drop here, but purpose carrying on a similar experiment in the near future. In the 1904 experiment we followed the printed directions as to quantity and manner of feeding of each of the stock foods. If these directions are not sufficiently accurate we are not to blame. If any of the stock food companies have any suggestions to offer as to method of feeding their foods, we would be glad to hear from them.

J. H. GRISDALE,
Agriculturist.
Central Experimental Farm.

Stock-judging Contests.

(Ottawa correspondence.)

An interesting feature of many of the county exhibitions in the Ottawa Valley during the coming fall will be stock-judging contests for farmers' sons. While definite rules to govern the competitions have not yet been adopted, it is proposed to bar out college graduates, and to place the age limit at eighteen. In connection with these contests, a movement is on foot to hold instruction classes at central points throughout the counties interested during the early part of the summer, at which an expert judge will instruct prospective competitors in the fundamental principles of live-stock judging. The Ottawa Valley has the reputation of being one of the best exhibition districts in Canada, and in inaugurating these classes it is expected that interest in live-stock judging among farmers' sons will be stimulated.

Compensation for Glanders.

We understand that an order-in-council was passed at Ottawa recently, authorizing compensation for glandered horses showing clinical symptoms. Formerly clinical cases were not paid for by the Dominion Government, only those reacting to the Mallein test without the clinical evidences. This expensive equine scourge ought soon to disappear under the active researches of the Veterinary Branch. Do not attempt to hide cases of glanders!



Life, Literature and Education.

"The first class of readers may be compared to an hour-glass, their reading being as the sand; it runs in and out and leaves not a vestige behind. A second class resembles a sponge, which imbibes everything, and returns it in nearly the same state, only a little dirtier. A third class is like a jelly bag, which allows all that is pure to pass away, and retains only the refuse and dregs. The fourth class may be compared to the slave of Golconda, who, casting aside all that is worthless, preserves only the pure gems."

—[Coleridge.]

In which class do the readers of the above paragraph place themselves, individually?

The Reading of Books.

Often one hears a farmer remark, "I have no time for reading." Excuse for this there may be during the long summer days when there is work to be done from early morning until the last of the daylight, and often aching bones and the lassitude that comes of physical weariness. At the same time, it is a query if the farmer, as well as most other men, improves all the moments which he might easily spend in reading. It is a good thing to remember that "a change is as good as a rest," or, as one might put it, "a change is a species of rest." There are moments at noon, at night, and on Sundays, which most of us can find without much hunting, and which we might well spend, to our pleasure and profit, in reading.

It is not necessary to devour great numbers of books in order to be a cultured man, and yet some reading is absolutely necessary. The farmer who reads is very easily told, in both manner and speech, from the one who never reads. The great thing necessary, when time is of necessity limited, is that one read wisely. This does not mean that all need apply themselves to one class of books; the kind that appeals to you may not, in all probability, appeal to me, but there may be the nugget of gold in your selection as well as in mine. As Henry Van Dyke has said, "Doubtless there are treasures to be found in all regions of literature—not a solitary pot of gold hidden in a single field, and a terrible chance that we may not happen to buy the right lot—but veins of rich ore running through all the rocks and placers in all the gravel-beds." At the same time, in order to be sure of the gold, one must see to it that one applies one's self only to the best of the class in which he is interested. Because you like novels, there is no reason why you should read Bertha M. Clay, and cast aside David Copperfield or Vanity Fair. Read the best of that which interests you, and branch out into other lines as you go. The more particular you are, the more finely-developed will your taste be-

come, so that, by and by, you will be as ready to take poison into your mouth as to waste time on trashy literature.

You may not, possibly, agree with all that you read, even in the works of good authors, but that is no necessity; even good books are not to be bolted like pills. If a book makes you think, whether to agree or disagree, then that book is likely proving of use to you. Torpidity of mind is a thing that should be dreaded as the plague, for the thought is the life. In so far as we cease to think, to weigh, to consider things, we cease to live.

Again, if you have but little time, read standards in preference to the "latest thing out." The chances are that the book whose title flares across the bookstore windows and newspaper headlines in blare of heavy type and fierce capitals, is but an ephemeron that will be dead before the year is out. Don't bother with it unless you find it recommended by those whose judgment is worth listening to. You have no time to waste on ephemera, and you may take it in very truth that "a book that is not worth reading twice is not worth reading once." Read then, and re-read; so, only, may you assimilate, and get the full pleasure from, and grasp of those wonderful creations which have been described as "the precious life-blood of master spirits, embalmed and treasured up on purpose to a life beyond life."

Violating the Oath.

Judicial authorities, particularly in Western Canada, are becoming more and more alarmed at the frequency with which witnesses in the courts perjure themselves. The crime of perjury seems to be held in the same estimation by a large number of the population as any sharp practice of business, many of our American immigrants considering its seriousness only in proportion to the punishment it merits in their native States, which, in some instances, is nothing more than a black mark against their names. This is one of the difficulties with which the Canadian judiciary and politicians have to grapple. The stability and integrity of the nation depends upon the observance of her laws and the maintenance of the inviolacy of the oath. With the spread of the doctrine of materialism, and the very general prevalence of atheism, the sacredness and significance of the oath is being ignored, so that it is becoming more and more incumbent that some other method be employed to impress people with its importance. The past twenty-five years have seen the world awake to its most strenuous existence, and it is most probable that the bustle of business activity has been responsible for the neglect of parents to teach their children many things to fit them to live among others, a more sacred regard for absolute truthfulness and the honor of their word, and particularly of the meaning of the oath. In case any of our readers have not at hand a definition of the term "oath," we give here, in the words of a noted authority: "A religious asseration by which we renounce the mercy or imprecate the vengeance of Heaven if we speak not the truth."



Evan Roberts.

A few months ago the world had never heard of Evan Roberts, now one of the most striking personalities of the times. He is a tall, gracefully built, musical, thoughtful-looking young man of twenty-six years, the son of a Welsh miner of sturdy character, both his parents being characterized by religious simplicity and zeal. Though a nominal Christian, it was not until the aggressive work of an "Endeavor Society" reached his village that the inspiration came to him, after prolonged "communion with the Unseen," to "speak to the people" of his village, which he did. This was last November. Since then the fiery cross of revival has spread to some 40,000, turning lives of sin and selfishness to lives of righteousness and self-sacrifice. As to the fruits, long-standing debts have been paid, the saloons and music-halls have closed for want of patronage, it is quite common for magistrates to receive white gloves, there being no criminal cases to try at the courts, and the Bible Society was at times unable to supply the demand for copies of "The Word of Life." The revival spirit has spread to England, though Evan Roberts has declined "invitations" to speak outside of his native Wales. Humble and self-effacing, he is one of those who, seeing visions and dreaming dreams, has become one of the greatest spiritual influences in Great Britain.



Bliss Carman.

A very few lines of poetry are usually sufficient for the revelation of the master-touch. The eminent prose writer may write lines, pages even, which are essentially commonplace, but the true poet—who added to that sixth sense for grasping the beauty and essence of things which in its fulness seems to belong most of all to the poet, has also the gift of being able to express his thought in words beautiful, melodious beyond the power of ordinary speech—must, of necessity, show his

power in almost every line. The works of few of our poets, perhaps, reveal the presence of this master-touch more strongly than those of Bliss Carman. Music of language, delicacy of description, originality of thought and expression, are all there. He knows just what to tell and what to eliminate, and he never overloads with that wealth of detail which sometimes renders the writings, even of some of the masters, rather odious reading. An impressionist among the poets, he dashes in a stroke here, a stroke there. The interspaces he leaves for the imagination of the reader to fill—but the picture is complete.

Bliss Carman was born at the beautiful city of Fredericton, N. B., in April, 1861, and was educated at the University of New Brunswick, taking the B. A. degree and the Alumni gold medal in 1881, and the M. A. degree in 1884. Afterward he spent some time in private study, and reading at Edinburgh and Harvard. Since then his life has been given up to literary work; in truth, it would seem that literature runs in the blood of his race, for he is a cousin of the brilliant Roberts family, of which Charles G. D. is the most widely-known member. Mr. Carman has been associated in editorial work with the New York Independent, the Cosmopolitan, and the Atlantic Monthly, but his name will live in the collections of poems and valuable prose works which he has given to the public. Among the best known of these are, "Low Tide on Grand Pre," "A Book of Lyrics," "A Sea-mark," "Behind the Arras," "A Book of the Unseen," "More Songs from Vagabondia," "By the Aurelian Wall, and Other Elegies," "Friendship of Art," and "Kinship of Nature." He has also assayed an ambitious piece of poetical work in reproducing the lost poems of Sappho, the "queen of song" of Lesbos, who loved and wrote about six centuries before Christ. Mr. Carman has collected the few fragments of her poems which have survived, and has built upon them a superstructure such as he conceives her elaborated work might have been. As Chas. G. D. Roberts, in his introduction to the volume, says: "Perhaps the most perilous and the most alluring venture in the whole field of poetry is that which Mr. Carman has undertaken in attempting to give in English verse those lost poems of Sappho, of which fragments have survived. . . . It is as if a sculptor of to-day were to set himself, with reverence and trained craftsmanship, and studious familiarity with the spirit, technique and atmosphere of his subject, to restore some statues of Polyclitus or Praxiteles, of which he had but a broken arm, a foot, a knee, a finger, upon which to build." . . . Mr. Carman is still carrying on his literary work in New York City.

The following stanzas from "Low Tide on Grand Pre," which in their plaintiveness remind one somewhat of Jean Ingelow's beautiful "Divided," may serve as some indication of Bliss Carman's style of writing:

"Was it a year, or lives ago,
We took the grasses in our hands,
And caught the summer flying low
Over the waving meadow lands,
And held it there between our hands?"

And that we took into our hands
Spirit of life or subtler thing—
Breathed on us there, and loosed the
bands
Of death, and taught us, whispering,
The secret of some wonder-thing?

Then all your face grew light, and seemed
To hold the shadow of the sun;
The evening faltered, and I deemed
That time was ripe, and years had
done
Their wheeling underneath the sun.

So all desire and all regret,
And fear and memory, were naught;
One to remember or forget
The keen delight our hands had caught;
Morrow and yesterday were naught.

The night has fallen, and the tide
Now and again comes drifting home,
Across these aching barrens wide,
A sigh like driven wind or foam,
In grief the flood is bursting home.

Open the Door of Your Heart.

Open the door of your heart, my lad,
To the angels of love and truth;
When the world is full of unnumbered
joys,

In the beautiful dawn of youth.
Casting aside all things that mar,
Saying to wrong "Depart!"
To the voices of hope that are calling
you
Open the door of your heart.

Open the door of your heart, my lass,
To the things that shall abide;
To the holy thoughts that lift your soul
Like the stars at eventide.
All of the fadeless flowers that bloom
In the realms of song and art
Are yours, if you'll only give them room.
Open the door of your heart.

Open the door of your heart, my friend,
Heedless of class or creed,
When you hear the cry of a brother's
voice,
The sob of a child in need,
To the shining heaven that o'er you
bends
You need no map or chart,
But only the love the Master gave.
Open the door of your heart.

—Edward Everett Hale.

A Poem for Reciters.

MRS. LOFTY AND I.

Mrs. Lofty keeps a carriage,
So do I;
She has dapple greys to draw it,
None have I;
With my blue-eyed laughing baby,
Trundling by,
I hide his face lest she should see
The cherub boy, and envy me.

Her fine husband has white fingers,
Mine has not;
He could give his bride a palace—
Mine a cot;
Hers comes home beneath the starlight—
Ne'er cares she;
Mine comes in the purple twilight,
Kisses me,
And prays that He Who turns life's
sands
Will hold his loved ones in His hands.

Mrs. Lofty has her jewels,
So have I;
She wears hers upon her bosom;
Inside I;
She will leave hers at Death's portal,
By-and-bye;
I shall bear my treasure with me
When I die,
For I have love and she has gold—
She counts her wealth—mine can't be
told.

She has those who love her station,
None have I;
But I've one true heart beside me—
Glad am I;
I'd not change it for a kingdom,
No, not I;
God will weigh it in His balance,
By-and-bye;
And the difference define,
'Twixt Mrs. Lofty's wealth and mine.

No man ever sank under the burden of
the day. It is when to-morrow's burden
is added to the burden of to-day that the
weight is more than a man can bear.—
George Macdonald.

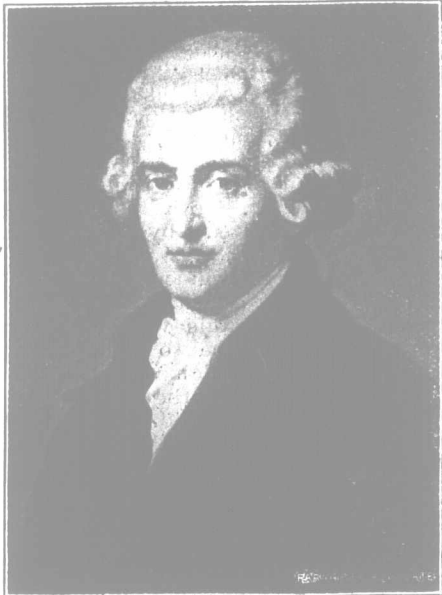
Joseph Haydn.

Born at Rohrau, April 1, 1732.
Died at Vienna, May 31, 1809.

Haydn, coming from a purely peasant stock, represents the entrance into cultivated music of the spirit of the people's song. A son of the people he was, with the homely kindness of his peasant forefathers. When he grew famous, and counted among his pupils such men as Mozart and Beethoven, on all sides could be heard the quaint, affectionate name given him by high and low, the name by which musicians still speak of him, "Papa Haydn."

His father, Matthias Haydn, was a wheelwright; his mother had been a serving-maid. His home was of the humblest kind, and he and his eleven brothers and sisters were brought up with very few pleasures or luxuries. His father was something of a music-lover, singing a very good tenor, and playing by ear upon the harp. He taught his children to look upon music as he did, in the light of a joy and rest. He worked hard during the day, but when evening came the harp would be brought, and the whole family would sing together until it was time for bed.

A cousin, who was choirmaster in a neighboring village, took the boy Joseph into his choir, and later, at the age of eight, he went to Vienna as a chorister in the chapel of St. Stephen. After a childhood and youth of bitter poverty, we find him, at the age of twenty-nine, engaged



Joseph Haydn.

as special musician to Prince Esterhazy of Hungary, a position he occupied for thirty years, composing constantly, and living a simple, natural life. He was unfortunate in his marriage, his wife not being at all congenial with him in her tastes. After the death of his benefactor, he went to London, where he was rapturously received by the musical world.

His most famous compositions are: Oratorios—"The Creation," and "The Seasons." Symphonies—"Military," "The Clock," "Surprise," "La Chasse," and scores of others, many of them nameless.

Haydn was the great pioneer in quartette writing, and the well-known Austrian national hymn, known as the "Emperor's Hymn," was one of his own favorite compositions.—[Adapted from "Masters in Music."

Tommy and his little brother had been playing together most peacefully for some time when suddenly the baby gave a howl, followed by a series of shrieks. The mother rushed in, and, while soothing the crying child, sought to find out what had hurt him. Tommy resisted her cross examination for a time, but finally admitted that he was guilty.

"What did you do to him?" she asked.

"I stuck him with a safety pin."

"What in the world did you do that for?"

"Nurse said you couldn't hurt yourself with a safety pin, and I wanted to see if it was so."



Victory.

He went forth conquering and to conquer.—Rev. vi.: 2.

In all these things we are more than conquerors through Him that loved us.—Rom. viii.: 37.

He will swallow up death in victory.—Isa. xxv.: 8.

"Glory be to JESUS! tell what He hath done;
Sound aloud the praises of the Holy One!
Bind, oh bind the laurels round the Victor's brow;
He Who conquered for us conquers in us now!"

The three texts given above speak of a past, a present and a future victory. Christ has conquered, we are bound to live victoriously now, and the final victory will be complete in the day when the "trumpet shall sound, and the dead shall be raised." At Christmas time, angels were the glad messengers who brought to men the good tidings of God's great gift of Peace, but the brightness of Christmas pales before the great glory of Easter, when the Victor Himself stands in the midst of His friends and offers them His own Peace—won through fiercest strife. At Christmas, we celebrate the coming of the Deliverer, but at the glad Easter season we share in His victory. But, as Canaan was a "gift" to the Israelites, and yet had to be won by hard fighting, so we must fight, if we wish to live victoriously; although, at the same time, our thanks are due to God, who "giveth" us the victory through our Lord Jesus Christ. This is one of the many paradoxes of life which it is impossible to explain, but we should hardly value a victory which cost us nothing.

"In all these things we are more than conquerors through Him that loved us," says St. Paul; and this list of "these things" shows that the victory is no easy one—"tribulation, distress, persecution, famine, nakedness, peril or sword." We are called to go forth in the ranks of the conquering army, following the Victor, Who is called Faithful and True, the KING OF KINGS AND LORD OF LORDS, Who "went forth conquering and to conquer." And how did He conquer? How did He show that He was a King in reality as well as in name? Read the story of that victorious Life and victorious Death. Think especially of His kingliness on that last terrible day of battle; of His daring acceptance of the high priest's challenge, of His kind encouragement of the unhappy Pilate, of the stern silence before Herod, the royal pardon extended to the soldiers, the quiet acceptance of homage from the dying thief, the thoughtfulness for others in apparent forgetfulness of personal agony. Then let us turn the light on our own lives and see if we are really conquerors all day and every day. We have no persecution, famine or great tribulation, perhaps, but the children are fractious or troublesome, we have a headache or a bad cold, meals are not ready just on time, the weather doesn't suit us, we can't have our own way about something, or other people are aggravating. We may think it is hardly worth while bracing ourselves to be conquerors in such trifling matters as these, but every soldier of Christ is pledged to accept his Master's will not only patiently, but joyfully, and to be a conqueror in all things, large and small. To look like a thunder-cloud, to speak crossly, to show temper by hasty, impatient movements, or even to feel irritable, is to lose the chance of a victory. To be worried, anxious, impatient, and afraid that things may go wrong, is a plain proof that we have not confidence in our Leader. We are bound to "trust in Him at all times"—every day, every hour. Then, and then only, we shall be "more than conquerors through Him that loved us."

"He always wins who sides with GOD:
To him no chance is lost;
GOD'S will is sweetest to him when
It triumphs at his cost.
Ill that He blesses is our good,
And unblest good is ill;
And all is right that seems most
wrong
If it be His sweet will."

God does not carry us through life as though we were helpless babies. When He gives us strength to stand on our own feet, to battle against our foes, it would be no kindness to hide us in a safe place where we could look on comfortably at the battle without striking a blow or facing any danger or difficulty. Would you like to be treated like a tender, hothouse plant, which must be shielded from the rough wind or cold, bracing air? The very word "Victory" is inspiring, and victory implies something to conquer. We may fancy we should be very happy if God always gave everything asked for, without any delay; but probably we should not really appreciate even the great gift of Holiness if we could win and retain it without a hard struggle.

I have just been looking over our "Quiet Hour" talks for the last five years, and it has struck me that you may wonder why I scarcely ever mention the life after death, except in connection with our unity with those who have gone on before. Even to-day, you see, I talk about the past and present victory, and have said not a word about the final triumph over sin and death. Why is this, do you think? I can only say that when I ask God for a message to deliver to you, I faithfully try to deliver that message. If it is about the present rather than the future, I can't help it. I know nothing, nor do I want to know anything, about the plan of serving God as a kind of life insurance to secure a comfortable existence for the soul in the next world. The thought of seeing the King in His beauty, and worshipping Him face to face, is almost too sacred to be dwelt on. As for the joy of winning His approval, we need not wait a day nor an hour for that. If to live is "Christ," to die must be "gain," but our business at present is living, not dying. If every day be an Easter Day—a day of victory, of rising from the death of sin to the life of righteousness—then we may safely leave the time and manner of our death to Him Who says: "I will ransom them from the power of the grave; I will redeem them from death; Oh death, I will be thy plagues; Oh grave, I will be thy destruction."

Robertson speaks of the "acting of a death-bed scene" as the most terrible of all unrealities, and suggests that the passionate longing of martyrs for death may have been partly earthly excitement. "Every day," he says, "Christ's servants are dying modestly and peacefully—not a word of victory on their lips, but Christ's deep triumph in their hearts. . . . They came to the battlefield and found no enemy to fight with—no foe was in sight."

The glorious, inspiring Easter message is old, yet ever new, the message that our King has passed through death, and is still the living One, alive for evermore. He has the keys of death, and we are one with Him and may follow closely in His steps.

Life was never intended to be a humdrum commonplace; so, if we allow it to drag dismally along, it must be our own fault. God doesn't make it too easy in order that we may have a chance to be victors. Soldiers may think their daily drill as wearisome, monotonous and meaningless as the daily march round Jericho must have seemed to the Israelites. But how can a general depend on their unflinching obedience to orders, when everything may depend on it, unless they have learned by long and continuous practice to obey promptly, as a matter of course.

I have just been reading a scientific

article which stated that even such an apparently solid substance as a bar of steel is made up of an infinite number of distinct atoms, which never actually touch each other. I don't know much about science, but I do know that the only bit of our own lives we can actually grasp is the present moment which slips by even while we speak of it. The past and the future are not ours to shape, so the great question is: What are we making of the present? The best preparation for holy dying is holy living. St. Paul knew that victory is rather a matter of every-day obedience than of emotionalism, so his triumphant contemplation of the victory over sin, death and the grave ends with the necessary climax—so quiet, yet so grand—"Therefore, my beloved brethren, be ye steadfast, unmovable, always abounding in the work of the Lord."

"So he dies for his faith. That is fine—
More than most of us do.
But say, can you add to that line
That he lived for it too?
In his death he bore witness at last
As a martyr to truth.
Did his life do the same in the past
From the days of his youth?
It is easy to die. Men have died
For a wish or a whim—
From bravado or passion or pride.
Was it harder for him?
But to live—every day to live out
All the truth that he dreamt,
While his friends met his conduct with
doubt,
And the world with contempt.
Was it thus that he plodded ahead,
Never turning aside?
Then we'll talk of the life that he led.
Never mind how he died."

HOPE.

My Mother.

She gave the best years of her life
With joy for me,
And robbed herself, with loving heart,
Unstintingly.

For me with willing hands she toiled
From day to day,
For me she prayed when headstrong youth
Would have its way.

Her gentle arms, my cradle once,
Are weary now;
And time has set the seal of care
Upon her brow.

And, though no other eyes than mine
Their meaning trace,
I read my history in the lines
Of her dear face.

And, 'mid His gems, who showers gifts
As shining sands,
I count her days as pearls that fall
From his kind hands.

The Value of Example.

To have your child truthful, be truthful.

To have him temperate, be temperate in all things.

To have him kind to others, be yourself kind to others.

Prescribe healthful amusements and so far as you can take part in them.

Prove to him by your life that a good name is to be chosen before great riches.

Teach him that riches are not to be despised, but should never be got by doing harm to others; that when acquired should be treated as a trust, not as a hoard.

To have him honest, present to him in yourself a living example of honesty. The chief part of a child's knowledge comes through observation. Acts mean more to him than speech.

My Share.

I have no lands, I have no gold;
Fame's way my footsteps miss;
But I've my baby girl to hold,
My little lad to kiss.
To helpful heights I may not reach,
Or tides of error stay;
Be mine the sweeter task, to teach
Their unstained lips to pray.

—Cora A. Matson Dolson, in Good Housekeeping.



An Easter Baby.

The sun was just rising one bright Easter Day—
The air was so balmy you'd think it was May—
As Trixy rushed out of the door
To play with the storks which her dear uncle Ned
From Egypt had brought, and a story she'd read
Made her wonder more and more.

"The babies are brought by the storks," said the book,
And Trixy determined she'd carefully look
For the baby her pets might have brought.
So she harnessed them up and drove them around
The stable and barn, then they suddenly found
The thing that she eagerly sought.
For a great Easter egg stood up on a nest,
And the storks chipped the shell—you can see all the rest,
How Trixy bent over to hear
The strange little sounds that the baby inside
Was making—he chuckled and laughed till he cried—
It certainly was rather queer.
When the top of the egg fell down to the ground
He popped up his head with never a sound,
But Trixy was wild with joy.
"What a darling you are!" she exclaimed, with a kiss,
"Did ever a child have a plaything like this?
A real, live baby-boy!"

COUSIN DOROTHY.

of those things were in the egg, the white box was closely sealed, so they could not get in from the outside—yet there they are! Isn't that real magic? It is not less but more wonderful, because millions of chickens chip their way out of eggs every year. Each common egg, that shows no sign of life and yet contains within itself the mysterious power of changing into a living creature, should remind us of the great Easter fact of the Resurrection.

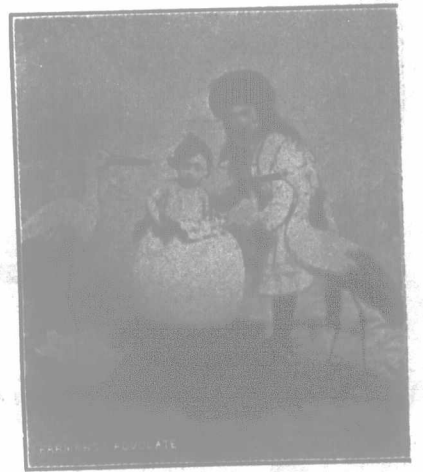
A long time ago a German countess said she did not believe that people who had died would ever rise again, so she ordered that her grave should be covered with heavy slabs of stone fastened together with iron clamps. Her directions were carried out, and these words were cut in the stone: "This burial-place, purchased to all eternity, must never be opened." But it was utter folly to defy the power of God, or to think that any stone could stand in His way. As though to show how easily He could open the tomb that had been so tightly closed, He did not send a great earthquake, but only a very tiny messenger to do the work. It was only a little seed, and no one would have thought such a weak and helpless thing could lift great stones out of its way. But "God hath chosen the weak things of the world to confound the things which are mighty," and He often does great things with very small instruments, so that everyone can see the power is not in them but in Himself. This seed was alive, and a little shoot came out of it which no stone could keep down. It grew on steadily, forcing its way up towards the light, until it tore the iron clamps apart, and even pushed aside the heavy granite slab. People look and wonder at the great tree which

as oranges are tied to a Christmas tree; they were not in existence before. Can you or anyone tell how they are made? These, and many other wonders, go on right before our eyes, and yet we are not sharp-sighted enough to see the transformation. No one ever saw a blossom change into an apple, or an egg change into a chicken.

"Who ever saw the earliest rose
First open her sweet breast?
Or, when the summer sun goes down,
The first soft star in evening's crown
Light up her gleaming crest?"

I once saw a moth come out alive from the grave in which it had been buried all winter. It had been a dead-looking chrysalis when last I noticed it, but one day it began to squirm and wriggle, and I found that it was not only alive, but had changed into a very different-looking creature from the crawling thing that had been buried so many months. I saw it slowly unfold its unused wings and fly away, but no human eye had seen the slow change from a worm, that could only creep slowly on the ground, to a moth which could fly easily through the air. Now, perhaps, you will understand why the two commonest Easter symbols are the egg and the chrysalis. They are both pictures of the Resurrection, and so also is every seed that is buried in the ground to decay and rise again. Think of the big plants and beautiful flowers that are packed invisibly into those tiny brown wonder-boxes? You might cut open the seeds, but you could not see the wonderful things that are inside, and no man on earth is clever enough to unpack them—but put them into the grave, and God does the rest.

One day the world is brown and shabby; then, a few days later, it has put on a pretty green dress, studded with golden jewels, which we call dandelions. In what invisible wardrobes have the green robes been packed all winter, and where are the jewel boxes from which the dandelions have been shaken out so thickly? You would not have found them if you had dug in the ground. The sudden change from shabbiness to beauty makes one



Some Everyday Wonders.

I daresay you would be delighted if, like little Trixy, you could find in your barn a wonderful Easter egg with a baby inside. Of course that is impossible, except in a fairy tale—and you don't believe in fairy tales, do you?—but perhaps, if you had your eyes open to notice them, you would find just as wonderful things happening all around you. The people who are fortunate enough to live in the country have no need to envy Alice her Adventures in Wonderland, for they live in wonderland all the time, especially in this springtime season. Perhaps you think the Easter eggs that are dyed red, blue or yellow are more wonderful than the common white ones in the henhouse, but really the common ones—like most common things—are far more wonderful. If a round box were filled with the yolk and white of an egg, and sealed up so that nothing could possibly get in from the outside, and then a fairy were to touch it with her magic wand and a little downy chicken should suddenly start to chip its way out, you would think you had got right into a fairy tale. Is it any less wonderful because the stuff inside the egg takes three weeks to turn into a chicken? Where did the lively little chap come from? Where did he get his fluffy black feathers, or his soft yellow down, his bright eyes, or his chirpy voice? None

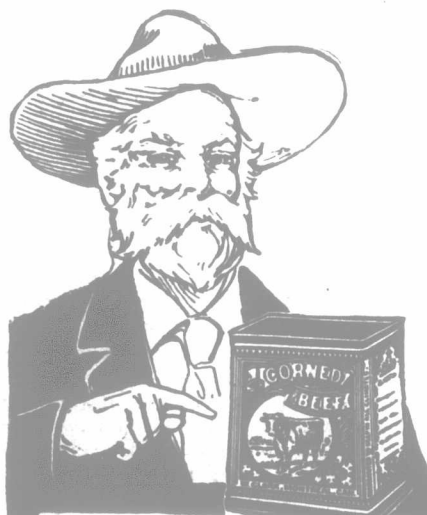
so quickly opened the tomb a foolish woman thought could be safely closed. Life is stronger than death, and there are resurrections everywhere in the spring—but I promised to show you some everyday wonders. What would you think if a fairy should wave her wand towards an orchard, which was standing bare and leafless in its winter clothes, and instantly every tree should be beautiful in a new dress of green leaves garlanded with pink and white blossoms. Well, isn't that what you see every year? It is done slowly instead of suddenly. One day there are no leaves, no blossoms—you might cut the branches open and you would not find one—then another day comes and each tree looks as though it had been dipped in a bath of popcorn, tipped with pink, like the popcorn balls. Isn't that like magic? Where did all the dainty blossoms come from? They were not anywhere, and now they are here! But that is not all. The fairy might wave her wand again and all the soft little flowers would fall to pieces, and the trees would be covered with big, juicy, red or yellow apples. Where did they come from? They also were not anywhere in the world, and yet there they are! You forget to wander at the transformation, because it is done slowly and you are so used to it, but is it any less marvellous on that account? Those apples were not tied onto the tree from the outside,

think of Cinderella, when the fairy god-mother turned her rags into a beautiful ball-dress. How do the big cornstalks and cobs of corn come out of a little grain? The less seems to always contain the greater, and the wonders of the fairy books are nothing to the wonders of God's great Book of Nature. The more you read in it the more pages you find there are yet to be studied, and it is the most interesting book that ever was written.

"Sing a song of days of spring,
Softly fall the showers,
Forty thousand raindrops bring
Half a million flowers.
Buds a-nodding as you go;
Emerald plumes a-dancing;
Here and there a bird in air—
Isn't it entrancing?
Gaily spring the blossoms up
Through the mould, right bravely;
Flaunts the golden crocus-cup;
The hyacinth stands gravely.
Every bud its message brings,
Peeping through the bowers,
Sing a song of days of spring,
Welcome to the flowers."

COUSIN DOROTHY.

"See that man? Well, sir, he landed in this country with bare feet and now he's got millions." "Gee whiz! he must be a regular centipede."



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B-2-05

With the Flowers.

Making Flower Beds.
 As was suggested some time ago, it is well to make flower-beds very early in spring, so that the frost and rain may help in mellowing the soil. It must be remembered, however, that no matter how early the beds are made, the majority of seeds must not be sown too soon. It is, of course, a great temptation to get out and put in the seed during the first warm, dry days, when it seems impossible that March winds and nipping frosts should come back upon us; but, if you would have a successful garden, you must resist. Sweet peas, of course, cannot be in too early, and seed of poppies, sweet alyssum, or any other plants which you may have observed to "self-sow" themselves successfully, may be put in as early as you choose, but for all less hardy varieties the old rule holds good, "Sow when the farmer is putting in his corn." This is also the time in which plantlets from the cold frame or window-box should be transplanted.

If possible, flower-beds should be given a southern exposure on the southern side of a building, a clump of trees or a mass of tall shrubs. If there is also some protection to the westward all the better. The first thing to do is to mark them out and spade thoroughly to a depth of about two feet. Unless the soil is very rich, leaf mould and mucky manure should be liberally incorporated, and the whole mixed up as finely and evenly as possible. Swamp muck should never be added except for salvia, ricinus, cannas, and spotted callas or other marsh plants. Unless the beds are

intended for peonies, lilies, etc., which are liable to rot if compelled to lie in the wet during spring or autumn, it is as well to make them rather flat for convenience in watering. When finished, drive in bricks or siding held in place by pegs all around the beds in order to protect them from encroachment of grass. These foreign borders do not look very attractive at first, but may soon be rendered practically invisible by giving them a coat of dull green paint, and planting a thick border just inside. Dusty miller, dwarf phlox, feverfew, sweet alyssum and ageratum will all be found admirable for such borders.

May we conclude with a few rules which have been often given, but which seem to bear repetition during every season of garden-making? (1) See to it that the tallest plants are placed at the back of the borders or the center of the beds. (2) Do not mix blue and red flowers in the same bed, nor pink and red, pink and blue, blue and purple, etc. (3) Use white flowers lavishly. (4) Mass flowers as far as possible; this is nature's way. A single clump of Sweet William, or a few straggling stalks of summer-flowering hyacinths may not be a very imposing sight, but place a mass of Sweet Williams before some shrubbery, or mix in a hundred white-bellied hyacinths in a bed of scarlet salvia or geraniums, and see what the effect will be. (5) In all your gardening exercise ceaseless observation and care. This alone will secure you artistic and satisfactory results.

FLORA FERNLEAF.
 "Farmer's Advocate" office, London, Ont.



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HEALTH IN THE HOME.
By a Trained Nurse

Simple Clothing for Children.
 While a great many people are converted to the truth that there cannot be good health without a certain amount of fresh air and exercise, a number of them believe that they themselves are too busy to spare time for it. There are always so many things to be done that make for the comfort of the family, and, if the family comprises little children, the mending and making, etc., for them constitutes a never-ending task. In making children's clothing, why not simplify everything as much as possible? I do not think it is right to make a child wear something it feels to be ugly and dislikes, or is ashamed to be seen in, but simple clothing for children is really the prettiest, and is becoming more and more fashionable. Frills and trimming do not make the child happier, healthier, or prettier. Little children are pretty enough in their childishness, and the plainer their clothes are the better they look, as a rule. Children need a great many changes of plain clothes, to the end that they may be kept constantly clean and dry—they do not need anything more. Little dresses can be made of seersucker for everyday use. As these do not require to be ironed, there at once is a saving of time and energy, which will do the children much good, if applied to the care of their mother's health, thus giving her a chance to adjust the really important things with better judgment than she can possibly have when tired or worn out. Again, why does not the mother always sit down to prepare vegetables and wash dishes? There is no reason why she should not; and how much bet-

ter washing can be done on the kitchen veranda; and why should not the sewing machine find a place there also? Why should not meals be eaten there upon a clean, white deal table, and tablecloths and the washing of them dispensed with during the hot weather. There is plenty to be done in the summer, and little enough time for the farmer's wife to spend pleasantly out of doors. I recommend, therefore, that at the time of the spring cleaning, everything not necessary for use or comfort, and with the exception of the household goods without which would be desolation, all bric-a-brac be put away for the season, to save cleaning and dusting, and make more room. It is for just this sort of thing that people leave beautiful homes in the cities and go out to wild places in the woods to camp—to get away from the heat and multiplicity of "things." No sensible woman wants to look at furniture in the sitting-room on a beautiful summer evening, when she might sit outside and be rested and refreshed, nor, I should think, would anyone want to dust ornaments and unnecessary furniture on a beautiful summer morning. I know there are some who consider any condition that might be called "resting" almost a crime, but they might at least transfer their energies to the garden, and get some fresh air and outdoor life.

A. G. OWEN.

A short refrain from a former Review:
 Little Willie had a mirror
 And he licked the back all off
 Thinking in his childish error
 It would cure his whooping cough.
 At the funeral, Willie's mother
 Sadly said to Mrs. Brown,
 'Twas a chilly day for Willie
 When the mercury went down



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Wade—They say the turnips are as big as footballs down south.

Cam.—That's nothing. I saw three policemen asleep on one beat in St. Louis.

Freddie—What's the difference between a politician and a statesman, dad?

Cobwiger—Well, when they run against each other, the politician gets elected.

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The Farmer's Wife.

Dear Dame Durden.—This is my first letter to the Ingle Nook. The position of the Illinois woman is in some manner like my own, so that I naturally longed to write and say what I thought about the country life. I must confess myself to being a born lotus eater. I could dream all day over a painting by Sandro Botticelli, and spend hours going over in my memory a sentimental nocturne by Chopin; or, in fact, I could continue musing indefinitely over all the beautiful beloved things in which there is no money. But Canada is a country for workers, and not for dreamers. When we choose the strenuous, eventful life of a country where there are no "records" to "moon" over, we must let our dreams be our recreation, and choose to do the noble deeds, which may possibly be no more than filling in the daily round.

I am sorry for the Illinois woman from my heart, because I too have to feed pigs and calves, and toil round the farm. I am building up a splendid poultry business, and attending to the washtub, and doing the thousand and one distasteful chores, while the "boss" is building houses, chopping trees, clearing land, and doing all the terribly hard work that even the most determined woman could not hope to accomplish. Fortunately for me, I am not like her "mated to a clown." I believe that if I were to suggest that I should spend the rest of my days in a hammock, my husband would shrug his shoulders and fix up the hammock, and take up my packs and carry them uncomplainingly with his own. It is I that am too hard a master to myself. I was reared in the lap of luxury, and when adverse circumstances turned me out into the cold world, I felt that on the farm and out in the country was a wider and better life than even Art or Literature could offer. To be one of the workers, to rise every morning with the feeling that there is something to be accomplished, some difficulty surmounted, is better than dreams. I think that I should have grudged myself the money laid out in stationery just to write letters to my friends; but there is a brisk demand for useful copy here in Canada, and by snatching an hour or so on quiet afternoons my pen supplies us with \$36 for advertisements every month. Of course those who have genius could do even better than this. Many a great author has been able to make his voice heard from the depths of an obscure farm. Never grumble at the farm life for not giving you the chance that you deserve. If there is anything in you, there is no better place for you to hail from.

There is one other point in your letter, dear Dame Durden, that I have so very often ruminated on. Why should women be so afraid of their husbands as many of them are? When a woman has done a fair and square day's work, and she knows it, she should not be afraid to take up a book or piece of needlework, or to visit a friend. If women only had a little more good temper, and a little more calm courage! Even the inhuman brutes that some women would prove their husbands to be, know that a wife is more valuable on the farm than even their best cow or pig, and they would not care to smash her up or mutilate her as they do in the London slums. So I would say to sum up: Do a fair day's work, and then stop. Don't be goaded on by sarcastic remarks. Take care to earn a little independent money, to show what you are worth commercially, and if you do make a mistake in choosing your mate, never own it. There is a quaint little tale that we have all read and smiled over. We ought to learn the chief sentence in it on our wedding morn, and by heart, and to repeat it as often and as earnestly as we possibly can from that day forth as long as we live. "Whatever the old man does is Right."

OCTAVIA.

Our Badge Again.

Dear Dame Durden.—As this is such a beautiful day, yet too wet "under foot" to call on my friends, I shall go, like Cousin Dorothy, on an "imaginary walk" to the Ingle Nook.

I have been much interested in the "town girl comparison" chat which the Nookers have been having. I think we should have more pity on our town sisters, and invite them during their summer vacation to visit our country homes and enjoy our pleasures of freedom unknown to them. Of course, I say the town girls exercise more taste than the majority of country girls. Why? Because they have their clothes to match—not a supply of all colors, like the country girls. I deem this the only feature the country girl may be jealous of. I shall now turn my attention to something more beneficial, I hope—a few hints from my experience.

A very fine soup is made from the water which pork, not too salty, has been boiled in. Cut turnips and potatoes in small squares, also a couple of onions. Put into the pork water; add half cup of rice, previously boiled, and allow to boil one hour.

A very good stove blacking is made by putting one "dome" and one teaspoonful of "tiger stove polish" into a bowl, with water to cover. Let remain over night. Mix thoroughly in the morning, and apply to a warm, not hot, stove. Brush well, and a beautiful satin polish will be produced more cheaply than by using all box polish.

Stovepipes are simply and well cleaned by applying a very little boiled oil on a cloth. This system will not dirty the hands. It is best to let dry a little, then start a gentle fire. This will not cause any smoke as the varnish does.

Stale soda buns dipped in a cup of cold water, then put in a hot oven for 20 minutes, are as nice as when freshly made. To be eaten hot.

Where has our badge system gone? Has it been entirely forgotten by all? How I should like to meet one of the "Chatters" at Guelph next June, and how shall I know her in a crowd? I hope Dame Durden, you shall decide on one before then. MICAMAC.

Victoria Co., Ont.

As Micamac will probably remember, I left the question of the Ingle Nook badge to the members of the Nook. As only about half a dozen wrote about it, I concluded the suggestion did not command enough popular attention to carry it through. However, if it is really the wish of the Ingle Nook members to have a badge arranged for before June, we shall be quite ready to come to a decision. When the question was mooted before, someone suggested that a small marguerite (ox-eye daisy) made of white and yellow ribbon, would be very pretty. Personally, I was quite taken with the idea. If that were decided upon, each member could easily make one for herself, and so all might be supplied with very little trouble at any one quarter. What do you say? I should think many pleasant acquaintances might be formed in this way at Guelph, or at other farmers' conventions held in any part of the country.

Household Notes.

Dear Dame Durden,—I longed to come in and talk with you, and seeing your invitation, I have to say just a few words. I have a few household notes, which are as follows: A red-hot iron will soften old putty so that it can be easily removed. A good remedy for chilblains is to apply turpentine to the affected parts. Windows may be kept free from ice and polished by rubbing the glass with a sponge dipped in alcohol. When sweeping carpets, dip the broom into a basin of lukewarm water into which has been put table salt—about a handful. It will make the carpet look clean and bright. When grease has been

spilled on an unpainted floor, pour on cold water to harden it, and then you can scrape it up easily. In cleaning lamp glasses, try ashes; it makes the glasses shine and stay clean longer.

My dear readers, who have hard work to do, try sitting down when drying the dishes. When washing the dishes, just try Pearline in place of soap, and stand on a good, thick rag mat; it is less tiring. Also sit down when paring fruit of all kinds.

If, when ironing, the starch persists in sticking to the iron, try rubbing the latter in dry salt, and put salt in the starch when making it; it makes the linen shine, and iron more easily. Rub dry salt on insect stings. If some soot has fallen on the carpet, sprinkle salt over it well, then brush all up together, brushing it with the grain of the carpet.

Will send a few recipes for cakes:

Circle Cake—One egg; one cup of sugar; two cups of flour; one-third cup of butter, one half-cup of sweet milk; one teaspoonful of cream of tartar; one-half teaspoon of soda, and flavor with lemon.

Cream Sponge Cake—Beat up two eggs in a teacup; fill up cup with sweet, thick cream; add one cup of sugar; one cup of flour; one teaspoonful of cream of tartar, and one teaspoonful of soda.

If cake begins to burn, set a dish of cold water in the oven. In chopping up potatoes, use a nice clean baking powder can; place six or seven holes in end of can for the steam to escape. I hope my long letter will escape the W. P. B., and if welcome, I'll come again.

A BACHELOR MAID.

Nipissing, Ont.

You are very welcome indeed, girlie.

The Coming Man.

A pair of very chubby legs
Encased in scarlet hose;
A pair of little stubby boots
With rather doubtful toes;
A little kilt, a little coat,
Cut as a mother can—
And lo! before us strides in state
The future's "coming man."

His eyes, perchance, will read the stars,
And search their unknown ways;
Perchance the human heart and soul
Will open to their gaze;
Perchance their keen and flashing glance
Will be a nation's light—
Those eyes that now are wistful bent
On some "big fellow's" kite.

That brow where mighty thought will dwell
In solemn, secret state;
Where fierce ambition's restless strength
Shall war with future fate;
Where science from now hidden caves
New treasures shall outpour—
'Tis knit now with a troubled doubt,
If two and two make four.

Those lips that in the coming years
Will plead, or pray, or teach;
Whose whispered words on lightning flash
From world to world may reach;
That, sternly grave, may speak command,
Or, smiling, win control—
Are coaxing now for gingerbread
With all a baby's soul!

Those hands—those little busy hands—
So sticky, small, and brown;
Those hands whose only mission seems
To pull all order down—
Who knows what hidden strength may lie
Within their future grasp,
Though now 'tis but a toffy stick
In sturdy hold they clasp!

Ah, blessings on those little hands
Whose work is yet undone!
And blessings on those little feet
Whose race is yet unrun.
And blessings on the little brain
That has not learned to plan.
Whate'er the future holds in store,
God bless the "coming man!"

A helpful hand and a word of cheer;
A gift of bread from your own repast;
Such deeds as these make answer clear
To the long dead times let a laugh be cast,
Hold hope, keep busy, be never glum,
Make each day better than was the last—
And joy shall be yours in the years to come.

To secure any advertisement on this page kindly mention the FARMER'S ADVOCATE.

but this one—Would you mind telling me her name, sir?"

"If what you say is true, her name is Mrs. Clavering."

"Clavering? Yes, that was his name."

"And a very lovely lady," said Mr. Gryce. "Morris, haven't you found anything yet?"

"Yes, sir," replied Q, bringing forward glasses and a bottle.

But Mr. Coon was in no mood for liquor. I think he was struck by remorse, for, looking from the picture to Q, and from Q to the picture, he said:

"If I have done this lady wrong by my talk, I'll never forgive myself. You told me I would be helping her to get her rights; if you have deceived me—"

"Oh, I haven't deceived you," broke in Q in his short, sharp way. "Ask that gentleman there, if we are not all interested in Mrs. Clavering getting her due."

He had designated me, but I was in no mood to reply. I longed to have the man dismissed, that I might inquire the reason of the great complacency which I now saw overspreading Mr. Gryce's face.

"Mr. Cook needn't be concerned," remarked Mr. Gryce. "If he will take a glass of warm drink, to fortify him for his walk, I think he may go to the lodgings Mr. Morris has provided for him, without fear."

Left alone with Mr. Gryce, I must have allowed some of the confused emotions which filled my breast to become apparent on my countenance, for after a few minutes of ominous silence, he exclaimed:

"This discovery rather upsets you, doesn't it? Well, it don't me. I expected it."

"You must have formed very different conclusions from what I have done," I returned, "or you would see that this discovery alters the complexion of the whole affair."

"It does not alter the truth."

"What is the truth?"

"Then," said he, "to my notion the complexion of things has altered, but very much for the better. As long as Eleanore was believed to be the wife, her action in this matter was accounted for, but the tragedy itself was not. Why should Eleanore or Eleanore's husband wish the death of a man whose bounty was believed by them to cease with his life? But with Mary, the heiress, proved the wife—I tell you, Mr. Raymond, it all hangs together now. You must never, in reckoning up an affair of murder like this, forget who it is that most profits by the deceased man's death."

"But Eleanore's silence, how will you account for that? I can imagine a woman devoting herself to the shielding of a husband from the consequences of crime, but a cousin's husband, never."

"Then you still think Mr. Clavering the assassin of Mr. Leavenworth?"

"Why, what else is there to think? You don't—you can't suspect Eleanore of having deliberately undertaken to help her cousin out of a difficulty by taking the life of their mutual benefactor?"

"No," said Mr. Gryce—"no, I do not think Eleanore Leavenworth had any hand in the business."

"Then who—" I began and stopped, lost in the dreadful vista that was opening before me.

"Who? Why, who but the one whose past deceit and present necessity demanded his death as a relief? who, but the beautiful, gorgeous, money-loving, man-deceiving goddess—"

I leaped to my feet. "Do not mention the name," cried I; "you are wrong, but do not speak the name."

"Excuse me," said he, "but it will have to be spoken many times, and we may as well begin—Mary Leavenworth, or, if you like it better, Mrs. Henry Clavering."

CHAPTER XXVI.

Mr. Gryce Explains Himself.

"I see that I have pulled down an avalanche of doubts about your ears," exclaimed my companion from the height of his calm superiority. "You never thought of this possibility, then, yourself?"

"Do not ask me what I have thought. I only know one thing, and that is, that I will never believe your suspicions true. That, however much Mary may have been benefited by her uncle's death, she never had a hand in it."

(To be continued.)

Unselfish Mother: Selfish Child.

Some of us mothers are all the time improving our own characters at the expense of those of our children; is this fair to them? We are so aggressively unselfish that we almost compel them to grow up exacting. The old proverb about unselfish mothers making selfish children has more truth than a little in it. I think it is more important to teach children to be unselfish and cheerfully helpful than any book-lesson or handicraft going. It may be well to wait on one's husband sometimes when he is very tired, but why find the children's hats and school-books for them every morning? Why give up the scarce dainty you need yourself when ailing to a greedy child? You wrong him more than yourself by so doing, and yet we all of us do similar things every day. I have small admiration for the woman who makes a door-mat of herself, either for her husband or her children; and she will find that they have far less respect for her than if she taught them to consider her comfort, at least equally with their own.

It is, of course, much more trouble, in the beginning, to teach a child to do anything than do it oneself. She who is painstaking enough to do the former will not only reap her own reward later, but do her child incalculable good. My mother used to say that she did not care how often we all had to turn out of our own bed-rooms, bag and baggage, at half an hour's notice, to make room for some unexpected guests; she said it was such good training for us.

When her boys went off to boarding-school, though they were under twelve, she made them feel responsible for packing their own trunks. Unknown to them she would, of course, always repack them afterwards; but the habit of method and orderliness thus early acquired has remained with them through life. Surely her daughters-in-law will arise and call her blessed.

The English Language.

We'll begin with a box and the plural is boxes,
But the plural of ox should be oxen, not oxes;
Then one fowl is goose, but two are called geese;
Yet the plural of mouse should never be meese;
You may find a lone mouse, or a whole nest of mice,
But the plural of house is houses, not hices;
If the plural of man is always called men,
Why shouldn't the plural of pan be called pen?
The cow in the plural may be cows or kine,
But a cow if repeated is never called kine,
And the plural of vow is vows, not vine,
And if I speak of a foot and you show me your feet,
And I give you a boot, would a pair be called beet?
If one is a tooth, the whole set are teeth,
Why shouldn't the plural of booth be called beeth?
If the singular's this and the plural is these,
Should the plural of kiss be nicknamed keese?
Then one may be that and three would be those,
Yet hat in a plural would never be hose,
And the plural of cat is cats, not cose,
We speak of a brother and also of brethren,
But though we may say mother we never say methren;
Then masculine pronouns are he, his and him,
But imagine the feminine, she, shis and shim,
So the English, I think, you all will agree,
Is the most wonderful language you ever did see.

William Dean Howells has adopted the rule that all applicants for his autograph must first furnish satisfactory proof that they have read his books. A Chicago girl recently wrote to the great novelist for his autograph. By return mail came a single typewritten line: "Have you bought my last book?" To which the young woman replied, "I sincerely hope so." The autograph came promptly.

CANADA PERMANENT MORTGAGE CORPORATION

Toronto Street, Toronto.

RECEIVES DEPOSITS and pays INTEREST at 3 1/2 % PER ANNUM, COMPOUNDED TWICE EACH YEAR.

Absolute safety is assured by

Paid-up Capital	\$8,000,000.00
Reserve Fund	2,000,000.00
Invested Funds	24,000,000.00



Far, Near, and Everywhere Progressive Dairymen are Using

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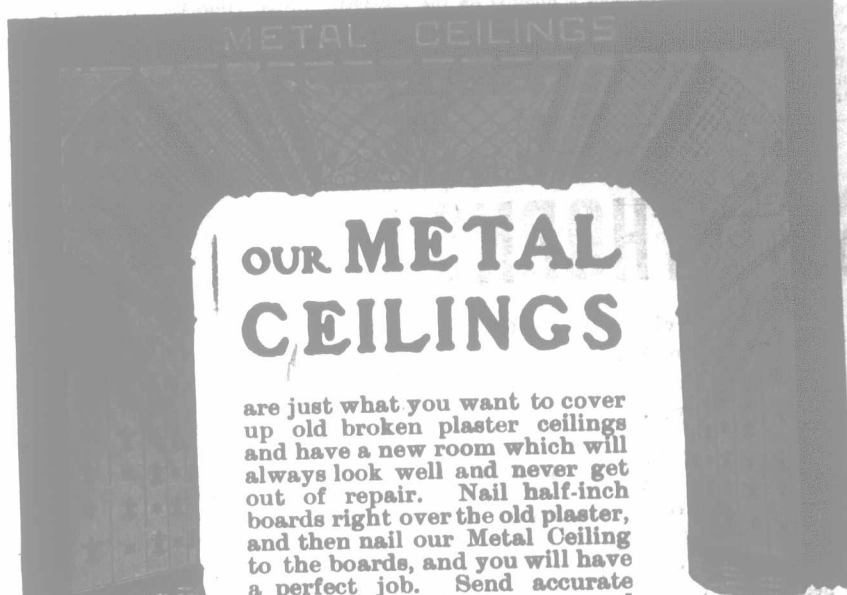
for they have proven the U. S. the surest and simplest money maker for the farm. Its simple bowl, operated by strong gearing entirely enclosed in a substantial frame, is easy to turn and gets all the cream—holds world's record for clean skimming. Notice the low supply can.

There are other advantages in using a U. S. aside from its wonderfully clean skimming, that are told in our handsome booklet, "The Dairy." Send for it immediately; it's free.

Vermont Farm Machine Co., Bellows Falls, Vt.

Distributing Warehouses at Chicago, Minneapolis, Omaha, La Crosse, Wis., Sioux City, Ia., Kansas City, Mo., Salt Lake City, Utah, San Francisco, Cal., Portland, Ore., Buffalo, N. Y., Portland, Me., Montreal and Sherbrooke, Que., Hamilton, Ont.

ADDRESS ALL LETTERS TO BELLOWS FALLS, VT.



are just what you want to cover up old broken plaster ceilings and have a new room which will always look well and never get out of repair. Nail half-inch boards right over the old plaster, and then nail our Metal Ceiling to the boards, and you will have a perfect job. Send accurate length and width of room, and we will tell you how cheaply it can be done. Housecleaning time is the time to put on Metal Ceilings. Try one of our Metal Ceilings and you will wish that you had known more about them long ago. Ask for our free catalogue, and look up our advertisements in former numbers.

The Metal Shingle & Siding Co., Ltd. PRESTON, ONTARIO.

\$350.00 will buy four (4) registered yearling

SHORTHORN BULLS

Bred from Valley Farm Herd. Well-grown, and well worth the money. Quick sale for one or four.

WM. HENDRIE, Jr., Valley Farm, HAMILTON, ONT.

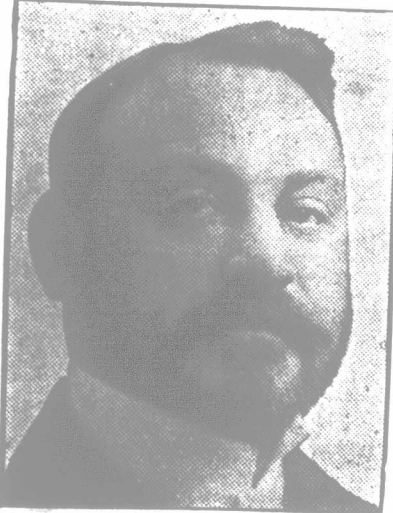
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MAKES MEN SOUND AND STRONG

Detroit Specialist Making Men's Diseases a Specialty for Years, Will Accept Your Case, Giving It Individual Treatment. You may Use it in the Privacy of Your Own Home.

You May Pay When You are Cured.

A Detroit Specialist who has 14 diplomas and certificates from medical colleges and state boards of medical examiners, and who has a vast experience in doctoring diseases of men, is positive he can cure a great many so called incurable cases;



DR. S. GOLDBERG.

The possessor of 14 diplomas and certificates, who wants no money that he does not earn.

In order to convince patients that he has the ability to do as he says, Dr. Goldberg will accept your case for treatment, and you need not pay one penny until a complete cure has been made; he wants to hear from patients who have been unable to get cured, as he guarantees a positive cure for all chronic, nervous, blood and skin diseases, which he accepts for treatment. He not only cures the condition itself, but likewise all the complications, such as rheumatism, bladder or kidney troubles, blood poison, physical and nervous debility, lack of vitality, stomach trouble, etc.

The doctor realizes that it is one thing to make claims and another thing to back them up; so he has made it a rule not to ask for money unless he cures you, and when you are cured, he feels sure that you will willingly pay him a small fee. It seems, therefore, that it is to the best interests of everyone who suffers to write the doctor confidentially and lay your case before him, which will receive careful attention, and a correct diagnosis of your case will be made free of charge; if you have lost faith write him, as you have everything to gain and nothing to lose; you must remember not one penny need be paid until you are cured. All medicines for patients are prepared in his own laboratory to meet the requirements of each individual case. He will send a booklet on the subject, which contains the 14 diplomas and certificates, entirely free. Address him simply Dr. S. Goldberg, 208 Woodward Ave., Room 135 Detroit, Michigan. Medicines for Canadian patients sent from Windsor, Ont., consequently there is no duty to be paid.

TROUT CREEK

SHORTHORNS

Bulls in service: Gold Cup (imp.), bred by W. Duthie, and Ardlethen Royal (imp.), a Marr Princess Royal.

James Smith, Manager. W. D. FLATT, Hamilton, Ont.

"The secret of bright faces and tranquil hearts, of work done cheerfully, of sorrow met bravely, is the conviction that all is well."

If little labor, little are our gains; Man's fortunes are according to his pains.

—Herrick.

Rev. M. B. M.— is a Primitive Baptist preacher in Illinois. Having occasion some time since to pay a first visit to a country parishioner, the prospective host, in order that Mr. M.— should not pass the place, stationed his young son at the front gate to await the minister's arrival. When he arrived, driving a pair of horses, his coming provoked no salutation on the part of the boy, and it was only upon inquiry that the visitor ascertained that he had reached his destination; whereupon the boy apologized by saying: "I didn't know you, 'cause you had two horses. Pop told me you was a one-horse minister."

GOSSIP.

Few Shorthorn breeders in Canada have placed so many good imported cows in their herd in so short a time as Mr. W. J. Thompson, of Hollymount Stock Farm, at Mitchell, Ont., in the rich agricultural county of Perth. Mr. Thompson is one of the leading spirits in that section, not only in Shorthorn breeding, but in public life, having been elected to municipal honors when only 21 years old, which fact is cited simply to show the confidence that his neighbors place in him, and while yet young he has reached an enviable place in the ranks of Shorthorn breeders, inasmuch as nearly his whole herd of cows are imported and of a high standard. Mr. Thompson also realized the importance of putting a good sire at their head, for which he selected Imp. Rustic Chief =40419=, a bull of great depth and plenty of size, and what is most important of all, a good stock getter. He is by the noted Clan Alpine (60495), dam Ruffy 2nd, by Queen's Guard (57953). Several of the principal families are represented in this herd, such as the Clementinas, Crimson Flowers, Rosemarys, Jilts, Red Velvets, Nonpareils, etc. Among the former is Imp. Princess 4th, a choice red four-year-old, by Fortunatus (79977), dam by Knight of the Border (76708), grandam by Golden Prince. This cow is proving an excellent breeder, and is a heavy milker, having two daughters in the herd to her credit, one a yearling, imported in utero, by King of Fame (81379), and a younger one, by Nonpareil Duke (imp.). Another choice cow is the roan, Imp. Poppea, by Knight of Strathbogie 2nd. This cow also has to her credit one yearling heifer, by Nonpareil Duke (imp.), and a nine-months-old red bull calf, by Rustic Chief (imp.). This latter is a strong, smooth, sappy calf, with thick flesh and plenty of style. Margaret (imp.) possesses more than ordinary good qualities. She is of the Jilt family, by Royal George (75521), dam Rothnick Fancy (Vol. 48). A good roan of the Rosemary tribe is Imp. Primrose 2nd, by the noted Scotch sire, Hogarth (74708). She has produced a very promising roan bull in Rosemary's Heir, by Imp. British Flag. Another one, got by Knight of Strathbogie, is Imp. Lettuce 12th, a thick, splendid heifer from Lucilla, she by Gold Dust. She is now in calf to Imp. British Flag. Imp. Pride 17th, a red four-year-old, by Count Joyful (74294), dam Pride 14th, has a nice red heifer calf at foot, by Rustic Chief (imp.). Jessie (imp.), by Merlin 2nd (69119), dam Royal Bessie, has a December bull calf at foot, by Imp. Royal Champion, that should make a good one, being both large and smooth. A very stylish red-roan heifer is Imp. Beauty 4th, by Mercury (77253), dam Jenny Lind, having among other Scotch sires in her pedigree, the famous Gravesend 46461. Among the home-bred cows, of which there are only a few, is Crimson Ida, a thick, mellow cow, by Hopeful (imp.), dam Princess, by Imp. Red Knight. She is doing well by her owner, having a good roan heifer calf at foot. These are but sample numbers of many others which might be mentioned did space permit; suffice it to say that with such good breeding in the foundation herd as is to be found at Hollymount, we quite naturally expect this herd to turn out some stock good enough for any show-ring. This herd and the enterprise of its owner should certainly be a stimulus to farmers in that district to improve their cattle. There is no good reason why farmers should send a great distance to purchase when there is such good stock almost at their doors. When in want of such, write to Mr. Thompson, who will let you know what he has for sale, and we believe he will sell as reasonably as anyone having as good a lot.

CAUSTIC BALSAM GOOD FOR SHOE BOILS.

Stanbridge Station, Quebec, Canada, November 5th, 1903.
The Lawrence-Williams Co., Cleveland, O.:

I enclose \$1.50 for one bottle of your Gombault's Caustic Balsam. It is a fine medicine for all lumps where a blister is needed. You can recommend it for canker in dog's ears, one part of Balsam to three parts of vaseline. I have used it for shoe boils where they were old and hard, by injecting the Balsam into the boils with a hypodermic syringe.

THOS. G. GIBSON.

Hon. Thos. Greenway shipped from Guelph last week to his Prairie Home Farm at Crystal City, Man., a carload of Shorthorn cattle purchased by him in Western Ontario.

Mr. Wm. Hendrie, Jr., Hamilton, Ont., in our advertising columns, offers four well-grown registered yearling Shorthorn bulls, bred from his Valley Farm herd, at moderate prices for quick sales. These are bred from high-class Scotch families.

FROST & WOOD MOWER.—Wider than the Dominion of Canada is the reputation of Frost & Wood implements, manufactured at Smith's Falls, Ont. The Frost & Wood mower is a leader everywhere on account of its excellent construction, wearing and working qualities. A strictly Canadian machine with all the latest improvements, it commends itself to the Canadian farmer every time. See advertisement in this issue. Send for catalogue, and buy a Frost & Wood machine.

A very successful sale of Shorthorn cattle was that of a draft from the herd of Mr. Frank Harding, of Waukesha, Wisconsin, on April 5th, when 47 head were disposed of by auction for \$12,885, an average of \$274 each. The cattle were a right good lot in breeding and individuality, and the bidding for them was brisk. The highest price paid was \$605 for Imp. Daisy 3rd, by Sittyton Style. The American-bred cow, Isabella Thorncliffe 7th, was the second highest-priced female, going at \$550. The highest-priced bull was the red four-year-old, Imp. Golden Banner, a Missie, bred by W. S. Marr, and sired by Bapton Glory, sold to C. T. Nelson, Blandinsville, Ill., for \$585. Two home-bred sons of Ceremonious Archer, calved in March, 1904, sold for \$500 and \$505 respectively.

W. D. FLATT'S IMPORTED CLYDESDALES.

The importation of 60 registered Clyde fillies, selected by Messrs. A. & W. Montgomery in Scotland for Mr. W. D. Flatt, Hamilton, Ont., leave Glasgow, April 22nd, and will be sold by auction at Hamilton some time in May, the date to be announced later. Messrs. Montgomery have experienced difficulty in filling the order with the class, as prices are high in Scotland, but they state that they have secured a consignment combining size and quality in a high degree, although the animals are in thin flesh, as the custom in Scotland is to winter fillies largely out of doors and on rough feed, a condition that will favor the buyers, and is best for the fillies. Full particulars will be given in an early issue.

Among unpretentious breeders is often found some choice stock. We called recently upon Mr. John Forgie, Claremont, Ont., where we had the pleasure of inspecting a son of the veteran, MacQueen sire of more prizewinners than any other Clydesdale stallion in America. The colt referred to is Masterpiece, a two-year-old dapple brown, from Royal Queen, by Royal Standard (imp.), grandam Nellie (imp.). This is the largest two-year-old we have seen this year, over 1,500 lbs. now. He is well coupled, has a good set of feet, and plenty of clean, flat bone to carry his weight, which should be a ton when he is matured. He is a full brother to Royal MacQueen, winner of first prize in a strong class at Calgary, 1903, when shown by John A. Turner, the well-known importer. He is nicely marked, with hind fetlocks white, and a small strip in face. Mr. Forgie is anxious to part with him, and will let someone have a real good colt at a bargain. This colt's dam is again in foal to MacQueen. A Baron Bogie mare with six registered dams in her pedigree is in foal to King's Crest (imp.). A small herd of up-to-date Shorthorns is being kept, with Scotland's Fame, of the Marr Flora tribe, at its head. This thick, evenly-fleshed roan is by Nonpareil Archer (imp.), dam Flora 51st (imp.), and though he is yet young, he has proved himself a good sire. Most of the young stock on hand is by Imp. Royal Sovereign, and among them is Enterprise, rising two years old, a low-down, thick red bull that is offered very reasonable, considering quality. He will also part with a few heifers that are bred to Scotland's Fame. Write him for prices.

Good to prime last year's lambs sold at Chicago Stock-yards on April 12th at \$7 to \$7.80 per 100 lbs.

Mr. W. D. Pugh, of Claremont, Ont., is a breeder of Clydesdales, Shorthorns, and Cotswolds, of several years' standing, while not having gone very extensively into breeding, he aimed to breed the best. In Clydesdales, he has used the best sires in the stud of Graham Bros., his neighbors, two of his brood mares being by MacQueen (imp.), the World's Fair champion, sire of so many good ones and seldom a poor one. A third is by Lord Lieutenant (imp.) 975 (4529). Another is by Here-You-Are (imp.) 1844 (8692). Among the colts and fillies is The Marquis, one year old, by MacQueen (imp.), dam Nellie Pugh 8611, by Here-You-Are. This is a big, growthy colt, with white markings, and a good set of legs and feet. MacQueen's Fashion, foaled June, 1903, is, however, more attractive, as he is getting more finished like a matured horse. He is a very clean-cut, smooth colt, with a flash set of feet and legs, will be a fair size and a stylish looker, like MacQueen's colts generally, and he can be bought worth the money. The Shorthorns are headed by Gilbert Logan =36424=, by Imp. Blue Ribbon 28876 (78297), dam Mayflower Maid 3rd, by Imp. Indian Chief, who is getting some good stock, among which is a red yearling bull from Red Rose of Claremont 2nd, by Royal George, by Barmpton Fancy (imp.), by Silver Plate. This is a promising young bull, which one would naturally expect from his breeding. About 40 head of Cotswold sheep are on hand, among them a few yearling rams, by an imported sire. Some of the breeding ewes are also by imported sires. Anyone wanting any of the above stock will do well to write for prices.

Recently we reported a case of a ewe which gave birth to four lambs. An English contemporary caps this by announcing the yearning by a ewe of no fewer than five lambs.

A teacher was trying to explain the meaning of the word "recuperate" to one of the pupils.

"Now, Willie," said she, "if your father worked hard all day he would be tired and worn out, wouldn't he?"

"Yes'm."

"Then, when night comes and his work is over for the day, what does he do?"

"That's what ma wants to know."

TRADE TOPICS.

CARRUTHERS & POOLEY, KELOWNA, B. C.—To merely mention the name of Carruthers & Pooley, real estate agents, Kelowna, B. C., is to give a guarantee of fair dealing and proper representation. Anyone desirous of buying fruit and agricultural lands or residential property in the far-famed Okanagan Valley cannot do better than to get in touch with this reliable firm. Kelowna is charmingly situated on the Okanagan Lake and in the very heart of a district than which there is no fairer in all the coast Province. The past few years have shown that settlers in this locality do well in every respect. What others have done, the readers of the "Farmer's Advocate" in Manitoba and the Northwest Territories can also do. There is no doubt that prairie farmers can go across the mountains, pick out land around Kelowna, and never regret any steps they may take towards settling in this delightful section.

FENCE CONSTRUCTION.—The sixth annual catalogue of the London (Ont.) Fence Machine Co. might, without exaggeration, be called a book on fencing, and fencing is one of the most important problems the farmer has to solve. This volume discusses the principles of successful and economical fencing, and the method of their application. The "London System" of wire fencing has demonstrated its usefulness in actual practice, and we have no hesitation in recommending our readers to write at once for a copy of this publication. A post card, mentioning the "Farmer's Advocate," will secure for you this valuable fund of information, which is handsomely printed, well illustrated, and is a credit to the progressive establishment that sends it out.

In answering any advertisement on this page kindly mention the FARMER'S ADVOCATE.

Good Kickers

Save the

Hay
Crop

!

MADE
IN
CANADA



The Deering Hay Tedder.



The McCormick Hay Tedder.

DEERING and McCORMICK HAY TEDDERS

The old way is to let the sun cure the hay, with good chances of thoroughly bleaching it, and the possibility of not being able to stack it for some days after it has been cut. The new way is to use a tedder, which turns the hay thoroughly and lets the air dry it without bleaching. Hay which has been cut in the morning can be turned with a tedder and put under cover before nightfall; besides, hay which has been air-cured is better than hay which has been sun-dried and bleached in the old way.

THE DEERING TEDDER

This machine is almost noiseless in operation and remarkably light of draft. Frame is made of heavy steel tubing, solidly riveted together, with no possibility of twisting or sagging. High wheels with channel tires and widely-staggered spokes. Forks of the best spring steel. A coil spring prevents them from breaking, should they strike an obstruction, and the main frame tilts up to relieve undue pressure.

THE McCORMICK TEDDER

Steel frame, steel wheels and steel forks. The crank shaft to which the fork arms are attached is driven by means of a gear wheel mounted on the centre of the axle, hence the full driving power of both wheels is imparted to each fork. The coil spring attached to each fork takes up most of the impact sustained by the forks. Thus the frame is relieved of incessant jars and severe strain.

International Harvester Company of America

General Offices, Chicago, U. S. A.

CANADIAN BRANCHES:

Calgary,
London,

Montreal,
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Winnipeg,

Regina,
St. John.

In answering the advertisement on this page, kindly mention the FARMER'S ADVOCATE.

VERNON

The Hub of the Fertile Okanagan, the Land of Fruit and Sunshine, the Garden Spot of the Pacific Province.

The Charming Home of Plenty and Prosperity.

The Okanagan has become so widely and generally known in Manitoba and the Northwest that it is scarcely necessary to preface a description of its principal city with more than the briefest reference to the fertile district which is attracting so much attention as a land unsurpassed in the fertility of its soil, the geniality of its climate, the range of its resources, and the charm of its scenery. Suffice it to say that the Okanagan comprises that productive section of the interior of the Province which extends in a southerly direction from Sicamous, on the main line of the C. P. R., some 125 miles to the foot of Lake Okanagan, and that its climatic, scenic and soil conditions are such as to fully merit the title bestowed upon it, both by partial residents and by disinterested visitors, that of the Garden of British Columbia. Nor should the eye of suspicion be cast upon the superlatives which are so freely used in any description of the Okanagan, for we assure our readers that there is far less likelihood of our being led into exaggeration than there is of our failing to convey an adequate impression of the natural beauties and almost ideal conditions of this favored district.

The district varies somewhat in breadth, averaging about 100 miles, while its total length must be in the neighborhood of 150 miles. It includes a number of smaller valleys—off-shoots, as it were, of the main depression—and also comprises a certain proportion of higher land, not so well suited to horticultural and agricultural purposes. The lands on the hillsides are of rich, sandy loam, while the soil in the valleys is, in the main, alluvial in character. While there are occasional abrupt breaks in the general surface, the country is for the most part gently undulating, and there is a sufficient variety from valley to plain and tableland to give a very pleasing aspect to the whole landscape. The hillsides are, for the most part, thickly wooded, the principal timber trees being the Douglas fir and larch on the higher parts, and yellow pine on the lower levels, intermixed in all cases with a great deal of birch and poplar, while along river bottoms, birch and willow grow profusely. The valleys are, in general, much more open, and comparatively little clearing is required. In their natural state, the ranges are well adapted to afford sustenance to cattle, and, indeed, grazing was the first industry of the early settlers, and is only now being displaced by the more productive fruit-growing and agricultural industries.

VERNON.

Beautifully situated, forty-six miles south of Sicamous, at a point from which radiate excellent roads leading to the northern towns and settlements, to Coldstream and White Valleys, to Kelowna, and the rich fruit-growing districts

of the south, and to Grand Prairie and Kamloops. Nature has endowed Vernon with as ideal a site as is to be found in the interior of British Columbia, and especially fitted it to hold the most important position among the flourishing towns and cities of the Okanagan.

Occupying a broad flat between higher portions, which serve admirably as locations for handsome residences, Vernon combines decided geographical and commercial advantages, with a charming situation in the midst of encircling hills, and in a region of pools and lakes. Scarcely two miles away is situated the beautiful Long Lake, whose beaches are covered in the summer time with camping parties, comprising whole families, who resort for a few weeks every year to this free life in the open, and also parties of young men who appreciate the pleasures of camp life sufficiently to walk or cycle to and from work morning and evening. Bathing, boating, fishing and attendant amusements are some of the attractions offered by this veritable summer resort of the Vernon people. Swan Lake, some two miles distant in another direction, does not offer the same facilities for camping and bathing, as its banks are low and swampy; but it forms a very attractive spot on the landscape, and is a resort of the huntsmen in search of ducks and geese.

Well wooded, naturally, and with shade trees adorning its streets, and orchards in flourishing condition on every hand, Vernon in summer forms a picture, the claim of which is increased by the many fire residences set in well-kept grounds, with flowers in profusion everywhere. The main residential portion of the city

taste of those who have selected it as a site for their residences. In its adolescent stages, it used to be a common complaint that the town site was hardly compact enough, presenting a rather scattered appearance. This is being very rapidly amended, and present indications are that, at no distant date, nearly every available lot will be taken up and put to good use. During the



Threshing Scene.

past year a block of land across the creek to the south has been laid out into town lots and disposed of very rapidly. This section, frequently referred to as the Young Addition, may be partly held for speculative purposes, but several have announced their intention of building there in the near future, and it is likely that a number of residences will soon be put up there.

Seventh Street is a part of the city



Money-making Land.

is situated upon a terrace to the eastward, at the base of which a level tract of land forms an admirable location for the principal business avenue. On parallel and intersecting streets, cosy dwelling houses, in neat and attractive rows, present a very inviting appearance, which is increased by the quantities of beautiful flowers that are produced with a minimum of care and oversight. The terrace mentioned above, with its walk in some places almost embowered by surrounding trees and commanding a view of the lower town, is one of the prettiest parts of the city, and fully justifies the

that has been greatly improved during the past few months, and the indications now are that it will soon be one of the prettiest residential streets of Vernon.

Vernon is well supplied with modern conveniences, possessing a water system which is one of the best of its size in the interior. The reservoir has a capacity of 250,000 gallons, while a pressure of 116 lbs. to the square inch gives ample power for effective streams for fire protection. A local telephone system, with fifty phones on the switchboard, has been arranged for, and will soon be in operation, and it is possible that long-dis-

tance connections may soon be made with Armstrong and Enderby.

Vernon also possesses a municipally-owned electric-light system, which is operated very successfully. Steps will probably soon have to be taken, however, to make use of water-power in place of steam as at present, and thus greatly reduce the expenses of the system.

Vernon has a great many important business houses, all thoroughly up-to-date and carrying heavy stocks, the range and variety of which are seldom equalled in cities of similar size. There are five general stores: The Hudson's Bay Company, W. R. Megaw's, W. T. Shatford's, W. F. Cameron's, and Megaw's; two drug stores; a book store, probably the brightest and most complete establishment in the interior; two butcher shops; a hardware store; a furniture store; three livery stables; a grocery store; two carriage and implement stores; two jewellers; a gunsmith; two firms of painters; a harnessmaker; three blacksmith shops; two auctioneers; two bakeries; three doctors; two dentists; three lawyers; four insurance firms; four real-estate firms, and a machine shop. It also has a well-conducted local paper, The Vernon News, which has grown up with the town, and two job-printing establishments.

Five hotels afford excellent accommodation for the travelling public, possessing all the modern equipments necessary to ensure the comfort of the guests.

The Bank of Montreal, which in the past has had a great deal to do with advancing the interests and furthering the development of the whole valley, affords every facility for the transaction of financial business, and provides a supply of cheap capital for legitimate enterprises.

One of the most important industries is D. Smith's sash and door factory, an establishment which has just been extended so as to make possible the manufacture of as many as a hundred doors a day, as well as a proportionate amount of miscellaneous products. This factory is supplying a large part of the lumber and fittings used in building operations throughout the valley.

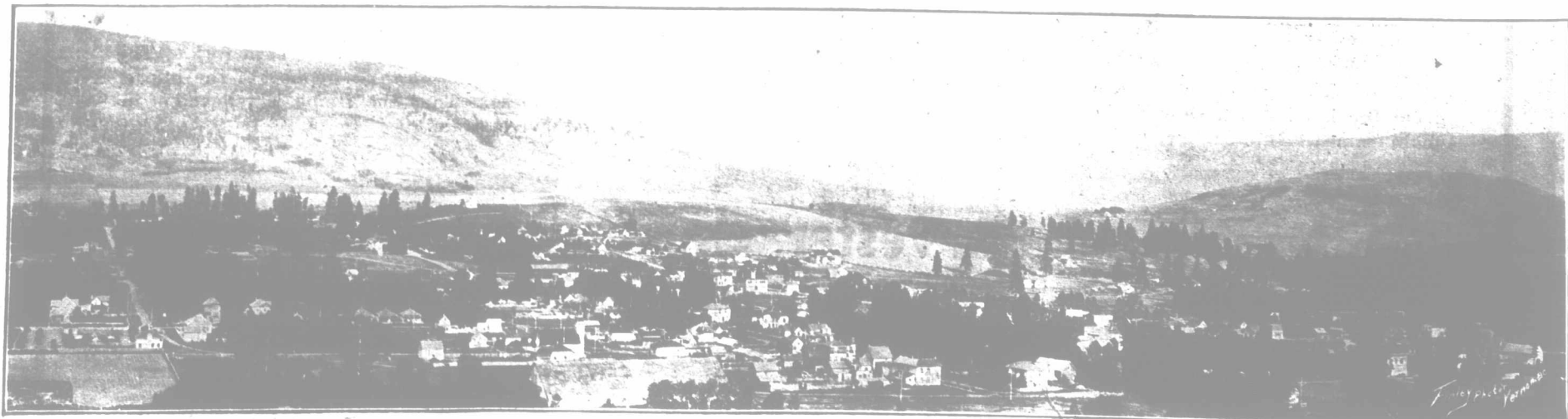
The local flour mill, under the management of the Columbia Flouring Mills Co., Ltd., of Enderby, supplies a large part of the flour consumed in Vernon and district, and affords the farmers of the neighborhood a convenient market for the disposal of their products.

There is also a cigar factory, where tobacco of Okanagan growth is utilized, and a pork-packing establishment, which will probably develop steadily, and become one of the most important industries of the district.

It may, perhaps, not be out of place to mention that there is every prospect of a large brewery starting in the city very shortly. This establishment, which would be conducted on a large scale, would do its own malting, and also aim to supply other provincial breweries with the malt, which they must now import from outside of British Columbia.

PUBLIC INSTITUTIONS.

There are few cities of similar size so generously endowed with public buildings as Vernon. Nor is it lacking in any of those institutions which pertain to every well-ordered, modern city, and which go far towards giving it a leading position amongst the other towns of the district. Not only is it the seat of the Provincial Government offices, the court house, and a branch of the hospital for the insane,



Vernon.

APRIL 20, 1905

but it also possesses handsome school buildings, a city hall, and commodious churches, belonging to the Roman Catholic, Arglican, Presbyterian and Methodist denominations.

The Vernon Jubilee Hospital, a most efficient institution, in charge of a staff of capable and experienced nurses, furnishes a refuge where the sick may receive the skilled attention and proper care which is frequently so essential to recovery. It is a large, roomy building, pleasantly situated on the outskirts of the city, and possesses three public wards, as well as a number of private ones, while what is known as the Queen Victoria Memorial Wing, added to the main building in 1901, serves as a maternity ward. The building is heated with hot water, and a complete septic-tank system, with bath rooms, furnishes necessary facilities. The Nurses' Home, a most comfortable little cottage, has just been built on the hospital grounds, and furnishes excellent accommodation for the nurses. The hospital receives the usual grant from the Government, of fifty cents a day for each patient, and is further maintained by the payment of the patients themselves, when possible, and by public subscription. The nursing staff consists of five, of whom some are probationers, or nurses in training. The institution ministers not only to the needs of the city, but also to the surrounding district, and its efficiency is a source of pride and comfort to the whole Valley.

SCHOOLS.

One of the first considerations confronting thoughtful parents seeking a home in a new country is that of educational advantages, and no single inducement of greater importance can be offered to the homeseeker than the facilities for providing his children with at least the foundations of a good thorough education. However rough, uncultured and illiterate a man may be, he appreciates the advantages conferred by good training, and he is willing to sacrifice a great deal to secure to his offspring those privileges which have been denied to himself. In this respect, however, Vernon's position is fully as assured as it is with regard to soil and climatic conditions. Not only does it possess an efficient and fully-equipped public school, offering, free of charge, the benefits of an excellent common school course, but these advantages are further supplemented by the recently-started high school, where pupils may be prepared for college matriculation at a very moderate cost.

The public school building is a handsome brick structure situated on the outskirts of the city in spacious grounds, which afford plenty of room for recreation purposes. There are at present five departments, in charge of capable and experienced teachers, and nearly two hundred pupils. The attendance has recently increased very rapidly, owing to the great influx of population from the East. The institution is provided with all necessary equipments, and ranks with the best of its kind in the Province.

The high school prepares for colleges and the B. C. certificates, and is open to all who have passed the entrance examination. It has already accomplished results that are highly creditable, and with the increase of equipment and facilities that will follow growth in the number of pupils attending will take a high rank among the best high schools of the interior.

In the surrounding districts there are also good miscellaneous schools so distributed as to deprive no settler of the privileges of education for his children.

FRATERNAL ORDERS.

The various fraternal orders are very much in evidence in the city, the Masons, Oddfellows, Woodmen of the World, Foresters, Knights of Pythias and Orangemen all having large memberships and well-organized and active lodges.

CLIMATE.

One of the most valuable assets of Vernon and surrounding district is undoubtedly its delightful climate, which forms one of the principal attractions, and frequently has a great deal to do with the decision of the visitor to locate in our midst. It is free from the excessive humidity of the coast districts, and yet is far from being as dry as the true bunch-grass country. The spring opens early and almost immediately merges into summer, and both spring

and autumn seasons are delightfully mild. The heat of summer is never excessive, and the temperature invariably drops at sundown, ensuring cool evenings and entire freedom from the discomfort associated in the minds of Eastern Canadians with hot summer nights. Cloudless skies and the most delightful sunshine prevail for weeks at a time, and furnish general conditions which are almost ideal for the enjoyment of summer pleasures. Nor are there extremes of cold in the winter time. This season only lasts about four months, from the middle of November till the middle of March, and its temperature does not average over ten degrees of frost. The air possesses a clear, crisp quality, which gives it an invigorating, snappy effect, rather than the depressing effect so common in damper districts near the coast, and has earned for the Okanagan the name of the great Canadian sanitarium.

Generally speaking, the rainfall is very light, and although irrigation is not an essential, a rancher who possesses the proper facilities is in a very much safer position, compared with his less fortunate neighbor, in view of the possibility of a particularly dry year.

A better idea of the climatic conditions will be gained from the appended meteorological records at the Coldstream Ranch Station, taken from the last year-book of British Columbia, and from reports of the Department of Agriculture:

Monthly Days of Snowfall.											
J.	F.	M.	A.	M.	J.	J.	A.	S.	O.	N.	D.
2	6	4	4	0	0	0	0	0	0	0	0
Monthly Days of Rainfall.											
0	0	0	2	7	9	2	2	9	0	0	0
No. of Inches of Rainfall Each Month.											
April	May	June	July	August	Sept.						
0.42	0.55	1.41	0.50	0.12	1.25						

According to the same records, the highest annual temperature occurs in July, and is 93 deg. to 96 deg.; the lowest is 13 deg. below zero. The number of inches of rainfall is 11. The snowfall is light in the immediate vicinity of Vernon, and while it varies in different localities, enough generally falls to maintain good sleighing for several weeks during the winter months.

THE LARGE HOLDINGS.

In the past, a great drawback to the development of the district and its expansion in population and importance has been the fact that large areas of land, secured by the early settlers, were held by the individual owners, who refused to sell, and thus, to a great extent, kept the small rancher from gaining a foothold in the valley.

During the past eighteen months, however, conditions in this regard have undergone a great change. Realizing the value of their hitherto largely unproductive estates, the large holders have broken up and re-surveyed their properties, placing the subdivided areas on the market, and disposing of them to prospective settlers, who are coming to the country in continually increasing numbers to plant orchards and make homes for themselves where they can live in the enjoyment of an almost perfect climate, and under pleasanter conditions than the rigorous life of the Territories. There is a large and growing class of well-to-do settlers in Manitoba and the Northwest who have stood the severe winters of the Eastern climate for a sufficient number of years to acquire a comfortable competence, and at the same time such a distaste for the cold that they are now casting about for some district where they may have an opportunity of making a fair living under more pleasing climatic conditions than they have been obliged to put up with in the past. This class is very largely represented among those who have located in the Okanagan during the past year, and it is this class who are most likely to feel thoroughly satisfied with their change of residence. For the Okanagan is emphatically the district for the man of some little means, not for the big capitalist, but for him who has, at least, the wherewithal to tide over the first few years, while his orchards are maturing.

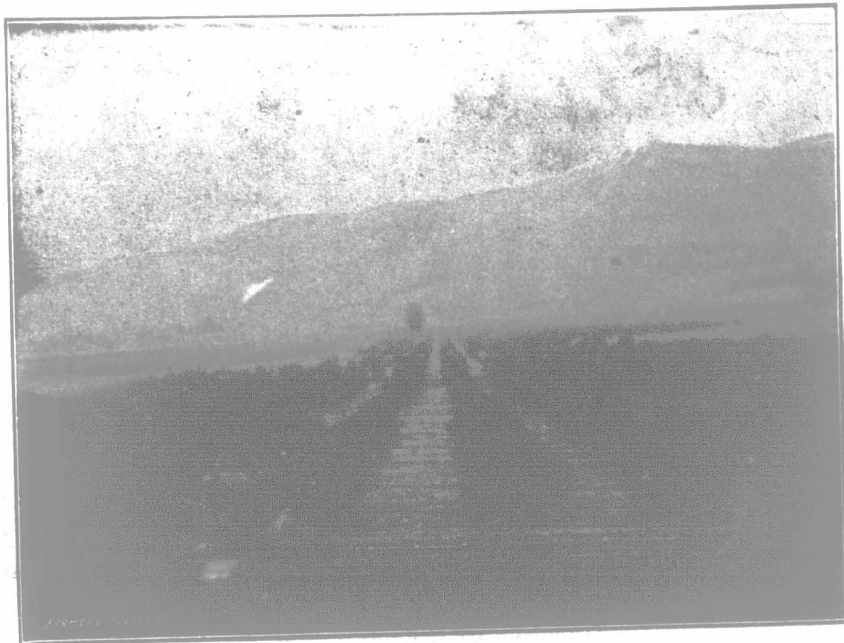
The influx of settlers during the past year, resulting from the subdivision of the big holdings, and the adoption of energetic and up-to-date methods of advertising and pushing real estate, has been surprising, and has resulted in a great increase in the total cultivated area of the valley. Visitors have joined the residents of the valley in outspoken enthusiasm over the horticultural and agricultural possibilities of the Okanagan. Pamphlets and illustrated descriptions of the valley have been freely distributed, and the general enthusiasm aroused has had its effect in bringing the district prominently before the people of the Northwest, and in inducing a tide of immigration, that is building up the country with unparalleled rapidity. Although the prices of land have gone up, so as to make buying for purely speculative purposes scarcely a profitable thing, there seems to be no decrease in the number of purchases by those who wish to make their homes in the district, and every train brings new landseekers, to locate themselves, or perhaps, to "spy out the land" for friends in the East.

THE TEN-ACRE RANCH.

The Okanagan is emphatically a district for intensive farming, and the Eastern rancher, who, perhaps, has barely managed to make both ends meet from the results of the working of his immense area of wheat land in the Northwest, is frequently astonished at the results pointed out to him by the small fruit-grower, whose little ten-acre plot nets him profits far in advance of what might have been expected. Of course, these are the results after the orchards come into bearing, for it is as well to realize that a living cannot be assured from a ranch of small area right from the beginning.

THE COLDSTREAM RANCH.

No description of Vernon would be complete without a mention of the Coldstream Ranch, Lord Aberdeen's splendid British Columbia estate, which has been the greatest benefit to the valley, both as one of the principal factors in calling



A Pleasing Vista.



Scene near Kelowna.



McKenzie & Martin at Long Lake.

attention to the many advantages it possessed as a fruit-growing district, and also as a sort of unofficial experiment station, where a great deal of necessary information as to the selection of proper varieties, the peculiar climatic and soil conditions of the district, the husbandry of the trees, the picking and marketing of the fruit, and other features of the fruit industry requiring special knowledge, has been gathered by the slow and frequently unprofitable process of experience, and are now placed at the disposal of the small grower.

It is probably unnecessary to say that the Coldstream Ranch affords one of the most striking and convincing examples which the country possesses of the capabilities of the Okanagan soil and climate when utilized under an intelligent and systematic method of cultivation, and has demonstrated, emphatically, that the district is pre-eminently suited for the production of fruit of the finest quality and the most delicious flavor. The products of the ranch have won a reputation for themselves, and have probably spoken more convincingly to many of our readers than we could possibly do.

The ranch comprises some 13,000 acres, of which 8,500 are range land, 2,000 under cultivation, and the remainder more or less timbered. Of the cultivated portion, the most interesting to the visitor will probably be the orchard of 200 acres, of which over 100 acres are now producing. This is being steadily increased year by year, and it is not unlikely that, at no very distant period, the Coldstream Ranch may develop into one of the largest fruit farms in the Dominion. Apples are the chief product, though pears, plums, prunes, cherries, etc., are also grown. As to output, it may be said that in 1903 there were shipped from this orchard 505 tons, and, in addition, 188 tons were purchased from neighboring growers, and were marketed along with the Coldstream fruit. The Northwest Territories and Manitoba provide the principal markets, though packages bearing the well-known brand of this ranch have found their way to Dawson City, and may even be met with in Australia. A small nursery is being enlarged to contain 200,000 stock trees of the various varieties which experience has shown to be best adapted to this district.

Another important feature of the ranch is to be found in its extensive hop-yards. There are now in cultivation under hops about 100 acres, from which were shipped last year 552 bales, containing in all 118,486 pounds. The area of the hop fields, like that of the orchard, is being yearly increased, and the facilities for curing and preparing them for market are of the best.

Of the arable land, 484 acres were devoted to grain in 1903, and yielded 500 tons. Of roots, 886 tons were raised, and potatoes, 574 tons. Most of the cultivated area of the ranch can be reached by a system of irrigation, though, to a large extent, it is hardly necessary to employ this during an ordinary season.

The live stock includes a herd of about 1,000 cattle, of which some 300 head are shipped each year to Alberta as yearlings, where they are grazed and fattened. The average crop of calves is fully 75 per cent., which speaks well for the excellent breeding conditions existing in this district. A few sheep and Angora goats are kept, and about 300 hogs are sold each year, realizing about \$3,000. About 25 men are employed in winter, and in summer this number is increased to 50 or 60.

Some years ago a few 40-acre lots on this estate were placed on the market, and are now occupied by prosperous farmers and fruit-growers. Another subdivision has since been made, and a limited number of twenty-acre plots on Long Lake are offered for sale. The purchaser, if he desires, may make arrangements with the ranch to have this lot planted with fruit trees, under expert management, and cared for till it reaches producing age.

NEIGHBORING RANCHES.

Vernon owes much of its importance to the rich and extensive agricultural district which surrounds it, and upon which it depends very largely for its support. So much has been said about the Okanagan as a fruit-growing district, that one is apt to lose sight of the fact

that much grain is produced in the vicinity, and that mixed farming is also prosecuted to a considerable extent. Some details of work of the large ranches of the neighborhood may correct any false impression in this regard which may be prevalent.

The Lanington Ranch, situated in the White Valley, about ten miles from Vernon, consists of about 940 acres of a rich loamy soil, unequalled in the valley. Four hundred acres under irrigation are put down to hay and clover, while there is about 90 acres of meadow land. From 250 to 300 acres are devoted to wheat-growing, from which about 250 to 300 tons of grain are harvested yearly. A young orchard of 1,000 apple trees, and some 150 plum and cherry trees, recently put out,

promise good returns in the future, while there are a hundred or more trees already bearing. The stock kept consists of about 60 head of Shorthorn cattle, and a small herd of pure-bred Jerseys, about 150 pigs, and some fifty pure-bred Shropshire sheep.

C. O'Keefe's ranch is one of the largest in the neighborhood, and it was this gentleman who took the initiative in the subdivision of great holdings, which has gone on ever since. The O'Keefe estate comprised some 11,000 acres, of which about six or seven hundred were wheat fields, and about a thousand acres fine meadow land, much of the rest being used as range for cattle. Since placing his land upon the market in small lots, about a year ago, Mr. O'Keefe has sold a great deal, and his enterprising agents

are now pushing part of the remainder with characteristic energy.

Mr. O'Keefe has about 800 head of cattle and some eighty horses. It might be mentioned that some 200 acres of the O'Keefe property, on both sides of the Mission Roads, is being put into orchard, under the management of the Vernon-Okanagan Land Company, and has found a ready sale at good prices.

Messrs. Greenlow's splendid property adjoins Mr. O'Keefe's, comprising about 8,000 acres, of which about 1,000 is in wheat, and 250 meadow land. Eight hundred head of cattle feed on the extensive ranges.

FRUIT-GROWING.

Fruit-growing is unquestionably the great industry of the Okanagan, and it is the fact that such unlimited markets are opening up for the fruit-grower in the Kootenays, the Northwest, and the Old Country, that is one of the principal factors in giving impetus to the settlement and development of the valley. Okanagan fruit is establishing a reputation for itself which will stand it in good stead in the future, and which insures a steady demand for the trainloads that will be shipped out of the valley in the future for every carload that is now produced. The apples compare very favorably in flavor, size and appearance with the choicest products of Ontario and Nova Scotia, and possess, besides, a superiority in firmness and lasting quality which admirably adapt them to supply a distant market, whenever the nearer ones may fail. The success met with by Okanagan fruit at the Royal Horticultural Society Exhibition this year has attracted the attention of the English dealers to the products of this valley, and thoroughly established their reputation as first-class fruit.

The climate of the district is eminently favorable to fruit-production, and pears, plums, prunes, cherries, peaches, and small fruits, attain a perfection which commands top prices wherever they are sold. The natural advantages of soil and climate are all that can be desired, and the application of care and skill to the business of fruit-growing may be relied upon to produce fruit which will equal or excel that of the most favored sections.

A great point in favor of the district is the total absence of those destructive enemies to the orchard, the codling moth and the San Jose scale.

A FRUIT-GROWER'S EXPERIENCE.

The facts and figures of actual experience are always worth very much more to the practical seeker for information than any amount of loose generalities, or "hot air." We cannot do better, therefore, in our endeavor to present Okanagan conditions before our readers, than to quote once more the much-quoted letter of one of the best known fruit-growers of the Okanagan, whose estimates of costs and possibilities are of the practical type required. The letter is as follows:

The cost of setting out an orchard of apple trees would figure out somewhat as follows:

20 acres, at \$60 per acre	\$1,200 00
Fencing, about	200 00
Plowing and fixing, at \$5 per acre	100 00
Trees, set 30 feet apart, 968 at 15c. a tree	145 00
Freight on same, about	20 00
Setting out and planting, at 4c. a tree	38 72
Total cost	\$1,703 72

The trees will occupy about one-fifth of the ground the first year, about one-fourth the second and third, about one-third the fourth, etc. Leaving out the cost of working the land between the trees, because this should at least be paid for by the crops of roots, potatoes, etc., raised upon it, the cost of working the land where the trees are will be somewhat as follows:

Cultivating, spraying, pruning, etc.—	
First year, at \$10 an acre	\$ 200
Second year, \$10 an acre	200
Third year, \$15 an acre	300
Fourth year, \$20 an acre	400
Fifth year, \$25 an acre	500
Total	\$1,600

The above figures are ample for giving thorough care to the orchard in every way. The land that was used for other crops—that is, the space between the trees



Round-up of O'Keefe Cattle.



A. Birnie's Ranch. 500 Feet Above Vernon.



B. X. Orchard, Vernon.

—might well be worked so as to more than pay for the initial cost of the trees. For instance, in the fourth year, if clover was grown, there would be about 14 acres, which should yield in two cuttings 40 to 45 tons, worth \$300 or \$400. The trees should also produce some fruit in that year, perhaps \$100 worth.

Leaving out, however, what might have been made from root crops, clover, etc., on the unoccupied part of the ground, the total cost of the orchard up to the beginning of the sixth year would be \$3,302.92, or \$165 per acre. After this the orchard should pay its expenses out of the fruit it produced, and about the ninth year there should be a crop amounting to about seven tons per acre, worth on the trees, perhaps \$150.

An orchard of apple trees may be expected to have an average crop of 8 to 10 tons per acre per year, if properly cared for, and it is possible that this average might be considerably exceeded. Some trees in a garden, planted about 14 years ago, which have had good cultivation right along, have averaged 600 pounds over some years.

To sum up: To plant an orchard is to get into an investment that takes ten years to properly mature. The property is improving all the time. For about the first four or five years, it will be a charge and an expense. Afterwards it should pay expenses. The total money sunk in it might be from \$150 to \$200 per acre. The returns from it should average \$150 or so above expenses.

FRUIT SHIPMENTS.

The following figures will give some idea of the growth and present proportions of the fruit industry in the Okanagan, and also of the relative position of the Vernon district as a fruit producer. Shipments by freight during the months of August, September and October, in pounds:

From.	1903.		1904.	
	Apples	Other Fruits	Apples	Other Fruits
Armstrong	72,000		70,000	
Vernon.....	788,000	420,000	924,000	458,000
Kelowna	764,000	250,000	746,000	308,000
Other points	38,000	12,000	22,000	12,000
To'als.....	662,000	682,000	1,762,000	778,000

In addition to the above, large quantities of peaches, berries, cherries, currants and other soft and perishable fruits were shipped from the Okanagan during the past season by express, and of such fruits, the shipments mentioned in the following table are for the most part made up:

	Lbs.
Armstrong	15,573
Enderby	3,300
Kelowna	99,085
Okanagan Landing	16,325
Peachland	70,320
Summerland	70,590
Vernon	85,222
Other points on lake	85,000
Total	445,415

TRIBUTARY DISTRICTS.

The central position of the city makes it the natural supply and shipping point for a number of rich agricultural sections, whose progress and development promise to advance with rapid strides in the very near future.

Leaving Vernon by a wagon road lead-

ing in an eastern direction, we enter the Coldstream and White Valleys, which, with tributary depression, comprise considerably over 75,000 acres. All along the way, till we reach the Coldstream Ranch, are found productive farms, on which fruit-growing is the main consideration, and which comprise some of the finest orchards in the district. Everywhere we see evidences of prosperity, and that general aspect of comfort which is the inevitable accompaniment of success. Beyond the Coldstream, not very much fruit-growing is done at present, the district being better suited to the growing of grain, hay, etc. Indeed, it would, probably, not be too much to say of the upper part of the valley, that it is one of the best and most productive hay

meadows in the interior. This part of the valley is mainly settled by French-Canadians, many of whom have transformed rather doubtful propositions into properties which yield them first-rate returns.

Lumby is situated some sixteen miles from Vernon, and is a prosperous settlement, possessing two churches—Roman Catholic and Presbyterian—a sawmill and a general store. A creamery, to be conducted on a co-operative basis, has just been organized, and, when it is in operation, should do much to encourage dairying, for which industry, indeed, the district is specially adapted. The creamery is expected to handle the milk from 300 cows. The position of Lumby, at the junction of the roads leading to Sugar and Mabel lakes, to the Monastee and Cherry Creek mines, and to Creighton valley, ensures its steady growth, and railway transportation facilities would make it one of the leading towns of the Okanagan. It is estimated that there must be over 40,000 acres of the good land immediately tributary to the town, and there are many indications that increased settlement and consequent development of latent resources will make the region one of the most flourishing in the country.

A short distance to the south of Vernon is a large tract of land known as the "Commonage." For a number of years the land in this district was considered suitable only as a range for cattle. This unfortunate impression greatly retarded the development of the region, and it is only in comparatively recent years that the practical experiment of enterprising farmers has resulted in the development of one of the most prosperous settlements in the valley. Mixed farming is now carried on most successfully in places formerly given over to cattle pasture, and excellent wheat, barley and other grains are grown. One of the main errors in the old idea was the opinion that nothing could be done without irrigation, which the height of the land rendered practically impossible. It is found, however, that the soil, on deep, black loam, from two to five feet deep, naturally retains sufficient moisture, and artificial irrigation is, therefore, unnecessary. A great deal of hay is also grown, first-class timothy being produced on many of the farms. Dairying receives some attention, much of the butter used in the city coming from this district. Very little has yet been done in fruit-growing, but several young orchards have been started, and it is expected that in this respect the "Commonage" will not be far behind other parts of the valley.

FISH AND GAME.

To the sportsman, the Okanagan offers attractions which are not equalled in many parts of the Dominion, as all kinds of game, whether big or feathered, fur, fish, flesh or fowl, await the hunter, who makes the city a starting point for excursions that may be made to the mountains and valleys of the surrounding country. The lakes and streams, which



Orchard near Vernon.



A Pleasing Variety of Landscape.



Coldstream Orchard.

*Finley, Photographer
Vernon, B.C.*

are dotted profusely all over the country, furnish trout that may weigh twenty pounds or more, while fish running from two to eight pounds are the common reward of the angler. Within a radius of from ten to fifteen miles from the city may be found deer in abundance, cariboo, mountain sheep and goats, grizzly and black bears, etc., while feathered game, including geese, duck, grouse, blue and willow, and prairie chicken, are to be obtained in all parts of the Okanagan.

TRANSPORTATION FACILITIES.

Vernon is connected with the main line of the C. P. R. at Sicamous by the Shuswap and Okanagan Railway, a branch railway, which makes daily trips over the fifty-mile line during the summer months, and tri-weekly trips during the winter. The growth of the district, and the consequent increase in the amount of shipments, has increased to such an extent during the past eighteen months that there is now every probability that the daily service will be continued throughout the year. Another railway has been projected for some time to connect the fertile agricultural districts of the Okanagan with the populous and growing mining country of the Boundary, and should it go through, it will be a great boon to the valley, and a great incentive to its growth and progress. This road, the Midway and Vernon, has been bonused by both Dominion and Provincial Governments, but, so far, it has been found impossible to finance it.

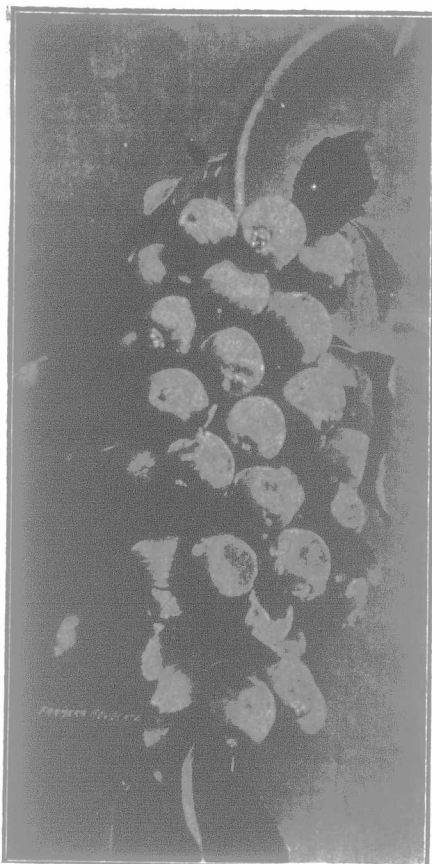
MARKETS.

The markets for fruit, hay, vegetables, hops and other produce is practically inexhaustible. The Northwest Territories readily absorb any fruit we can supply, and the large influx of settlers into that country, now steadily going in, and likely to continue for some time, will further increase the demand. The mining towns of the Kootenays furnish a more local market, and consume our beef, mutton, pork, poultry, tomatoes and early vegetables, while large shipments of produce are annually made to Vancouver and other coast cities. Railway connection with the Boundary country, which is still a possibility, would open up another great market in the populous mining sections of the South, with their steadily increasing demand for various agricultural products. If, for any reason, these should fail, we have England and Scotland to fall back on. Recent experiments of Okanagan fruit-growers have demonstrated that apples can very profitably be shipped to the Old Country, while even Australia has received fruit from the Okanagan.

RETAIL PRICES.

The following figures, giving the retail prices at Vernon of ordinary necessities, will furnish some idea of the general cost of living:

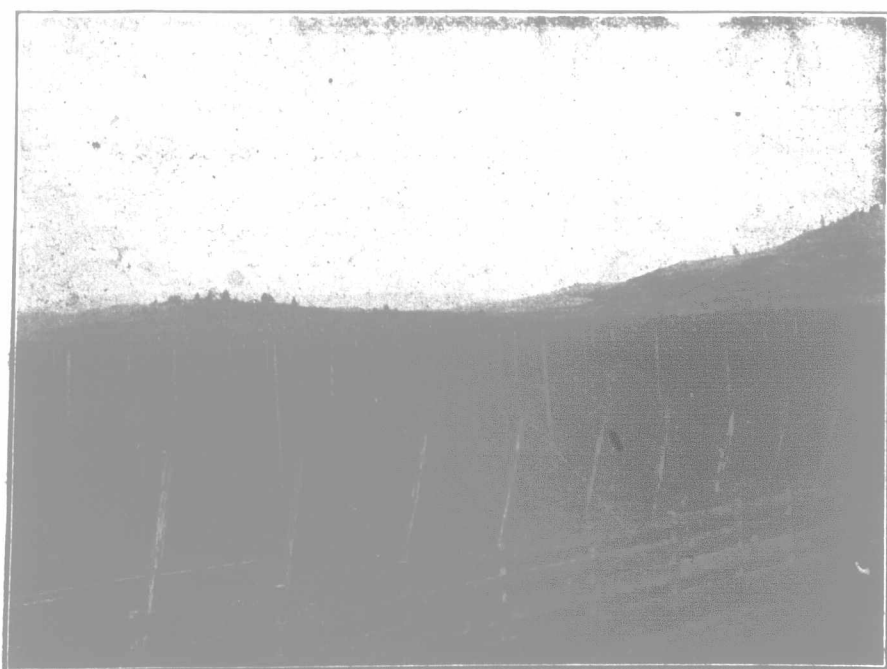
Retail prices at Vernon of ordinary necessities for farmers (supplied by Mr. W. R. Megaw).—Flour, \$3.75 to \$4.50 per bbl.; beef, 8c. per lb. by the quarter (10c. to 12c. retail); bacon and ham, 16c. to 18c. per lb.; lard, 13c. to 15c. per lb.; butter, 20c. to 25c. per lb.; tea, 25c. to 50c. per lb.; sugar, \$5.75 to \$6.25 per 100 lbs.; overalls,



Branch of Crab-apples.



Branch of Plums.



Hop Yards.

75c. to \$1.25 each; shirts, 40c. to 75c. each; boots, \$1.25 to \$4.00 per pair; walking plows, \$14 to \$22; harrows, \$17 to \$24; two-horse farm wagons, \$75 to \$120; sleighs, \$30 to \$35; cutters, \$35 to \$50; buggies, \$70 to \$100; democrat wagons, \$90 to \$110; double harness, \$35 to \$45; single harness, \$15 to \$24; saddles, \$10 to \$40; binder twine, 13c. per lb.; binders, \$160; mowers, \$65; hay rakes, \$30 to \$35; farming tools of all descriptions, about ten per cent. above Manitoba prices (fifteen per cent. above eastern); dry goods in general, eight per cent. over eastern prices; hardware, ten per cent. over eastern prices.

MARKET PRICES OF FRUIT.

The following are given as the prevailing prices for fruit: Apples, \$1.00 to \$1.25 per box of 40 lbs.; pears, \$1.35 to \$1.50 per box of 40 lbs.; cherries, \$1.60 to \$1.85 per box of 16 lbs.; plums, 80c. to 90c. per crate of 20 lbs.; prunes, 65c. to 75c. per crate of 20 lbs.; strawberries, 10c. per lb. per crate of 24 lbs.; raspberries, 10c. per lb. per crate of 24 lbs.; crab apples, \$1.50 per 40-lb. box; tomatoes, 14c. per lb. to start, to 6c.

For further particulars regarding this fertile district, write W. R. Megaw, Vernon Board of Trade, Vernon, B. C.

QUESTIONS AND ANSWERS.

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

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1 must be enclosed.

Miscellaneous.

PAYING FOR BULL'S SERVICES.

A has a bull. B brings four cows, and does not pay at time of service. Does A have to advertise bull before he can collect fees? S. W. Ont.

Ans.—No.

EMPLOYEE BREAKING AGREEMENT.

A hires with B for one year for \$200. On the first of December and through the winter draws \$38. On the 15th of March, A leaves without any reason, other than that he can make more wages, and B has to pay at the rate of \$26 per month for the eight months and one-half remaining.

1. Can A collect any wages?

2. Can B hold A responsible for what it costs him over the \$200 to hire a man to put in the rest of A's time?

3. Also can B recover the \$30 already paid, providing both parties have got property, and are responsible parties? Ont.

Ans.—1. He is not legally entitled to do so.

2 and 3. B's remedy is by way of an action against A for damages for the latter's breach of the agreement.

REFUSE SALT FROM PORK FACTORY FOR MANGELS.

1. Is the refuse salt from a pork factory as good for the land as the ordinary land salts?

2. Is the alum contained in the said salt in any way injurious to the land?

(3) If it is fit for mangel ground, about what quantity per acre would you advise? C. T. E. Wentworth Co., Ont.

Ans.—1. In many pork-packing factories saltpetre is used along with the salt, and doubtless a portion of this will be found in the refuse salt. The salt also contains small quantities of the juices of the meat. The factory salt will thus be slightly enriched by potash and nitrogen.

2. It is not likely that the amount of alum present will be injurious.

3. Mangels are heavy feeders and take large amounts of potash and nitrogen from the soil. The salt supplies a very small quantity of these when applied on clay soils, the sodium of the salt tends to bring potash in the soil into an available form. Taking it all together, salt cannot be said to be a good material to apply on mangel ground. Purely nitrogenous manures and wood ashes are more likely to give good results. R. HARCOURT.

Ontario Agricultural College.

ARTICHOKES.

1. When is the proper time to plant artichokes?

2. What state of cultivation and fertility should the soil be in?

3. How should they be planted, and how much seed per acre?

4. Where might I obtain the seed?

Simcoe Co., Ont. J. H. M.

Ans.—1, 2 and 3. Sow the seed in April or May in drills two inches deep; thin the plants to four inches, and when strong transplant in deep rich soil, two feet apart each way. Keep the earth loose about them in summer, and cover during winter with dry litter or leaves for protection. Jerusalem artichokes, an enormously productive variety, valuable alike for table and stock-feeding purposes, should be planted in rows, not less than three feet apart. Three bushels of tubers of this variety will plant an acre.

4. Write to the seedsmen advertising in the "Farmer's Advocate."

CROP FOR A MUSTARD-INFESTED FIELD.

I have eight acres of sod, which I am plowing now; had intended to sow peas on same, but the field is infested with wild mustard, and I have been told that peas will not do well with mustard. Will bluestone spray for mustard injure the pea vine? The field is in good condition otherwise, and I would like to sow fall wheat after peas.

AN OLD SUBSCRIBER.

Ans.—We are advised by Prof. Lochhead, of O. A. C., Guelph, that in their experiments they found that pea vines were not injured by a two-per-cent. or even three-per-cent. solution of copper sulphate. At the same time we would be inclined to advise planting corn on this field, giving thorough frequent cultivation until quite late, say till the corn is tasseled. Wheat might be sown in the fall or oats or barley next spring, and spraying depended on to kill any remaining mustard plants then.

PASTURE FOR HOGS.

1. I have an acre of timothy sod I intended seeding with barley about three bushels per acre for hog pasture. Could you suggest some mixture that would be better for constant pasture till after harvest? Would it pay me to work manure in on the surface for it?

J. H. M.

Ans.—1. We would not advise sowing barley for this purpose. Try a mixture of 1 bushel oats, 1 bushel peas, 1/2 bushel common vetch, and 2 lbs. rape per acre.

2. A little fine manure could probably be used to advantage.

PEARS NOT FRUITING.

I put out two Bartlett pears about five or six years ago, close against the west end of my barn, and trained them vine-like. They have never shown flower. A year ago, this time, I cut them well back, and still no sign of flower. The ground is good, and they are the only trees in that locality that have not done well. Can you suggest what the trouble is? Ontario Co., Ont.

Ans.—From the particulars given, I can assign only two reasons why your trees have not done as well as other trees in the locality. In the first place, a western exposure is one of the worst that they could be placed in. The trees there would not receive their full share of sunlight during the forenoon, and would, no doubt, be severely exposed to the hot sun in the afternoon. Then, again, it is not natural for them to be trained as vines. It is much better to allow trees to take their natural shape and not try to force nature out of its usual course. Cutting the trees back severely would not help to induce fruiting; in fact, it might have the opposite effect, as it would tend more or less to upset the equilibrium of the tree, and the result would be that for a year or two they would make extra wood growth to restore the balance between top and root. It is best to give trees full exposure to sunlight, allow them to assume their natural form, and prune regularly so that severe cutting back will not be necessary at any time. H. L. HUTT.

AUTOMATIC GATES.

We have been asked for the names of makers of automatic gates—those that may be opened and closed by lever operated from carriage or wagon seat. Can any reader supply the information?

Vernon-Okanagan Land Company

Orchards Planted and Taken Care of for Non-Residents at Reasonable Rates.

Sole Agents for 300 acres of Choice Fruit Land adjoining City of Vernon, Subdivided in lots from 10 to 100 acres.

NOTICE

We are sole and exclusive agents for over 5,000 acres of Choice Orchard Land adjoining the City of Vernon and Larkin, in blocks of from 5 to 500 acres. Terms: One-Third Cash, balance in three years at 6 per cent. We are also planting out over 100 acres in orchard this spring—30 for ourselves, the balance for our customers, and that is 100 per cent. more than any other agent in Vernon can truthfully say. Therefore, we practice what we preach, and from these facts we have sold over \$200,000 worth of property in the past year. We also own an addition to the City of Vernon, and are sole agents for the Town-site of Larkin. We are pleased to show all comers that these are facts and that our prices are right. Give us a call.

Although we are by no means backward in blowing our own trumpet and usually know how to proclaim with proper effect, when we have a good thing, we must admit that it is much more satisfactory to have a proper share of deserved credit given us by an unprejudiced observer. For not only does such a complimentary reference reinforce our own opinion of ourselves and the undertaking we have in hand, but it has a great deal more weight with the public in general, as coming from one who cannot, in any sense, be said to have an axe to grind. It is, therefore, with a great deal of pleasure that we quote the following from the Vernon News of recent date:

A great deal is heard of the progress and development of the district, and there is a more or less definite general impression that the country is going ahead, but, perhaps, few actually realize the extent to which the settling and building up of the portion surrounding Vernon is proceeding. It would surprise those who have not driven out the Mission Road recently to note the changes that have taken place there during the last few weeks. The land on both sides of this road for some little distance has been in the hands of the Vernon-Okanagan Land Company, and a large part of it has been disposed of to settlers from the east, while Mr. D. R. Young himself has become possessed of some of the most promising sections.

At the request of purchasers, who were unable to leave their business in the east so as to personally superintend the work, the company undertook this spring to look after the putting in of trees on a limited area. This plan, however, proved acceptable to so many buyers that the amount of land now being prepared for the reception of fruit amounts to over 200 acres. Most of this has been surrounded by substantial fencing, and a gang of 25 odd men, with four three-horse teams, have been continuously employed during the past month in the various operations preliminary to the putting in of the orchard. It is estimated that about 15,000 trees will be put out this spring on land under the immediate control of the company, and that this will probably be doubled next year. These figures include the Wellington Ranch, a 300-acre property, owned by a Regina syndicate, 70 of which is being planted in orchard this spring, and comprising portions of the former O'Keefe estate. A. Best, recently of the Coldstream Ranch, an experienced fruit man, is in charge of all the work for the Vernon-Okanagan Company, and O. Dabb, who has had a great deal of experience with fruit-growing in Australia,

is in charge of the Wellington. Mr. Young, who is the moving spirit in the enterprise, certainly deserves a great deal of credit for his push and energy, which has had a great deal to do with awakening general interest in the possibilities of the district.

LARKIN.

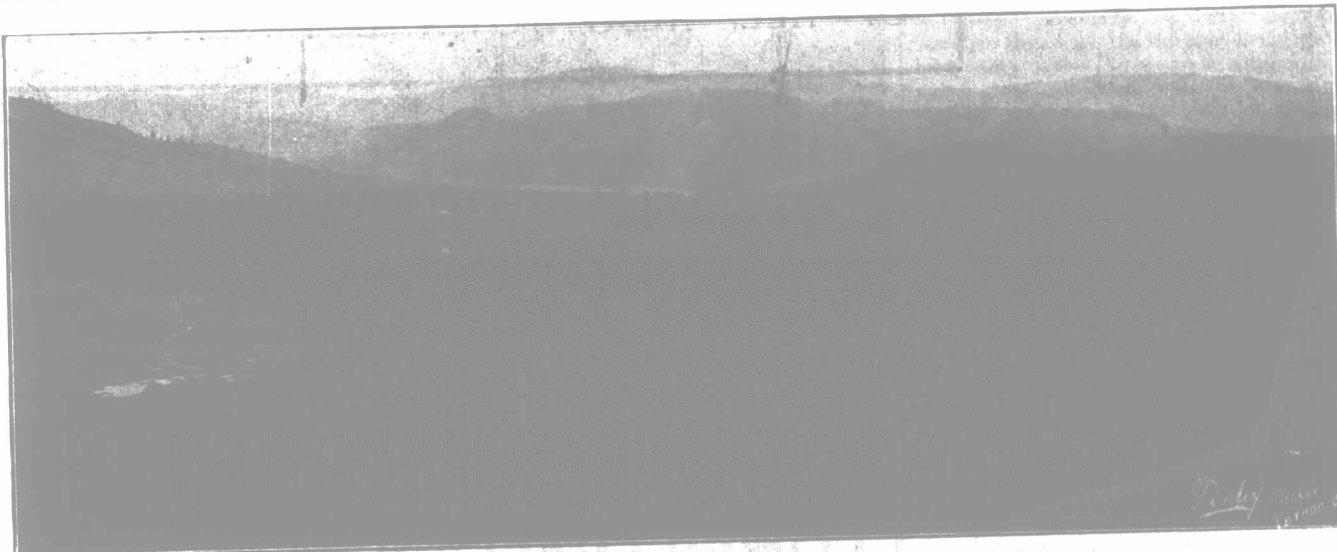
The new town of Larkin, situated on the S. & O. branch of the C. P. R. is destined to become one of the most im-

portant towns in the Okanagan. It is unnecessary to add very much except as to developments. A map of the new town site has been completed, and a large number of lithographs of it are now being struck off at the coast so that it may be possible to show would-be purchasers the exact position of their lots without a personal visit. Lots are already selling quickly and applications should be made at once to secure choice locations. Arrangements have been made for the immediate erection of a hotel, and it is probable that in a very short

time an up-to-date hostelry will supply the needs of the public. A livery stable and accompanying buildings will be put up at once, and the offices of the Vernon-Okanagan Land Co. will be begun the first of next week. A sawmill will also start about the middle of next month and 75,000 feet of logs are now ready to furnish lumber for the various building operations. A contract has just been let for piping two inches of spring water to the town site from a distance of about

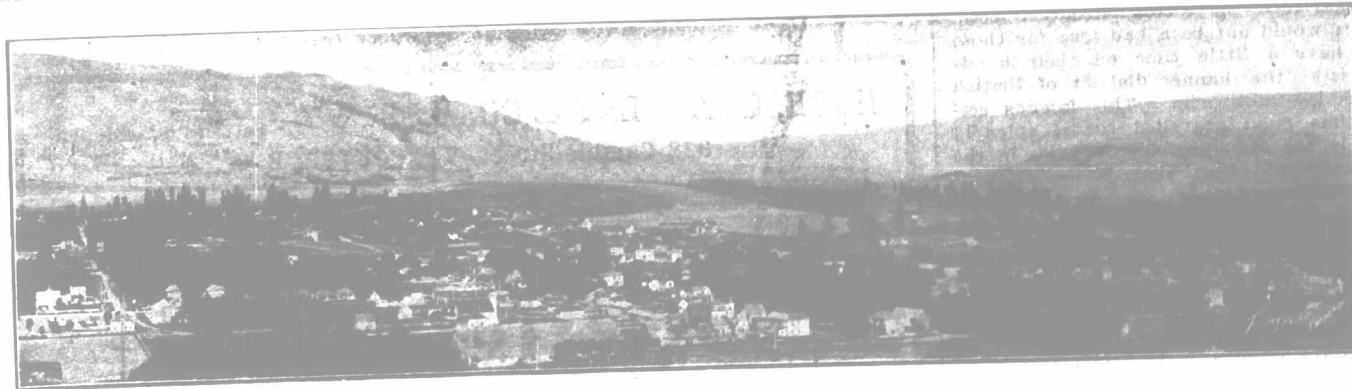
of the finest fruit land in the valley will be placed upon the market. It may be mentioned incidentally that the eastern agents for these fine properties are Messrs. Christie & Heubach in Winnipeg and the Tracksell Land & Investment Co. in Regina.

A FEW GOOD THINGS ON OUR LIST.
20 10-acre blocks, from one to two miles from city of Vernon, adjoining some 200 acres being planted in fruit trees this



1 1/2 miles, to supply the immediate demand for domestic purposes, and another contract will shortly be given for the piping of 300 inches for general irrigation purposes. The ditches are already complete and only the construction of the flumes is retarding the turning on of the water. Nor is the enterprise of the controlling company confined to the town site. By the middle of the month surveyors will start the subdivision of 20,000 acres of land in the immediate vicinity of the new town, and as soon as possible this great area

spring at \$80.00 per acre. Terms: 1-3 cash; balance, 3 years, at 6 per cent. Also 10 20-acre blocks, same locality and same price and terms. The above property overlooks the city of Vernon and also Okanagan Lake, making it an ideal location for a home. 100 residence lots, facing on Seventh and Mission streets, at \$35.00 per lot. Easy terms and reduction to those who wish to build at once. This price is only good for 2 weeks from date. Vernon has a great future. Buy now and you won't regret it.



We are sole Agents for everything we advertise. For further particulars apply to

VERNON-OKANAGAN LAND CO., Vernon, B. C.

OR TO

Messrs. Christie & Heubach,
Sole Agents, WINNIPEG.

The Tracksell Land & Investment Co,
Sole Agents, REGINA.

In answering the advertisement on this page, kindly mention the FARMER'S ADVOCATE.

BRITISH COLUMBIA

Far Famed Okanagan

Kelowna, B. C.

FRUIT AND AGRICULTURAL LANDS, RESIDENTIAL PROPERTIES FOR SALE IN LOTS OF A SIZE TO SUIT ALL PURCHASERS. PRICES AND TERMS PUTTING IT WITHIN REACH OF ALL. ALSO TOWN LOTS. APPLY TO

CARRUTHERS & POOLEY, Real Estate Agents,
Kelowna, B. C.

TRADE NOTES.

A PLEASING COMBINATION.—The Okanagan Valley of British Columbia combines a Manitoba soil with a California climate. This gives all the advantages of earth and air, and makes living superlatively attractive. It is stated with the utmost authority that better fruit can be grown and better prices obtained for it in the Okanagan than in the famous Niagara district. This beautiful valley of British Columbia has no fruit pests, and enjoys free irrigation. If you are at all interested and will write to H. Percival Lee, Vernon, B. C., he will send you the largest list of farm properties in B. C.

CHILLIWACK, A FAMOUS DISTRICT—Now that the farmers of Manitoba and the Territories have completed their seeding, it would not be a bad idea for those who have a little time on their hands to visit the banner district of British Columbia—Chilliwack. This famous section has good gravelled roads, splendid schools, the two largest creameries in the Province, and fruit that is beautiful in its perfection. Dairying, mixed farming and fruit-growing can be carried on here under the most ideal circumstances, and high prices realized for everything. The Provincial Government reports show full well that Chilliwack has achieved a splendid reputation for itself, and is adding to its renown daily. All last winter there was only five degrees of frost. The fruit trees were in bloom on April first, and the cattle feeding on rich pasture; in fact, summer had arrived. If you want a desirable home, write at once to Nelems & Scott, the real-estate and insurance agents, P. O. Box 279, Chilliwack, and they will send you a splendid descriptive catalogue, free of cost. However, the best thing for the readers of the "Farmer's Advocate" to do is to go out and see this charming country for themselves. Leave the Canadian Pacific Railroad at Harrison Mills Station, 60 miles east of Vancouver, and cross the river to Chilliwack, via the ferry, or embark on the large river steamer at New Westminster for Chilliwack, the western terminus of the Fraser River service.

FARMS IN
LOWER FRASER VALLEY, B.C.

You can select land from 20,000 acres at \$5 to \$150 per acre. This district is not subject to floods, and requires no irrigation.

All this land being within 50 miles of Vancouver should give big returns from mixed farming, dairying, fruit, hop and berry growing, poultry and hog raising.

These farms have the City of Vancouver and the Klondike gold fields as local markets.

Write us at once, giving some idea of your requirements, and we will mail you a list of farms ideally suited to your needs. We will also send descriptive pamphlets.

HOPE, GRAVELEY & CO., Ltd., Mems Vancouver Settlers' Association.
322 Cambie Street, VANCOUVER, B. C.

OKANAGAN

MANITOBA SOIL.

CALIFORNIA CLIMATE.

Raise better fruit. Get better prices than celebrated Niagara District. No fruit pests. Irrigation FREE. Send for largest list of farm properties in British Columbia.

H. PERCIVAL LEE, VERNON, B. C.

Special Notice to Our Readers.

When writing any advertiser in this issue kindly state plainly that you saw Ad. in the FARMER'S ADVOCATE AND HOME MAGAZINE.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

TRADE NOTES.

PRODUCTIVE FARM LANDS.—In this issue of the "Farmer's Advocate" appears an advertisement of the well-known firm of Hope, Graveley & Co., Vancouver, B. C. This firm, as managers of the Vancouver Settlers' Association, are offering 20,000 acres in the Lower Fraser Valley at prices ranging according to location. This land is well adapted to mixed farming, dairying, fruit, hop and berry growing, poultry and hog raising, and everything produced on it is certain to find a ready market in the City of Vancouver, and in the Klondike gold fields. The readers of the "Farmer's Advocate" will do well to write Hope, Graveley & Co., 322 Cambie St., Vancouver, and secure a list of farms along with descriptive pamphlets.

RIVER HEIGHTS.—Any ordinary investigation will convince the reader that the purchase of lots in River Heights is undoubtedly a good investment. Howey & Borebank bought these properties in large acreage tracts, and now have over 500 acres inside the city limits and 300 acres adjoining the city, which they have surveyed into acre lots for market-garden purposes. Controlling so much, they are able to offer lots at lower prices in proportion than others can sell ten-acre blocks for. For instance, Howey & Borebank are selling lots at \$45 each, ten lots to the acre, immediately on the east side of ten-acre blocks, the owners of which have refused \$600 per acre, or \$60 per lot en bloc. This alone will show that prices are low. The property is situated on the south side of the Assiniboine, half a mile inside the city limits, and between the City Hall and the new City Park. The car line to same will pass through between Colquhoun St. and the river. During the summer, the road will be graded same width as Main St., 132 feet, for double line of car tracks, and Wellington Crescent will be boulevarded similar to Broadway, 150 feet wide for driveway to the New Park. Drop a post card to Howey & Borebank for plans and particulars of these properties.

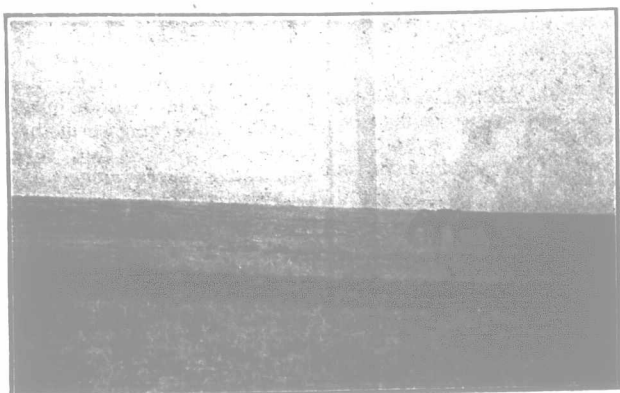
Last Mountain Valley

Steamboat Service On the Lake.

S. S. Queen City and S. S. Silken Dale will make regular trips with freight and passengers.

Railway in Operation This Summer.

WRITE FOR FREE MAPS, BOOKS, ETC.



The Finest Wheat Land in North-east Assiniboia.

Average crop for 5 years
25 bushels per acre. . . .

Wm. Pearson & Co.,
WINNIPEG.

QUESTIONS AND ANSWERS. Veterinary.

COW POX.

Cow had small sores on teat last fall. They appeared like blisters, burst, and left sores and scabs. My other cow contracted the same. I milked the affected one first, and then the other. This spring, after calving, the trouble has re-appeared. J. C.

Ans.—This is cow pox, and is contagious. Milk the sound cow first, and then be sure to thoroughly wash and disinfect your hands before next milking. Dress the spots three times daily with an ointment composed of four drams boracic acid; twenty drops carbolic acid, and two ounces vaseline. V.

COW POX.

We have two grade Jerseys with sore teats. Small lumps appear, break and form scabs, and refuse to heal. T. J. G.

Ans.—This is pox, and the virus is easily carried from a diseased to healthy cows, hence the same person should not milk them. Get an ointment made of four drams boracic acid, twenty drops carbolic acid and two ounces vaseline. Dress the sore parts three times daily with this, and milk very carefully. If the teats become very sore, use a teat syphon (a milking tube), carefully dipping it in boiling water each time before using. V.

UNTHRIFTY COW.

Cow in good condition commenced to fall about a week after calving. She has lost her appetite, and gives very little milk. J. B.

Ans.—It is probable she ate the after-birth, and in some cases this interferes with health. If she is not too weak, give her a purgative of one pound Epsom salts and one ounce ginger. If very weak, do not purge. Give her one dram each sulphate of iron, gentian, ginger and nux vomica three times daily in a pint of cold water as a drench. In addition give separately four drams hypsulphite of soda in half a pint of cold water as a drench three times daily. If she will not eat, you must drench her with boiled flaxseed and ale to sustain and nourish her. V.

SKIN DISEASE AND FEEDING.

1. Mare has lumps the size of peas on neck and back. They are itchy, and when the scab is picked off, the hair also comes. G. J. C.

2. With oats at 55c. per bushel; wheat bran, \$21 per ton; corn meal, \$28.30 per ton; shorts, \$22 per ton; middlings, \$22 per ton; linseed meal, \$33, what shall I feed my horses for a grain ration? Horses weigh about 1,350 lbs. each.

3. How soon after farrowing may a sow be bred? G. J. C.

Ans.—1. Pick the scabs off, and dress the raw surface with butter of antimony once daily for three days; follow up by dressing three times daily with carbolic acid, one part; sweet oil, twenty parts.

2. Feed about five quarts of oats each feed, and give a gallon of bran extra at night twice weekly.

3. It is not wise to breed in less than six or eight weeks after farrowing; if the litter has nursed, not till after the pigs are weaned. V.

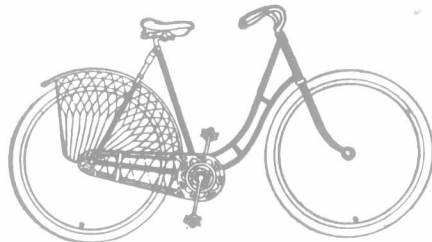
"I am glad to know the bicycle is again coming into favor. It affords an excellent method of overcoming distance and tempts one to keep out doors. I have no doubt its use has added not only to the enjoyment but to the health as well of many people."

HON. JOSEPH B. MOORE,
Chief Justice, Supreme Court
of Michigan,
Lansing, Mich.

July, 1904.

Chief Justice Moore "hits the nail on the head" when he says the bicycle affords an excellent method of overcoming distance. In this connection it is a matter of surprise to us that people living in the country do not use more bicycles. There is nothing on the list so useful on a farm as the bicycle.

City people have discovered that it is indispensable to city life. They have also declared in favor of the



Cleveland and Rambler

Bicycles. They are the new wheels—made in several models to suit any pocketbook—Cushion Frame—Morrow Coaster Brake—Sills' Handlebars.

CANADA CYCLE & MOTOR CO., LIMITED,
MAKERS WORLD'S BEST BICYCLES,
TORONTO.

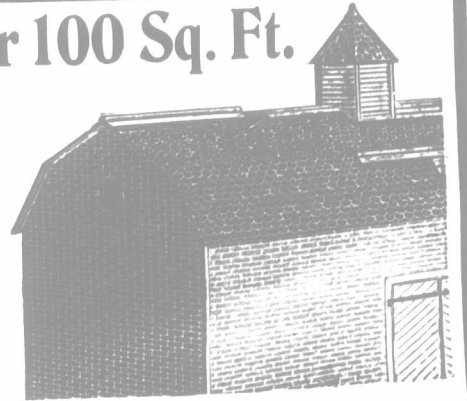
Steel Roofing and Siding, \$2.00 per 100 Sq. Ft.

Painted red on both sides. Most durable and economical covering for Roofing or Siding, for Residences, Houses, Barns, Elevators, Stores, Churches, Poultry Houses, Cribbs, etc. Easier to lay and will last longer than any other covering. Cheaper than wood shingles or slate. No experience necessary. A hammer and snips are the only tools required. It is semi-hardened high grade steel. Brick or Stone Siding at \$2.00 per 100 Square Feet. Pedlar's Patent Steel Shingles at \$2.50 per 100 Square Feet. Also Corrugated Iron, Painted or Galvanized, in sheets 96 inches long. Beaded and Embossed Ceilings. V Crimped Roofing. 2000 designs of Roofing, Siding and Ceilings in all grades. Thousands of buildings through the Dominion covered with our Sheet Metal Goods making them

FIRE, WATER AND LIGHTNING PROOF.

Send in your order for as many squares (10 x 10 feet) as you require to cover your new or old building. The very best roofing for this climate. We can supply Eave Trough, all sizes, Corrugated or Plain Round, Conductor Pipes, Shoes, Elbows, Spikes, Tubes. All goods shipped day after order is received. We are the largest concern of the kind under the British Flag. Established 1861. Capital Invested \$150,000.00.

PEDLAR PEOPLE, OSHAWA, ONTARIO, CANADA.
Eastern Warehouse—767 Craig St., Montreal, Quebec.



Miscellaneous.

BEDDING ON CONCRETE FLOOR.

Would you, in a warm barn with cement floor, advise bedding the cattle, or having stand swept clean? L. C. R.

Ans.—Certainly keep them bedded; it is more necessary on concrete than wooden flooring, the former being colder and more liable to become slippery; besides the bedding absorbs the liquid manure, and makes the best of fertilizer.

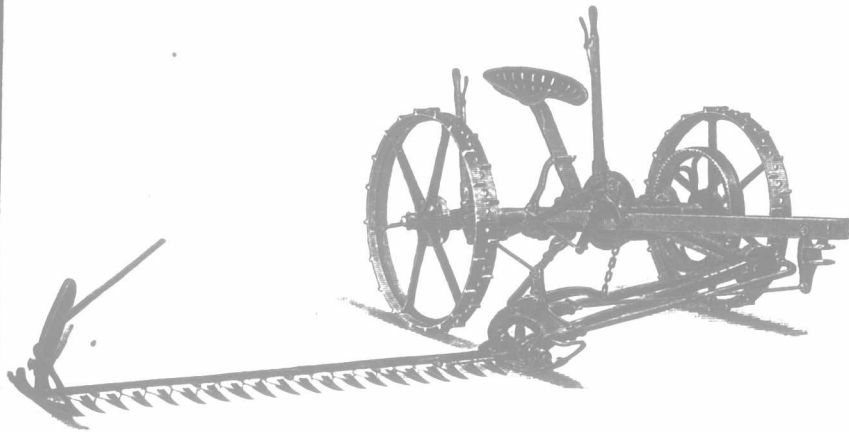
Mr. Geo. Miller, of Gregory, Texas, formerly of Markham, Ont., in renewing his subscription to the "Farmer's Advocate," writes: "South-west Texas is in fine shape; an abundance of green grass and cattle all in fine shape. This firm, J. F. Green & Co., are shipping a train-load of fat steers to market each week; have been shipping at that rate for two months, and will not get them all out until July. These steers have never seen any feed, except the natural pastures in their natural state, and are good enough to top the Fort Worth market quite frequently. They are mostly grade Shorthorns. I am glad to say that the color craze seems to be broken in Texas. A few years ago roans were almost unknown here, and could scarcely be sold at any price. So seldom were they seen that many farmers got the idea that anything that was not all red could not be a pure-bred Shorthorn; but so successful have been the roans brought to Texas in the last five years at the fairs and fat-stock shows, that now very few object to that color, and some buyers insist on having roans. Mr. Green was very successful with Shorthorns in Southern Cattle Department at St. Louis World's Fair, winning nine first prizes and four championships, principally with Canadian-bred cattle. Corn in this section is now knee high, and looks very promising. Cotton not all planted yet."

A cheerful face, a contented mind, a grateful heart, belong to those who give their confidence and love and loyal service to the Lord Jesus Christ. His true disciples take no anxious thought for the morrow, and are profoundly grateful for to-day and yesterday. This is true even when yesterday was full of trouble, and to-day is a hard problem, and the morrow promises a storm. Yes; they give thanks always, for all things.—George Hodges.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

ARE YOU TRYING

to decide what is the best **MOWER** to purchase? A copy of our Catalogue, describing in detail our No. 8 Mower, would aid you. We would like you to ask your neighbor why he uses **FROST & WOOD** Machines in preference to all other makes. We have satisfied customers in every corner of the Dominion who swear by **F. & W. Machinery**, and would be glad to let others know their reason.



Cuts a swath 4½, 5 and 6 ft. wide.

Built Well. Wears Well. Cuts Well. Looks Well.

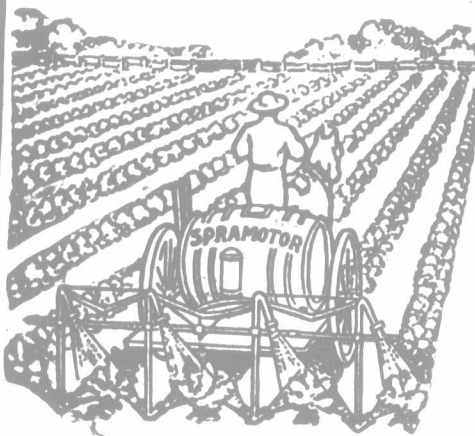
Experience in the building of Mowers has enabled us to turn out a Mower which we guarantee to cut any kind of grass that grows on any land. This is equipped with all the latest devices for saving TIME, labor and trouble.

Spring Foot-Lift, Internal Gear, Roller and Ball Bearings, Forged Steel Pitman Connections, Durable Finish.



HEAD OFFICE & WORKS, - SMITH'S FALLS, ONT.
Winnipeg, Toronto, Montreal, Quebec, St. John, Truro, Charlottetown, Man., Ont., Que., Que., N. B., N. S., P. E. I.

Did the Blight Spoil Your Potatoes Last Year?



The Spramotor will for \$1.00 per acre, protect the coming season's crop from **BLIGHT, BUGS and ROT**, and increase the yield over one-half. The machine illustrated will spray 20 acres a day, 4 rows at a time, above and below, by driving the horse between the rows. All the work is done by the horse. The machine can be worked by hand for stationary work, such as large trees, whitewashing, etc., kill the wild mustard plant, and greatly increase the yield of grain. Write for Booklet "B," it's free.

SPRAMOTOR CO.
88-79 King St. 107-109 Erie St.
LONDON, Can. BUFFALO, N. Y.

Agents Wanted



THOMAS EASY WASHER

Turns mother's drudge into child's play.

- Rubs the clothes naturally—the way a woman does washing by hand.
- Takes the dirt out of wristbands, neckbands, collars and cuffs, just as thoroughly as it cleanses blankets, sheets or pillow cases.
- Has eight inches more rub than any other machine, and positively will not bunch the clothes.
- The children think it great fun to operate it—no work.
- If your dealer doesn't sell it, write

Thomas Brothers, Limited, - - - St. Thomas, Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

COW FAILING TO BREED—RINGWORM.

1. We have a young cow, whose last calf is about eight months old. She is milking well, and was bred in due season. In about three months she came in season, and again in six weeks. I would like to know if anything can be done in order to get her with calf, and what is the reason of such trouble with some cows? The rest of the herd are seldom taken away more than once.

2. We have ringworm in part of the cattle stable. A calf, seven weeks old, which has never come in contact with said part of stable, has a spot on one eye. What is the cause of this calf having it? What is the best way to rid the stock and stable of the disease?

D. B.

Ans.—1. The latest theory is that the usual cause in such cases is bacteria of some sort that gives rise to an acid condition of the secretions of the generative organs, which prevents conception. And a new treatment recommended by Dr. Peters, of Nebraska Experiment Station, is simple and inexpensive. It is as follows: Take an ordinary two-cent cake of yeast and make it into a paste with a little warm water. Allow this to stand in a moderately warm place for 12 hours, then add one pint of lukewarm, freshly-boiled water; mix, and allow to stand another 12 hours. Prepare this mixture 24 hours before the time the cow is expected to come in heat, and inject it into her vagina the moment she is seen to be in heat. Breed her just when she is going out of heat. As a rule, a young bull is preferable in such cases.

2. A simple and sure remedy for ringworm is a mixture of lard and sulphur well rubbed in and repeated till cured.

AGREEMENT WITH SCHOOL TEACHER.

The trustees of our school section hired a teacher. The teacher commenced work and taught for two days. When the trustees met the week following the annual meeting, to appoint a secretary-treasurer, they met the teacher also. When the question of agreement came up, the teacher wanted her salary quarterly, and as the section had always been in the habit of paying at the end of the year, they, the trustees, would not consent to paying quarterly. There is three months gone now, and no agreement, yet the teacher claims she understood it was paid quarterly, although nothing was said about it when her application was accepted. Now, one of the trustees claims she is standing in her own light by not signing it, as he claims she is not hired until she signs the contract, and that she cannot claim a cent for the time she has taught.

1. Is she hired when her application is accepted and she starts to teach, and can she claim salary for time she has taught?

2. Can the trustees give her notice to leave, providing she is giving general satisfaction as a teacher?

3. If so, what notice would they have to give her, as there is no agreement stating the number of months' notice?

4. This trustee also claims it is against the Act to change this agreement from yearly to quarterly without bringing it before the ratepayers. Is that the case, or not? J. G. N.

Out.
Ans.—1. Strictly speaking, no. The Public Schools Act, section 81, under the heading, Agreements, provides that: "All agreements between trustees and teachers shall be in writing, signed by the parties thereto, and shall be sealed with the corporate seal of the corporation." The marginal note to the section is: "Valid agreements with teachers."

2 and 3. She may be summarily dismissed by the trustees, if she will not sign a proper agreement in accordance with the Act.

4. It is not. Section 65, subsec. 10, of the Act, provides that: "It shall be the duty of the trustees of all public schools, and they shall have the power to provide (in the case of rural schools) for the payment of teachers' salaries quarterly, and, if necessary, to borrow on their promissory note, under the seal of the corporation, at interest not exceeding six per cent per annum, such moneys as may be required for that purpose, until the taxes imposed therefor are collected."

Little Boy Had Eczema For Six Months. Salves and Ointments No Good.

Eczema is one of the most torturing of the many itching skin diseases, and also the most prevalent, especially in children. The cause is bad blood, aided by inactive skin, inflammation, etc. It manifests itself in small, round pimples or blisters, which later on break, and form crusts or scales. The skin has an itching, burning and stinging sensation. To get rid of Eczema, it is necessary to have the blood pure, and for this purpose nothing can equal

Burdock Blood Bitters.

Mrs. Florence Benn, Marlbank, Ont., writes:—"My little boy had eczema for six months. I tried ointments and salves, but they healed for only a short time, when it would break out worse than ever. I then decided to give Burdock Blood Bitters a trial. I only gave him two bottles, and it is now two months since, and there is no sign of a return. I feel sure that as a blood regulator, nothing can equal it. I cannot say too much for what it has done for us."

THE T. MILBURN CO., LIMITED, Toronto, Ont.

WINDMILLS



Grain Grinders,
Gas & Gasoline Engines,
Tanks,
Bee Supplies,
Etc.

WRITE FOR CATALOGUES.

Goold, Shapley & Muir Co., Ltd. BRANTFORD, CANADA.

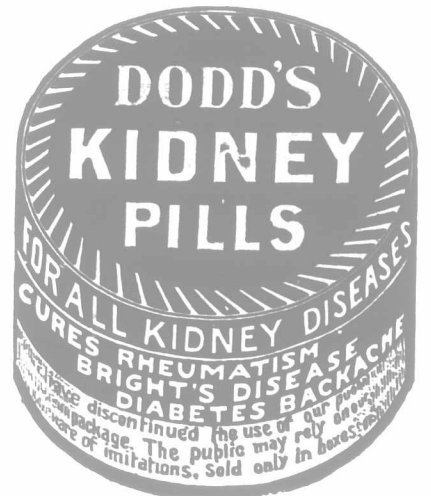
Asthma

Cured to Stay Cured

Attacks stopped permanently. Cause removed. Breathing organs and nervous system restored. Symptoms never return. No medicines needed afterwards. 21 years of success treating Asthma and Hay Fever. 58,000 patients. Book 57¢ Free. Very interesting. Write P. HAROLD HAYES, Buffalo, N. Y. 0

Choice Seed Grains—Mandscheuri barley, Emmer, Tartar King oats. All grains well cleaned and graded, at reasonable prices. Write for samples and particulars. JAMES DICKSON, "Glenairn Farm," Orono, Ont.

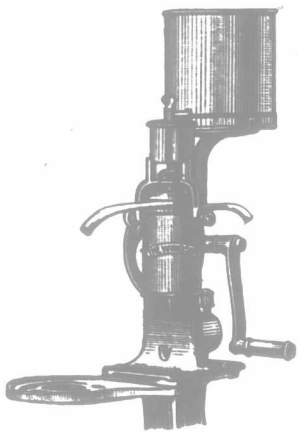
A storekeeper who had been married recently was exceedingly tender to his wife in his speech. One day a little boy entered the store, wishing to purchase a toy. "My lamb, will you wait on that boy, please?" said the busy proprietor to his wife. The boy's eyes opened wide in wonder. He was soon served and went away, but in a few days later returned to have the toy changed. Doubting that the boy had purchased it at his shop, the proprietor asked, "Who waited on you?" "It was the lamb, sir."



In answering any advertisement in this page kindly mention the FARMER'S ADVOCATE.

\$25.00 Buys a Cream Separator

All Sent Out on Free Trial.



WE ARE selling cream separators on the same plan as we have sold sewing machines and threshing supplies during the past three years; that is, we aim to sell a large number of them at a small profit on each. We have a strictly first-class cream separator, as hundreds of Canadian farmers who purchased them last year can testify, and our prices are so much below what agents charge that they are well worth looking into. Further, we send each separator out on free trial, and every one not satisfactory may be returned to us at our expense. We supply with each separator, except the smallest size, iron stand, milk-shelf and two cranks, one long one for easy turning for children, and one short one for men's use.

Our prices for the WINDSOR CREAM SEPARATORS are as follows: No. 0, capacity 115 lbs. per hour, \$25.00; No. 1, capacity 210 lbs. per hour, \$45.00; No. 2, capacity 340 lbs. per hour, \$55.00; No. 3, capacity 560 lbs. per hour, \$80.00. We have dozens of testimonials from farmers in all parts of the country who purchased these machines last year. Every separator sold by us went to a thoroughly satisfied customer, otherwise it would have been returned. Nearly all our customers took them on trial, and did not pay for them until after thoroughly testing. Mr. Henry Pruder, Purple Valley, writes: "The cream separator we purchased from you is giving immense satisfaction. We have eight cows, and are making 12 lbs. of butter more a week than we could the old way by using the milk cans. We also tested your cream separator by running the milk through that we had skimmed closely, as we thought, and we got two quarts of good rich cream. Mr. Schalos, the man who got the separator when we got ours, is also well pleased. He says it half paid for itself the first summer over what they could have made the old way." Mr. Pruder and Mr. Schalos had No. 2 machines.

Mr. Taylor Hamilton, Locksley, Ont., writes: "The Windsor Cream Separator we bought from you last May is giving the very best satisfaction. I could not wish for a better separator, and my neighbors are also well pleased with it. It runs very easy and does its work perfectly."

Send for our separator pamphlet, fully illustrating our machine, showing pictures of the interior of bowl and other parts; also testimonials, terms, etc. We have sold cream separators, sewing machines or threshing supplies in almost every part of Canada, and can probably refer you to some party in your own neighborhood as to the quality of our goods and our reputation for fair dealing.

WINDSOR SUPPLY COMPANY, Windsor, Ontario



20 PERCHERONS 20

Have just arrived with our new importation, Jan. 31st, 1905, direct from France, of 20 high-class Percherons and prize winners in France, from the best breeders in France. They are descendants of such noted champions as Brilliant, Besique, Romulus. Have personally selected every horse ourselves, using extraordinary caution to select nothing but good, sound, serviceable horses that will do our customers and the country good. Colors, black and dark dapple grays. They are large and blocky fellows, 3 to 5 years old, and can go like and dark dapple grays. They are large and blocky fellows, 3 to 5 years old, and can go like and dark dapple grays. They are large and blocky fellows, 3 to 5 years old, and can go like and dark dapple grays. They are large and blocky fellows, 3 to 5 years old, and can go like and dark dapple grays.

HAMILTON & HAWTHORNE, SIMCOE, ONTARIO.
82 miles south-west of Toronto, on G. T. R.

INSIST

on having

STEVENS' OINTMENT

as used in the Royal Stables, once, and you will always insist on having it. It is a reliable article. Veterinary doctors to the Royal Stables use it. Cures

Splint, Spavin, Curb, Ringbone,

and all enlargements in horses and cattle. 75c. small, \$1.50 large box, at Chemists, or direct from

Evans & Sons, Ltd., Montreal, Que. Agents for Canada.



50 Years' Success!!

\$7,000 in prizes. ELEVENTH CANADIAN \$7,000 in prizes.

HORSE SHOW

TORONTO ARMOURIES, WED. THURS. FRI and SAT
APRIL 26, 27, 28 and 29.

Entries close April 12th. Address Henry Wade, Secretary, Parliament Buildings, Toronto. Boxes sold by auction Wednesday, April 19th. Reserved seat sale begins April 21. For information address the Manager, Stewart Houston, Massey Hall, Toronto. REDUCED RATES ON ALL RAILWAYS. Return tickets at single fare, good going April 26; at fare and a third, good going April 27, 28 and 29. All tickets good to return on all May 1st.

MAKE MONEY AT HOME

by taking subscriptions for the FARMER'S ADVOCATE. For terms, etc., apply at once to

THE WILLIAM WELD CO., LTD., LONDON, ONT.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS. Veterinary.

THRUSH.

Mare has been lame all winter from thrush. Give me a speedy cure.

G. McD.

Ans.—Unfortunately we are not always able to effect speedy cures, especially in chronic cases. You will need to have patience. Pare away all partially detached hoof, remove all dirt and fluid from the cleft of the frog, and then introduce some calomel, work it down to the bottom of the cleft with the back of your knife blade. Do this every day for three days, and then every second day, until the discharge ceases. In the meantime keep her standing in a thoroughly clean place.

ABORTION.

Mare 11 years old has had two foals, and was due to foal this year about May 20th. She has been in good health and did little work, and been fed on hay, straw, oats, boiled barley and flaxseed in reasonable quantities. She was let out to water twice daily, and in very cold weather she shivered after drinking. On March 20th she became uneasy about an hour after drinking, and she produced a dead foal. What was the cause of abortion? Would it be advisable to breed her again?

J. M.

Ans.—This mare was well used, but would have been better with regular exercise or light work. Nothing in her usage predisposed to abortion. She doubtless met with an accident, as slipping, falling, being kicked, getting fast between a door and its frame, or some other way unknown to you, and as a result the foetus died, and, as is usually the case, was aborted. The immediate cause of abortion was the dead foetus, and not cold water. I certainly would breed her again, as while she is liable to a recurrence of the accident, as any mare is, she is not liable to acquire the habit under such circumstances, and it is probable her next foal will be safely carried to full term.

CHRONIC LAMENESS.

Mare got her foot caught in the manger a year ago. She had trouble in entraining it, and has been lame ever since. I could not locate the trouble until recently. I find it is in the flexor tendons, and they are enlarged from the knee to fetlock. I applied a liniment, and followed up with coon's oil, but the lameness and swelling increased.

T. W. P.

Ans.—Chronic thickening of the flexor tendons, with lameness, is very hard and tedious to cure. You must make up your mind to give her a long rest. It is a pity you did not have her treated during the winter. Bathe the leg well with cold water several times daily, until the inflammation that has resulted from your liniment has subsided. Then get a blister, composed of 1 1/2 drams each biniodide of mercury and cantharides, and 2 ounces vaseline. Clip the hair off the parts; rub the blister well in; tie so that she cannot bite the parts. In 24 hours, rub well again with the blister, and in 24 hours longer, wash off, and apply sweet oil. Turn her loose in a box stall now, and oil every day. Repeat the blistering every month, and it is probable the lameness will disappear, but a thickening of the tendons will probably remain. Continue to blister every month as long as necessary.

Miscellaneous.

WHEN TO SOW MILLET FOR HAY.

When is the best time to sow millet for hay?

H. H.

Ans.—Millet may be sown almost any time during late spring or early summer, as it likes a rather warm soil. For hay sow it the latter part of May, after the other seeding is completed.

HAY PRESS.

Kindly give instructions for making a homemade hay press, or baler to make bales of about 100 or 150 lbs., also cost of material, etc.

Y. E. P.

Ans.—Possibly some reader can supply the information, but we believe more satisfaction would be secured by the use of the regular presses, several of which are on the market, and are advertised in this paper.

Horse Owners! Use

GOMBAULT'S

Caustic Balsam

A Safe, Speedy, and Positive Cure



The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blenches from Horses and Cattle, SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or Blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. The Lawrence-Williams Co., Toronto, Ont.

Bone Spavin

Know it by the lump and the limp—a hard, bony growth on the inner side of the hock joint, usually low down and a little forward of the center of the leg—a quick hitch with the sound leg, and a stiff movement of the lame leg, bearing the weight on the toe, most noticeable in starting.

Now cases, old and bad cases, the worst cases, cases where firing has failed, are cured by

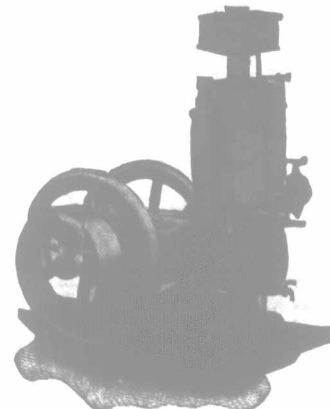
Fleming's

Spavin and Ringbone Paste

Guaranteed to cure the lameness for good—may or may not take off the lump. Easily used by anybody, and a single 45-minute application usually does the work—occasionally two required. Write for Free Horse Book before ordering. It gives all the particulars, and tells you what to do for other kinds of blemishes.

FLEMING BROS., Chemists, 45 Front Street, West, Toronto, Can.

GASOLINE ENGINES



If you prefer an ENGINE to a WINDMILL, write us.

The "STICKNEY" will tickle you. Safe, economical and very simple.

Ontario Wind Engine & Pump Co., Toronto, Ont. Limited.

Clydes & Hackneys

FOR SALE: Nine choice imported

Clydesdale Stallions



By such noted sires as Hiawatha, Prince of Erie, Ornamont, Ascot and Sir Hugo. Also six choice imported HACKNEYS, by the English champion, Garton Duke of Connaught, and others. All are rare good individuals. Determined to reduce stock, will make prices and terms to suit customers & rare chance for a good stallion at a right price. Millbrook is on G. T. R., 18 miles north of Port Hope. Call or write.

T. H. HASSARD, MILLBROOK, ONT.

2 Registered

Clydesdale Stallions

FOR SALE.

For price and particulars write to R. & O. PALING, Caledonia Stn. & Tel., North Simcoe.



DEATH TO HEAVES Newton's Remedy, Cough, Hoarseness and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per case, of dealers, or Exp. prepaid. The Newton Remedy Co., Toledo, Ohio.

Your druggist has it or can get it from any wholesale druggist.

\$3 a Day Sure

Send your address and we will show you how to make \$3 a day absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send your address and we will explain the business fully; remember we guarantee a clear profit of \$3 for every day's work, absolutely sure, write at once.

IMPERIAL SILVERWARE CO., Box 706, WINDSOR, ONT.

TRUMANS' CHAMPION STUD

READ OUR UNBEATEN RECORD AT ST. LOUIS WORLD'S FAIR:

Premier Championship.
Reserve Grand Championships.
Three Reserve Championships.
Six \$100 Shire Horse Ass'n Gold Medals.
Six Second Premiums.
Three Fourth Premiums.

Grand Championship.
Two Championships.
Five Diplomas.
Nine First Premiums.
Six Third Premiums.
Two Fifth Premiums.

Our fourth carload of Shire, Percheron and Hackney stallions just arrived at our London, Ont., stables at the Reid Hotel, and with those already on hand make the best collection of stallions to pick from in Canada, many of them being World's Fair and International winners. A responsible guarantee given with every horse. We will sell a better stallion for the money than any other firm. TWENTY-SEVEN YEARS IN THE IMPORTING BUSINESS. Write for full particulars and new Catalogue Q.

Trumans' Pioneer Stud Farm

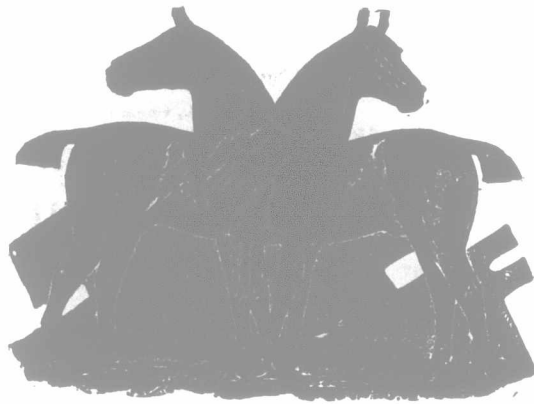
BUSHNELL, ILL., U.S.A.

Address
H. W. TRUMAN,
Manager, London, Ont., Branch.

J. H. TRUMAN,
Whittlesea, England.

LAFAYETTE STOCK FARM

J. Crouch & Son, the Great Importers,
of Lafayette, Indiana,



and the largest Importers in the world of

GERMAN COACH, PERCHERON and BELGIAN STALLIONS.

have just received at their new sale barns, Bernard House, London, another car of Percheron, Belgian and German Coach stallions. All are imported from France, Belgium and Germany, and are the largest prizewinners of 1904. We exhibited 100 head at the St. Louis World's Fair, and we have won more prizes in 1904 than all others combined. We guarantee every horse to be satisfactory, sure breeders, and back them up by a responsible guarantee. We sell nothing but good sound serviceable horses that will do our customers' good.

MESSRS. U. V. O'DANIEL and R. P. WATERS, managers and salesmen, London, Ont.

Address: J. CROUCH & SON, LONDON, ONT.

Have just received a new importation of 131 head of high-class Percheron, Belgian and German Coach Stallions.

125 Percheron, Shire and Hackney .. Stallions and Cares ..

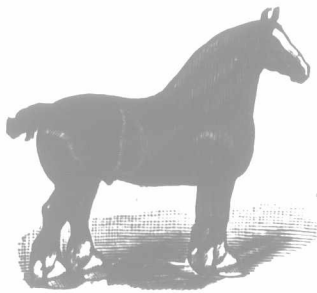
At the World's Fair at St. Louis I won more Premier Championship awards than any other exhibitor of live stock; I won every Premier Championship offered on Hackneys, also every Gold Medal but one. At Chicago International, 1904, on 20 head I won 34 prizes.

I HAVE THE GOODS and will pay intending buyers' R. R. fare here from any part of Canada, sell you a good Stallion for \$700 to \$1,000, or choice of my barns for \$1,400, delivered in your town. I will guarantee stallions. I will sell against death for two years, and to get 60% mares in foal.

Time of payments made to suit the purchaser.

LEW W. COCHRAN, 607 West Main St., Crawfordsville, Ind

Smith & Richardson's CLYDESDALES



COLUMBUS, - ONTARIO

We are now offering for sale the finest lot we ever imported at reasonable prices. Amongst them, Baron Gartley, winner of 1st prize and sweepstakes.

Stations—Oshawa and Brooklin, G. T. R. Myrtle, C. P. R.

Long-distance Telephone at Residence.

JOHN CHAMBERS & SONS

Holdenby, Northampton, Eng.

Farm over 2,000 acres of land just in the centre of the Shires, and breed the very best and soundest of the

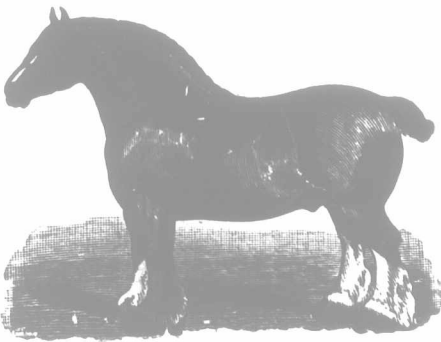
SHIRE HORSE

which from birth are kept in their natural condition, neither forcing nor overfeeding for showing purposes.

Canadian buyers visiting England are invited to call and see what we have to show them and obtain their stallions and mares direct from the breeder that breed them.

No fancy prices, and all delivered free Liverpool landing stage. Correspondence invited.

Station—Althorp Park, L. & N.W. Ry.



In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS. Miscellaneous.

CURE FOR CRIBBING.

Is there any way of curing cribbing without putting strap around the neck? W. J. H.

Ans.—There are other measures, such as smearing the front of the manger with aloes or other bitters. One writer advises placing a small revolving roller above the front of the manger so that the teeth may at once slide off. He also suggests muzzling. We know of no better treatment than the one you mention.

KEEPING BUTTER UNDER WATER.

We have a large box in which iced water is kept. Would a tin box with a tight cover let down into the water about fifteen inches be a suitable place in which to keep butter during warm weather? W. R. J.

Ans.—If the box is kept clean, and the water is reasonably pure and free from taint, we would expect the butter to keep well this way. It would not be necessary to have the box more than partially under water.

SORGHUM-OIL FOR HARNESS-COAL OIL FOR SEED CORN.

1. Would you recommend growing sugar cane along with corn; if so, what proportions to the bushel of corn? Would it cure and keep, if stacked or stored in barn?

2. Is raw linseed oil a good oil for oiling harness, boots, etc.?

3. Will corn wet with coal oil damage it for growing purposes, and keep crows from pulling it up? G. W. Lambton Co., Ont.

Ans.—1. Not with corn for husking. We have, however, seen sorghum, of which the cane sugar to which you refer is a variety, grown with good satisfaction along with corn for ensilage. The sorghum makes rapid growth in the hot weather, and while the yield of sorghum alone in our climate is rather less than the yield of corn alone, a mixture is said to turn off more per acre than will corn only. Try an acre or two mixed in the proportion of 1 lb. sorghum to 1 peck shelled corn. We have had no experience in storing sorghum in mows, but it is said to be rather difficult to cure for use as dry fodder.

2. Do not apply vegetable oils to leather; use neat's oil.

3. We do not think a little coal oil stirred into the corn would injure it in any way, and it would probably prove more or less efficacious in protecting it from crows.

Veterinary.

ABORTION.

Clyde mare aborted when the hair was just appearing on the fetus. She appears to be quite well.

1. How soon should I breed her? 2. Would it be dangerous to put another pregnant mare in the box in which this one aborted? D. A. M.

Ans.—1. It would be safe to breed her in six or eight weeks after abortion.

2. There is no danger of infection, but there may be some odors of blood or fluid that might act disastrously. I would advise you to wash the stall thoroughly with a five-per-cent. solution of carbolic acid in water, before introducing another mare.

BLIND MARE.

Three years ago an aged mare got her head hurt, and partial paralysis of the mouth, lips and tongue resulted. She gradually recovered. Last summer her eyesight became impaired, and now she is totally blind. She is twenty years old, and has bred several colts. Do you think it would be wise to breed her again, or would there be danger of her foals inheriting a tendency to blindness? D. A.

Ans.—It is possible the blindness resulted from the injury, but more probable from cataract, in which case there is a danger of her foals inheriting a predisposition to the same. At the same time, as she is useless for other purposes, I think I would breed her as long as she will reproduce, and if the blindness resulted from the injury, the foals will not be affected.

Tuttle's Elixir



is a quick and permanent cure for distemper, founder, lameness of all kinds, pneumonia, thrush, cuts, bruises, collar and saddle galls, colds, stiffness, etc. It is used and endorsed by the Adams Express Co. We offer

\$100 Reward

for any case of Colic, Curb, Contracted or Knotted Cords, Splints, recent Shoe Bolts or Callous that it will not cure.

Tuttle's Family Elixir

is the best household remedy that can be used for rheumatism, sprains and all other pains and aches. Saves doctor bills and stops pain instantly. Our 100-page book, "Veterinary Experience," free. Send for it. Tuttle's Elixir Co., 46 Beverly St., Boston, Mass. Beware of all so-called Elixirs. Get Tuttle's, the only genuine. For sale by druggists or sent direct.

LYMAN, KNOX & SON, AGENTS,
Montreal and Toronto, Canada.

IT SAVES TROUBLE

and annoyance many times to have

ABSORBINE

handy in case of a Bruise or Strain. This remedy is rapid to cure, pleasant to use, and you can work the horse. No blister, no hair gone.

ABSORBINE cures Lameness, allays pain, removes any soft bunch quickly. \$2.00 per bottle delivered or of regular dealers. Book 6-B Free.

ABSORBINE, JR., for man and horse. Cures Badly Strained Joints or Ligaments. Kills Pain.

W. F. Young, P. D. F., 73 Monmouth St., Springfield, Mass. Canadian Agents, Lyman, Sons & Co., Montreal.

"THE REPOSITORY"

Burns & Sheppard, Proprietors,



Cor. Simcoe and Nelson Sts., TORONTO.

Auction Sales of Horses, Carriages, Buggies, Harness, etc. every Tuesday and Friday at 11 o'clock.

Special Sales of Thoroughbred Stock conducted. Consignments solicited. Correspondence will receive prompt attention.

This is the best market in Canada for either buyer or seller. Nearly two hundred horses sold each week.

PERCHERONS at BARGAIN PRICES

In order to make room for our new importation, for the next 60 days we will sell stallions at greatly reduced prices. Come and see us while this sale lasts.

We have some of our best ones yet. Among them is a black not three years old, weighing 1900 lbs., with the best of breeding. Located three miles out of town, or two miles from Ruthven, on the Pere Marquette. We pay lively if not on hand to meet you. Address: I. A. & E. J. WIGLE, Essex County, Kingsville, Ontario.

FOR SALE: The imported Clydesdale Stallion

Uam Var (2129) (9457). Apply to DAVIS & GRABAM, Schomberg, Ont.

Clydesdale Stallions and Fillies.

Imported and Canadian-bred. For sale: Two Canadian-bred stallions, rising 3 years, from imp. sire and dams. Also **SHORTHORN** Cows and Heifers for sale. Reasonable prices. For particulars write to

JAS. W. INNES, Cityview Farm, Woodstock, Ont.

Canadian Clydesdales for sale. One stallion rising 3 years, one stallion rising 2 years. For further particulars, apply to GEO. BORTHAM, Bradford Ont.

Clydesdales, Shorthorns and Cotswolds—stallions. Present offerings: 2 Clydesdale stallions, 1 and 2 years old, by MacQueen; one yearling bull by imp. sire; also some yearling rams. For price and particulars write to W. D. PUGH, Claremont, Ont.



Galt Sure Grip Shingles

cannot be dislodged by the fiercest gale that ever swept the "Hurricane Deck" of a Prince's Palace or a Cottager's Home.

Ripened experience of the rigors of this northern climate has passed judgment on the wooden shingle of yesterday. The shingle of the Twentieth Century must be better than wood—it must be metal, and metal only.

GALT SURE-GRIP shingles last a life time, and they're absolutely wind, storm, rain and fire proof.

The Classic Kids will tell you all about them.

GALT ART METAL CO., Limited, GALT, ONT.



Heavy Upright Wires Make A Strong Fence

Small upright wires make a weak fence. They won't support heavy running wires. They bend under the weight and the running wires with them. First thing you know, the whole fence is out of plumb. A horse or a cow runs into it and the fence comes down.

A fence that's tied together with softie

wires simply invites trouble. The whole fence is only as strong as those little tie wires, and you can't reasonably expect horses and cows NOT to break them.

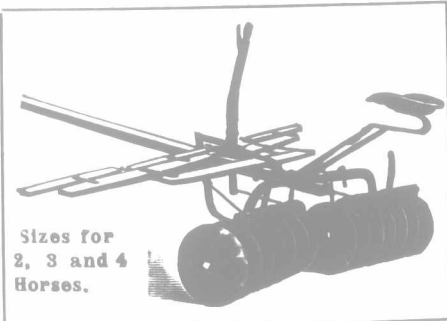
Frost Wire Fence

is a fence of strength. The upright wires are big and strong. Each one is able to support 2,000 pounds weight, and also supports its own share of the strain. THE FROST LOCK holds uprights and running wires of either wire. And any farmer or stockman, who knows anything about wire fencing, knows that a bend, knot or crimp in the wire robs it of 50% of its strength.

Write for our catalogue. It's free.

FROST WIRE FENCE CO. Limited
WINNIPEG, Man. HAMILTON, Ont. CLEVELAND, Ohio.

The BISSELL DISK HARROW, because built right



Sizes for 2, 3 and 4 Horses.

Does its work right. In a word—The Bissell Disk has the capacity. So many other disk harrows are lacking, and are a failure.

The Bissell will loosen up the fall-plowed land ready for seeding. Will make a garden of a sod field, whether fall or spring plowed. Will prepare root, corn, rape or bean ground. Will work up the summer fallows. Will make a seedbed for fall wheat. Will work the hardest stubble ground after harvest and start an after-growth.

Nor are these all—but the special construction of this Disk insures all the work being more thoroughly accomplished, with less horse power than any other.

None genuine without the name "BISSELL."
Your inquiries by letter or post card promptly answered.

Manufactured only by

T. E. BISSELL, Elora, Ont.
DEPT. W.

SAVE 20 CENTS PER SHEEP on every sheep you shear with

STEWART'S IMPROVED 1904 SHEEP SHEARING MACHINE Price in Canada **\$17**

For sale by all leading jobbers. The day of the old-fashioned hand shears is past. No owner of 10 sheep or more can afford to shear by hand, even though the work be done for nothing. Don't butcher your sheep. Shear with machine and get one pound of wool extra per head. It will more than cover the cost of shearing. Send to-day for valuable book, "Hints on Shearing." It is free, and will save you money.

CHICAGO FLEXIBLE SHAFT COMPANY, 110 LaSalle Ave., Chicago.

Advertise in the Farmer's Advocate.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS. Miscellaneous.

STRENGTH OF TOBACCO DECOCTION FOR LICE LIME WATER FOR PLANTS.

1. How strong would the tobacco water require to be to kill lice on cattle?
2. How much lime is required to one quart of water to kill little white worms in earth on house plants?

SUBSCRIBER.

Ans.—1. One of our editors says he used to use a small five-cent chewing plug in a gallon of water. Another used a decoction of stems and leaves, the strength of which he gauged by color and smell. This remedy was abandoned years ago for the commercial dips. Try the above strength, and, if too weak to kill the vermin, repeat with a stronger wash.

2. Take a lump of lime the size of a teacup, slack it in five gallons of water, and use till the worms are exterminated.

CAPONIZING.

1. Can you tell me if caponizing is a success, and if one who has altered calves, lambs, pigs and so forth, would be successful in operating on fowl with a caponizer?
2. If so, whose make would you recommend?

W. K.

Ans.—1. Caponizing is very successfully practiced by those who have an aptitude for the work. Though caponizing poultry is quite different from castrating lambs, pigs or calves, anyone good at the latter should, by following carefully the instructions accompany the instrument, become proficient in the use of the caponizer.

2. We are told that there is practically only one make on the Canadian market. It is handled by A. J. Morgan, London, Ont.

TO MAKE FACTORY TENT WATERPROOF.

How can a factory tent be made waterproof without making the cotton so very yellow? Someone told me that they had used boiled linseed oil, but the cotton rotted very quickly.

F. R.

Ans.—The following, from an old scrapbook, might be tried: "Soft soap is dissolved in hot water, and a solution of sulphate of iron (green vitriol or copperas) is added. The sulphuric acid of the copperas combines with the potash of the soap, and the iron oxide is precipitated with the fatty acid as insoluble iron soap. This is washed and dried and mixed with linseed oil, and the mixture is applied to the canvas. The soap prevents the oil from getting hard and cracking, and at the same time water has no effect on it." Any reader who can recommend a better method is requested to send it in.

GINSENG CULTURE.

1. Is ginseng profitable?
2. How is it cultivated?
3. To what kind of soil is it adapted?
4. Where can roots be obtained, and at what price?
5. How large a patch would you advise a beginner to start on, and how many roots will it take?
6. Where is it marketed?

W. A. C.

Ans.—1. We do not believe it is likely to prove satisfactory for the Ontario farmer. The cultivation is too tedious, and returns too slow.

2 and 3. It is grown from seed dropped in light furrows or ruts about three inches apart and one inch deep; plants about one to two inches apart in the rows. The bed is made ready for fall sowing. Choose a deep, moist, mellow loam, with good natural drainage, free from stones or roots, and preferably facing south. The best place is said to be in the woods where trees are tall and there is no undergrowth to interfere with cultivation. Two years from time of seeding, the plants should be transplanted, and set about four to six inches apart each way. The ground should be kept clean for five years, at the end of which time the roots should be ready for market. A complete treatise on ginseng culture, by M. G. Kains, may be ordered through this office; price, 50c.

4. Roots may be propagated from wild seedlings growing in the woods, though better results will be obtained from the seed of improved stock. See in our "Want and For Sale" column the advertisement of E. Beattie, Highgate, Ont.

5. Do not try more than a bed, 16 x 3 feet. An ounce of seed will sow about 10 square feet.

6. Any enterprising druggist should quote prices on ginseng for you, or put you in touch with firms that handle it.

A School Teacher

ON WHOM TWO OTTAWA PHYSICIANS OPERATED IN VAIN FOR

Bleeding Piles

WAS AFTERWARDS COMPLETELY CURED BY USING TWO BOXES OF

Dr. Chase's Ointment

The folly of risking a surgical operation, with its pain, expense and danger, is illustrated in the case of Mr. Lepine, who was cured of bleeding piles by the use of Dr. Chase's Ointment, after the surgeon's knife had failed.

Mr. Arthur Lepine, school teacher, Granite Hill, Muskoka, Ont., writes:—"I am taking the liberty of informing you that for two years I suffered from bleeding piles, and lost each day about half a cup of blood. Last summer I went to the Ottawa General Hospital to be operated on, and was under the influence of chloroform for one hour. For about two months I was better, but my old trouble returned, and again I lost much blood. One of my doctors told me I would have to undergo another operation, but I would not consent.

"My father, proprietor of the Richelieu Hotel, Ottawa, advised me to use Dr. Chase's Ointment, and two boxes cured me. I did not lose any blood after beginning this treatment, and I have every reason to believe that the cure is a permanent one. I gratefully recommend Dr. Chase's Ointment as the best treatment in the world for bleeding piles."

Dr. Chase's Ointment, the only positive and guaranteed cure for every form of piles, 60 cents a box, at all dealers, or Edmanson, Bates & Company, Toronto.

Evelyn is a very cowardly little girl. The world is so full of terrors for her, indeed, that her life is scarcely worth living. Her father, finding that sympathy only increased this unfortunate tendency, decided to have a serious talk with his little daughter on the subject of her foolish fears. "Papa," she said, at the close of his lecture, "when you see a cow, ain't you 'fraid?'" "No, certainly not, Evelyn." "When you see a horse, ain't you 'fraid?'" "No, of course not." "When you see a dog, ain't you 'fraid?'" "No!" with emphasis. "When you see a bumblebee, ain't you 'fraid?'" "No!" with scorn. "Ain't you 'fraid when it thunders?'" "No!" with loud laughter. "Oh, you silly, silly child!" "Papa," said Evelyn, solemnly, "ain't you 'fraid of nothin' in the world but jest mamma?'"

HE IS EMPHATIC IN WHAT HE SAYS

Dodd's Kidney Pills Cured Robt. Bond of Bright's Disease.

His Doctor, who Said There was No Hope for Him, Now Pronounces Him Well—We Tell His Own Story.

MT. BRYDGES, Ont., April 17.—(Special).—Among the many people in this neighborhood who tell of the great work Dodd's Kidney Pills are doing, none is more emphatic than that old and respected citizen, Mr. Robert Bond.

"I believe I owe my life to Dodd's Kidney Pills," Mr. Bond says. "My attending physician said I was in the last stages of Bright's Disease and that there was no hope for me. Then I commenced to take Dodd's Kidney Pills, and used in all twenty boxes. Now I eat well, sleep well, and my doctor says I am well. Dodd's Kidney Pills and nothing else cured me. Do you wonder I am always ready to say a good word for Dodd's Kidney Pills?"

What will cure Bright's Disease will easily cure any other form of Kidney Disease. Dodd's Kidney Pills will always cure Bright's Disease. They are the only remedy that will cure Bright's Disease. Be sure you get Dodd's.

GOSSIP.

For something choice in Barred Rock eggs, see the advertisement elsewhere of W. C. Shearer, Bright, Ont.

For good Ayrshire bull calves, write Alex. Hume & Co., Menie, Ont., whose crop of calves this year happens to be mostly of the male "persuasion." The accident is your chance. In writing, don't forget that you saw his advertisement in the "Farmer's Advocate."

FROM FAR-OFF AUSTRALIA.
Cardigan, Victoria, Australia,
January 4th, 1905.

The Dain Mfg. Co.:

With reference to your advertisement in the "Farmer's Advocate," please send me your catalogue and full particulars for hay press, if you consider it suitable for pressing straw. No grass hay is cultivated in this part of the globe, and while there are several makes of presses for sheaf hay, we have not anything suitable for straw. Please state if you have any agency for your manufactures in Australia.

When quoting, give f. o. b. price (boat, nearest port), and ascertain, if possible, probable freight to Melbourne, as it is very difficult to get quotations for freight at this end.

Should your press be suitable, I may state that there would, in all probability, be a good market here.

Yours faithfully,

T. O. SURMAN.

Graham Bros., Claremont, Ont., report the following recent sales of imported Clydesdale and Hackney stallions: Imp. Baron Primrose (3979) (10980) went to Star & Collins, Port William, N. S. This horse was by MacEachran (9792), dam Montrave Primula 11773, other sires in his pedigree being MacGregor 1487, Prince of Albion 6178, Prince of Wales 673, Darnley 222, etc., etc., breeding second to none, and quality to match. The purchasers are to be congratulated upon their choice. Messrs. McKinnon & Young, of Coningsby, Ont., were fortunate in securing a capital bay colt, three years old, in Lord Watson (12659), sired by Moncrieffe Marquis, the sire of Marquis and Kenneth, the champion geldings at Chicago, 1903 and 1904. Lord Watson is a big colt of good quality, with first-class feet and legs and splendid action. Robt. Cheyne, Cooksville, Ont., secured The Squire (Imp.) (12771), a three-year-old, sire Drumflower (107537), dam Peggy, another capital colt, with good feet and choice breeding and quality. Fabian (Imp.), another brown three-year-old, has been sold to Duncan Fumerton, Yorkton, Assa. This is a good, thick, stylish horse that combines quality with breeding, his sire being Up-to-Time, a son of Baron's Pride, and his dam a granddaughter of Darnley. There are several other imported stallions at Cairnbrogie, which were described in the "Farmer's Advocate" of April 13th.

Fuller particulars of which may be had by writing for a catalogue. A word about the Hackneys at Cairnbrogie: White-wall Fashion (Imp.), a five-year-old chestnut, by Troubadour (1357), stands nearly 16 hands high, is of true Hackney type, with a beautiful top, and the best of feet and legs; has splendid high action, and we predict he will create a sensation when he comes into the showing. He has 14 registered sires in his pedigree. Antipator (Imp.) is a beautiful chestnut three-year-old, by Rosador, the champion of England, dam Amelia 1423, by Danegelt 174. This colt has a long string of the best registered sires in England, backed up by conformation, style and action, seldom seen in a colt of his age. Among the home-bred Hackneys we noticed Revenge 246, a chestnut rising two years old, by Attraction 371, dam Prairie Queen 301, by Robin Adair 2nd (3907), the sire of Saxon, the Chicago and St. Louis champion, recently sold for \$5,500. This colt is of beautiful conformation, and a high actor. Supreme 247, rising one year old, is by Saxon, from the same dam as Revenge, and is a colt of great promise. Emerson Johnston, Binbrook, Ont., recently bought Orient 8596, a four-year-old, dark chestnut, that combines the greatest prizewinning Hackney blood in the kingdom. Joe Rock 6419, the prizewinning Hackney pony, has been sold to Geo. Chipchase, New York City, and it is expected he will create a sensation at the New York Horse Show.

It Makes the Most Dollars for You. THERE ARE REASONS FOR IT.

That's the Easy Running **EMPIRE** Cream Separator

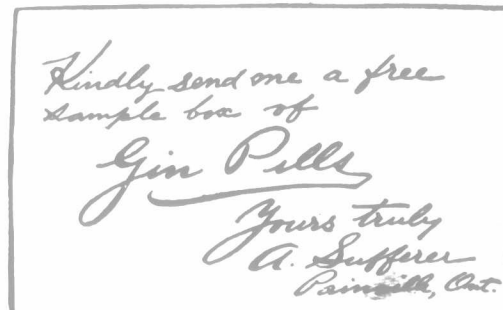
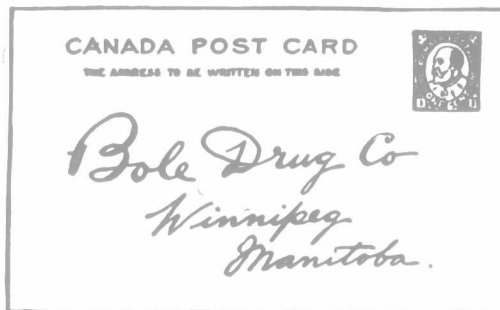
Send to-day for proof.

EMPIRE CREAM SEPARATOR CO.,

28-30 Wellington St., West, Toronto, Ont.



If your Kidneys are Sick
just write this:



WE'LL SEND THE CURE

Perhaps you don't know about Gin Pills—the wonderful cure for Kidney Troubles—the healing, soothing pills that never fail to make the Kidneys well and strong. We want you to know about them—to try them—to see for yourself that they do cure all Kidney Diseases.

We are giving away 100,000 boxes of GIN PILLS, free to sufferers.

Won't you write us for a box, and cure yourself?

Gin Pills are a certain and speedy cure for Inflammation of the Kidneys; Gout and Rheumatism, caused by uric acid in the blood; Catarrh of the Bladder; Painful and Suppressed Urination; "Burning" Urine; Gravel or Stone in the Bladder; Bed Wetting; Pains in the Back; Swollen Hands and Feet; and all other Kidney and Bladder Troubles.

Each Gin Pill contains all the medicinal properties of one and a half ounces of best Holland gin, without the alcohol, and combined with other curative agents of recognized value.

Don't put this off. If you have any of these troubles, don't run the risk of Bright's Disease or Chronic Cystitis. Write for a free sample.

BOLE DRUG CO., Dept. v, Winnipeg, Man.

We Will Buy

A 50c. Bottle of Liquozone and Give it to You to Try

We want you to know about Liquozone, and the product itself can tell you more than we. So we ask you to let us buy you a bottle—a full-size bottle—to try. Let it prove that it does what medicine cannot do. See what a tonic it is. Learn that it does kill germs. Then you will use it always, as we do, and as millions of others do.

This offer itself should convince you that Liquozone does as we claim. We would certainly not buy a bottle and give it to you if there was any doubt of results. You want those results; you want to be well and to keep well. And you can't do that—nobody can—without Liquozone.

We Paid \$100,000

For the American rights to Liquozone. We did this after testing the product for two years, through physicians and hospitals, after proving, in thousands of different cases, that Liquozone destroys the cause of any germ disease.

Liquozone has, for more than 20 years, been the constant subject of scientific and chemical research. It is not made by compounding drugs, nor with alcohol. Its virtues are derived solely from gas—largely oxygen gas—by a process requiring immense apparatus and 14 days' time. The result is a liquid that does what oxygen does. It is a nerve food and blood food—the most helpful thing in the world to you. Its effects are ex-

hilarating, vitalizing, purifying. Yet it is a germicide so certain that we publish on every bottle an offer of \$1,000 for a disease germ that it cannot kill. The reason is that germs are vegetables; and Liquozone—like an excess of oxygen—is deadly to vegetable matter.

There lies the great value of Liquozone. It is the only way known to kill germs in the body without killing the tissues too. Any drug that kills germs is a poison, and it cannot be taken internally. Every physician knows that medicine is almost helpless in any germ disease.

Germ Diseases.

These are the known germ diseases. All that medicine can do for these troubles is to help Nature overcome the germs, and such results are indirect and uncertain. Liquozone attacks the germs, wherever they are. And when the germs which cause a disease are destroyed, the disease must end, and forever. That is inevitable.

Asthma
Abscess—Anemia
Bronchitis
Blood Poison
Bright's Disease
Bowel Troubles
Coughs—Colds
Consumption
Colic—Croup
Constipation
Catarrh—Cancer
Dysentery—Diarrhea
Dandruff—Dropsy
Hay Fever—Influenza
Kidney Diseases
La Grippe
Leucorrhoea
Liver Troubles
Malaria—Neuralgia
Many Heart Troubles
Piles—Pneumonia
Pleurisy—Quinsy
Rheumatism
Scrophula—Syphilis
Skin Diseases
Stomach Troubles

Dyspepsia
Eczema—Erysipelas
Fever—Gall Stones
Gout—Gout
Gonorrhoea—Gleet
All diseases that begin with fever—all inflammation—all catarrh—all contagious diseases—all the results of impure or poisoned blood.
In nervous debility Liquozone acts as a vitalizer, accomplishing what no drugs can do.

50c. Bottle Free.

If you need Liquozone, and have never tried it, please send us this coupon. We will then mail you an order on a local druggist for a full-size bottle, and we will pay the druggist ourselves for it. This is our free gift, made to convince you; to show you what Liquozone is, and what it can do. In justice to yourself, please accept it to-day, for it places you under no obligation whatever.
Liquozone costs 50c. and \$1.

CUT OUT THIS COUPON.

For this offer may not appear again. Fill out the blanks and mail it to The Liquozone Company, 458-464 Wabash Ave., Chicago.

My disease is.....
I have never tried Liquozone, but if you will supply me a 50c. bottle free I will take it.

.....
.....
.....
Give full address—write plainly.

Any physician or hospital not yet using Liquozone will be gladly supplied for a test.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

FARM BOOKS.

The farmer's home without an Agricultural Library is lacking in one of the chief aids to pleasure and success. We have gone over first-class works on agricultural subjects, and selected the best. See below for prices and how to obtain them.

LIVE STOCK.

Veterinary Elements.—A. G. Hopkins, B. Agr., D. V. M. \$1.50. A practical farm live-stock doctor book.
The Study of Breeds (Cattle, Sheep and Swine).—Prof. Shaw. 400 pages, 60 engravings. \$1.50.
Horse Breeding.—Senders 423 pages. \$1.50.
Horse Breaking.—Capt. Hayes. \$5.00. Far and away the best on this subject.—[The Field].
Points of the Horse (3rd edition).—Capt. Hayes. \$10.00.
Light Horses—Breeds and Management. (Vinton series) 226 pages. \$1.00.
Heavy Horses—Breeds and Management. (Vinton series) 212 pages. \$1.00.
Cattle—Breeds and Management. (Vinton series) 270 pages. \$1.00.
Sheep—Breeds and Management. (Vinton series) 232 pages. \$1.00.
Pigs—Breeds and Management.—Senders Spencer. 175 pages. \$1.00.

Feeds and Feeding.—Henry. 600 pages. \$2.00.
Live-stock Almanac. Handsomely bound. 75 cents. Paper cover, 40 cents.
Live-stock Judging.—Craig. \$2.00. The only work on this subject.

GENERAL AGRICULTURE.

Agriculture.—C. C. James. 200 pages. 30 cents.
Chemistry of the Farm.—Warrington. 183 pages. \$1.00.
Farmyard Manure.—Aikman. 65 pages. 50 cents.
Successful Farming.—Rennie. 300 pages. \$1.50, postpaid.
Agricultural Botany.—Percival. \$2.00. A very useful book for student farmers.
Sowing Crops and the Silo.—Shaw. 366 pages. \$1.50.
Fertility of the Land.—Roberts. 415 pages. \$1.00.
Physics of Agriculture.—King. 604 pages. \$1.75.

DAIRYING.
Milk and Its Products.—Wing. 230 pages. \$1.00.
Testing Milk and Its Products.—Farrington & Woll. 255 pages. \$1.00.
Canadian Dairying.—Dean. 260 pages. \$1.00.
Cheesemaking.—Decker. 192 pages. \$1.75.

POULTRY.

Poultry Craft.—Robinson. \$2.00.
Farm Poultry.—Watson. 341 pages. \$1.25.

APIARY.

The Honeybee.—Langstroth. 521 pages. \$1.50.

FRUIT, FLOWERS and VEGETABLES.

Vegetable Gardening.—Green. 224 pages. \$1.25.
Flowers and How to Grow Them.—Rexford. 175 pages. 50 cents.

Amateur Fruit-growing.—Samuel R. Green. 5x7 inches; 134 pages, with numerous fly leaves for notes; bound in cloth, and illustrated. 50 cents.

PLANT AND ANIMAL LIFE.

The Story of the Plants.—Grant Allen. 213 pages, 40 cents.
The Study of Animal Life.—J. A. Thomson. 375 pages. \$1.75.
Insects Injurious to Fruits.—Senders. 636 pages. \$2.00.

MISCELLANEOUS.

Landscape Gardening.—S. T. Maynard. 328 pages. \$1.50.
Birds that Hunt and Are Hunted.—W. B. Blanchard. 360 pages. \$2.25.
Carpenters' and Joiners' Handbook. 75 cents.
American Tanner.—Briggs. 25 cents.
Taxidermy.—Hashick. 50 cents.

HOW TO OBTAIN THESE BOOKS.—We will furnish present subscribers any of the above books for cash or as a premium to those obtaining new yearly subscribers to the "Farmer's Advocate" according to the following scale:

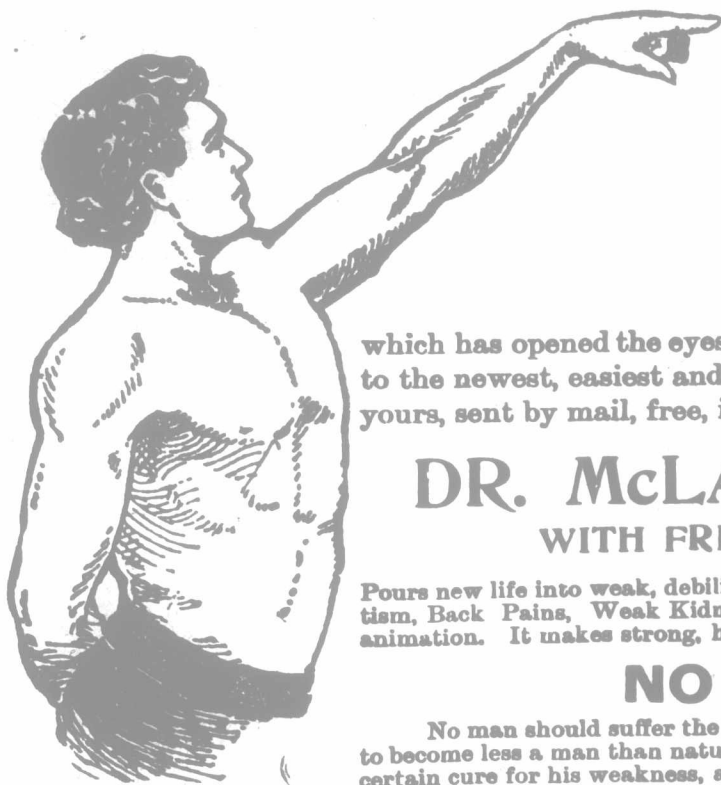
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Pours new life into weak, debilitated men, builds up nerve and vital force, cures Varicocele, Nervous Debility, Rheumatism, Back Pains, Weak Kidneys, Stomach, and revives the spark of youthful energy, giving back the old, vigorous animation. It makes strong, husky and vigorous specimens of manhood. (It is just as good for women as for men.)

NO MAN SHOULD BE WEAK.

No man should suffer the loss of that vital element which renders life worth living. No man should allow himself to become less a man than nature intended him; no man should suffer for the sins of his youth, when there is at hand a certain cure for his weakness, a check to his waste of power.

Most of the pains, most of the ailments from which men suffer can be traced to it. You need not suffer for this. You can be restored. The very element which you have lost you can get back, and you may be as happy as any man that lives.

My Electric Belt with Special Electric Suspensory (free), will restore your power, and will give back the old vigor of youth. I know how skeptical people are after paying out hundreds of dollars without getting any benefit, and know that many would pay after they were cured. To those I say, set aside those prejudices, give me evidence of your honesty by offering me reasonable security for the Belt. I will arrange it with necessary attachments suitable for your case, express it to you, and you can

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My Belt is easy to use; put it on when you go to bed; you feel the glowing heat from it (no sting or burn, as in old style belts) and you feel the nerves tingle with the new life flowing into them. You get up in the morning feeling like a two-year-old.

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 DR. McLAUGHLIN: Dear Sir,—I write you to let you know that your Belt helped me wonderfully. I am well satisfied. I feel well, and can work without being fatigued and done out like I used to be. I quit wearing the Belt in the early part of the summer, as I do not need it while I feel as I do now, nor have any desire to unless my trouble should come back on me, which I don't think can possibly occur. Yours very truly,
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This drain upon your power causes all kinds of debility and Stomach Ailments. You know it's a loss of vital power and affects every organ of the body.

Every man who uses my Belt gets the advice and counsel of a physician free. I give you all that any medical man can give, and a lot that he can't. Try my Belt. If you can't call, write me to-day for my beautiful illustrated book with cuts showing how my Belt is applied and lots of good reading for men who want to be "The Noblest Work of God"—A MAN. Inclose this coupon and I will send this book, sealed, free.

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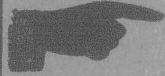
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