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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE  
SUCCEED  
FOUNDED 1876

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

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VOL. XLIV.

LONDON, ONTARIO, JUNE 24, 1909.

No. 874

**Choice Western Farms.**  
Desirable Locations.

We are offering good values in specially-selected blocks of unimproved lands, also improved farms, with buildings and breaking done. PRICES and TERMS VERY REASONABLE. Call and see us, or write for literature.

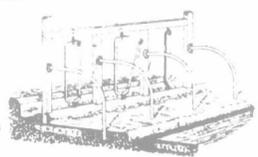
THE UNION TRUST COMPANY, LIMITED  
REAL ESTATE DEPARTMENT  
174-176 Bay St., Toronto, Ont.

**Buchanan's Swivel Carrier**



For unloading Hay and all kinds of Grain.  
For wood track, steel track, rod and cable track. Made entirely of malleable iron; no springs. Fitted with our patent deadlock. 25,000 of our Haying Machines in use, is the best guarantee that we build them right.  
Write for catalogue of Carriers, Slings, Stackers etc.—and name of dealer near you who handles Buchanan's. M. T. Buchanan & Co., Ingersoll, Ont.

**Why Not Put "BT" Stanchions in Your Stable?**



They will make it brighter and neater, are stronger, more durable, and cost less than any other tie when all is considered. Your cows will be kept clean and comfortable. Ask us how to lay out your stable, and why it pays to use "BT" STANCHIONS.

BEATTY BROS., FERGUS, ONTARIO.  
Hay Carriers, Litter Carriers, etc.

**Boys for Farm Help** The managers of Dr. Barnardo's Homes invite applications from farmers, or others, for the boys who are arriving periodically from England to be placed in this country. The young immigrants are mostly between 11 and 13 years of age; all will have passed through a period of training in Dr. Barnardo's English Institutions, and will have been carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained upon application to Mr. Alfred B. Owen, Agent Dr. Barnardo's Homes, 50-52 Peter St., Toronto.

**HIGH FINANCE**

Doesn't offer the safety of an investment in

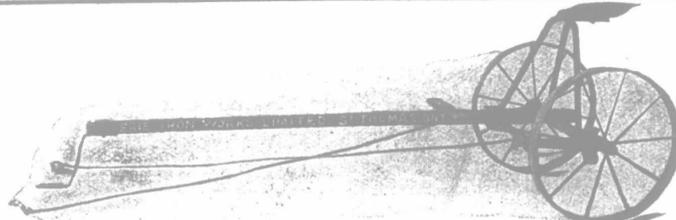
**GOOD COWS**  
and a  
**De Laval Cream Separator**

One is as important as the other.  
Free Catalogue



The De Laval Separator Co.,  
173-177 William Street, Montreal  
VANCOUVER WINNIPEG

**ST. THOMAS HARROW CART**



Not a lazy man's tool. It's up-to-date. It is easier to pull the driver in the cart than to drag lines on the bit. Made by

**ERIE IRON WORKS, LIMITED, St. Thomas, Ont.**

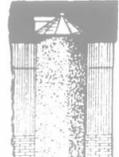
If your dealer does not handle them, send direct to us for further information. This cart suits any harrow.

**Build CONCRETE SILOS Any Size**  
with the London Adjustable Silo Curbs.

SEND FOR CATALOGUE.

We manufacture a complete line of CONCRETE MACHINERY. Tell us your requirements.

**LONDON CONCRETE MACHINERY CO., LTD., 19 Marmora St., London, Ont.**  
Largest manufacturers of Concrete Machinery in Canada.



**25 Years**

of actual wear is proof that Fire, Lightning, Rust, Rain and Snow has absolutely no effect on

**"EASTLAKE" Steel Shingles.**

That's the kind of a roof you want on your house and barns. They are the cheapest, being easiest and quickest to lay, and last the longest.

Send us measurements of the roof you intend covering, and we will give you complete estimates of cost.



"A paper guarantee vs. a 25-year actual test. I will leave it to you which is the 'safest.' I think actual proof is the best surety."

—The Philosopher of Metal Town.

**THE METALLIC ROOFING CO. LIMITED, MANUFACTURERS, Toronto, 1598 Winnipeg.**

**\$1,500 MADE ON CIDER**

Write for Free Catalog, Describes and illustrates our line of the

**ORIGINAL MT. GILEAD HYDRAULIC CIDER PRESSES**

Built in sizes 10 to 400 barrels per day. Hand or power. Presses for all purposes. Also Beans, Erasers, Apples, Better Cookers, Vinegar Generators and everything for the Cider and Vinegar-maker. We can show you how \$1,500 clear profit can be made.

**HYDRAULIC PRESS MFG. CO., 110 Lincoln Ave., Mt. Gilead, Ohio**



**TOP BUGGY INFORMATION.**

Top Buggies, the equal of anything on the market, selling from \$75 to \$90, delivered, Freight Paid, at any railroad station in Ontario for \$63 to \$70. No such value ever before offered in Canada. Be your own dealer by dealing with us. Shipment within 10 days guaranteed. Send for descriptive, illustrated catalogue. Other special lines are

**HARNESS AND GROCERIES.**  
The Clement Brown Trading Co., TORONTO, ONT.

**NEW IDEA GRATE**  
NO SIFTING OF ASHES



SHAKING.  
DUMPING.

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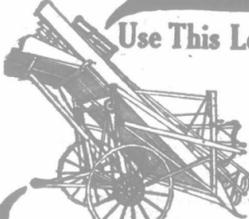
**BOTH SHAKES AND DUMPS**

**NEW IDEA FURNACES**

ASK FOR FREE CATALOGUES.  
SEND SIZE OF HOUSE  
IF YOU WISH ESTIMATE OF  
**COST OF FURNACE**  
INSTALLED READY FOR USE

**THE GURNEY TILDEN CO.**  
HAMILTON LIMITED MONTREAL  
WINNIPEG, DEPT. A VANCOUVER.

**Use This Loader and Hire No Men**



One man can build the load because the Loader pushes the hay well forward on the wagon. This feature saves one man's wages, over other types of Loaders, every day used. An adjustable apron at top keeps hay from spilling or blowing away.

Here's a Loader that takes hay clean from swath upwindrow. The nine rakes are so shaped they can't wrap or tangle, they automatically self-adjust, each independent of the other and pick hay out of low places, don't tear up ground in high places. Wheels set underneath so you can gather hay close to fences or ditches.

You can couple it in a few seconds to any height wagon and uncouple it from top of load. No cog gears, or crossed chains, to cut out, no long crooked crank shaft to break, no ropes to rot, no rollers, cams, or what-nots to wear and make trouble.

**Great DAIN Loader**

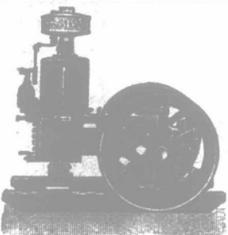
is a model of simplicity, and efficiency. It is light draft, easy to operate and substantially built of best material to stand hardest service. We have specialized on Hay Tool for a quarter of a century. The name Dain on a Mower, Rake, Loader, Stacker or Press guarantees best work, lightest draft, most labor saved, a perfect machine.

Ask your dealer to show you the whole line.

**Handy Hay Book FREE**

Tell us your hay tool needs and we will send you our new book "All About Hay" containing facts on how to make hay-growing more profitable and other information valuable to hay makers. Send for it.

**DAIN MANUFACTURING CO.**  
Mention this paper. Preston, Ont.



**What You Are Looking For: A SIMPLE ENGINE!**

**OUR "STICKNEY" GASOLINE ENGINE**

IS THE FARMER'S PET.

It is simplicity boiled down. Power absolutely guaranteed. Economical in fuel. We ask you to investigate for yourself.

**Ontario Wind Engine & Pump Co., LIMITED,**  
TORONTO, CANADA.

**Genasco Ready Roofing**

Trinidad Lake Asphalt Roofing. Does away with leaks and repairs. Guaranteed.

Write for Good Roof Guide Book and samples.

**THE BARBER ASPHALT PAVING COMPANY**

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

**PHILADELPHIA**  
New York San Francisco Chicago

Roofer's Supply Co., Bay and Lake Sts., Toronto.  
Alex. McArthur & Co., 82 McGill St., Montreal.  
D. H. Howden & Co., Ltd., 200 York St., London, Ont.

**BINDER TWINE.**

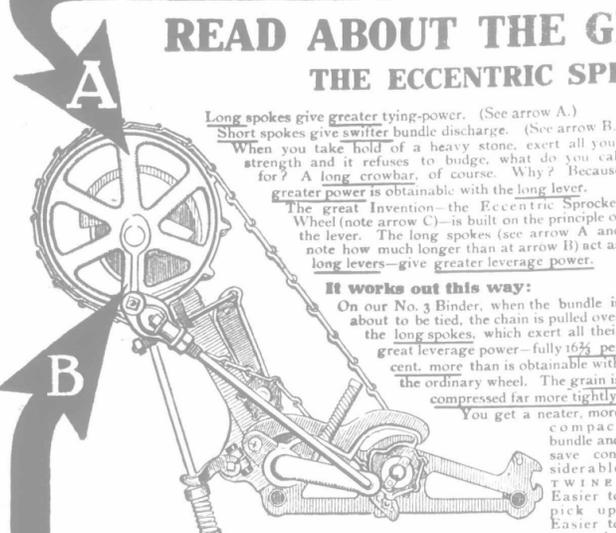
Central Prison Binder Twine will be supplied to farmers as follows:

600 Feet per lb.,	8 1-2c. per lb.
550 " "	7 3-4c. "
500 " "	7 1-4c. "

These prices are net cash. The twine is put up in fifty-pound jute sacks, and is manufactured from SELECT FIBER. Quality and length guaranteed. Please specify at once what quality and quantity is required. Purchaser pays freight, and cash must accompany shipping instructions.

Apply **J. T. GILMOUR, Warden,**  
Central Prison, Toronto.

**READ ABOUT THE GREAT INVENTION THE ECCENTRIC SPROCKET WHEEL**



Long spokes give greater tying-power. (See arrow A.) Short spokes give swifter bundle discharge. (See arrow B.) When you take hold of a heavy stone, exert all your strength and it refuses to budge, what do you call for? A long crowbar, of course. Why? Because greater power is obtainable with the long lever. The great invention—the Eccentric Sprocket Wheel (note arrow C)—is built on the principle of the lever. The long spokes (see arrow A) and note how much longer than at arrow B) act as long levers—give greater leverage power.

**It works out this way:**

On our No. 3 Binder, when the bundle is about to be tied, the chain is pulled over the long spokes, which exert all their great leverage power—fully 16 2/3 per cent. more than is obtainable with the ordinary wheel. The grain is compressed far more tightly. You get a neater, more compact bundle and save considerable TWINE. Easier to pick up. Easier to carry, easier to shock.

Immediately after our Knotter ties the bundle, the chain is pulled over the short spokes (see arrow B) and note difference in length of spoke as compared with arrow A). The shorter spokes greatly increase the speed of the chain. The bundle is given a swifter discharge than with ordinary wheel, and the needle is speedily brought back, out of the way of the downcoming grain, into position for the next sheaf.

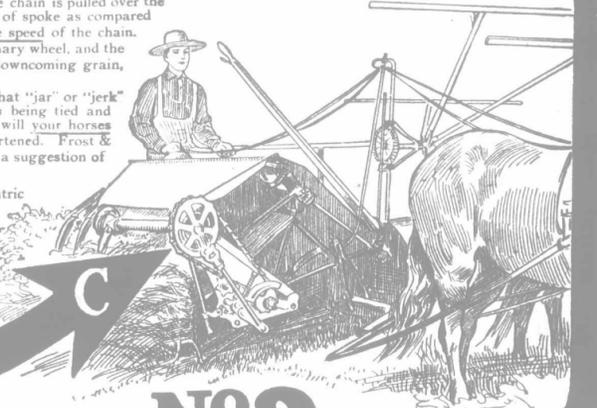
The Eccentric Sprocket does this, too—it prevents that "jar" or "jerk" always noticed on other machines when a bundle is being tied and discharged. You will not feel it on the No. 3; neither will your horses be annoyed by it, nor "the life" of the machine be shortened. Frost & Wood No. 3 runs along and does its work without even a suggestion of that "jerk."

Now, you see why every maker would put the Eccentric Sprocket Wheel on his binder if we did not control the patents for Canada. You see why it's wise to invest a post card and get our Binder Booklet so as to become thoroughly posted on the peer of them all—the Frost & Wood No. 3.

You are on the right track when you start investigating our No. 3—the binder that is built by a purely Canadian Company, who thoroughly understands Canadian conditions. We would like you to read a few of the hundreds of testimonials we have received from Canadian farmers, which back up our claims to the letter.

Just write us for catalogue F I

**The Frost & Wood Company, LIMITED,**  
Smith's Falls, Canada.



**Frost & Wood No. 3 Binder**

**STRENGTH AND ECONOMY**

You can depend absolutely on **PEERLESS** Fencing to hold live stock under any and all conditions. It is made of all No. 6 steel wire heavily galvanized and has lots of spring in it, making ample provision for contraction and expansion due to changes in the temperature, sudden shocks, etc.

**PEERLESS**

The Fence That Saves Expense

is held together by the Peerless lock which holds the wires securely and makes Peerless Fence absolutely stock proof. The lock cannot be slipped or knocked loose. Write for our new book—it will interest you. It's free.

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

**For Spraying**

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

**EUREKA COMPRESSED AIR, FOUNTAIN SPRAYER**

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

**THE EUREKA PLANTER CO. Limited, - Woodstock, Ont.**

**Make Money on those Perishables you waste every season**

Here's where every Farmer, Fruit Grower, and retail and wholesale Grocer has a chance to turn into real profit all those perishables which are usually wasted. The Modern Canner does the work easily, simply, cleanly, and without a bit of waste. It can be operated by a mere child—no experience necessary. Three sizes: \$30, \$60 and \$90. Cans 1,000, 2,000 and 4,000 Tins in 10 hours, and pays for itself first season. Won't you write for Money-Making information now?

**The Modern Canner Co.**  
Canadian Branch: 86 King St., S., London, Ont.

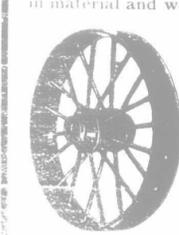


Write for Catalogue To-Day!

**Guaranteed Wheels**

We guarantee our Low, Wide-tire Steel Wheels against any defect in material and workmanship. We guarantee they will not break in the coldest weather, or on rockiest road, or on roughest road. It will pay you to learn more about these Guaranteed Wheels, so write for catalogue.

**DOMINION WROUGHT IRON WHEEL CO., LIMITED,**  
Orillia, Ontario.



**The 1909 Kemp Manure Spreader**

Equipped with the Reversible, Self-sharpening, Graded Discs, and the latest improvements of J. S. Kemp, the inventor of the Kemp Spreader. The result of 34 years in the use and manufacturing of Horse Manure Spreads. Send for our catalogues, fully describing this machine, and Horse Manure Drill. The only drill equipped with a horse-lift.

**W. L. KEMP CO., LTD., STRATFORD, ONT.**

SOLE AGENTS: PARLIN & ORENDORFF Canadian Plow Co. Agents for Quebec: D. H. TAYLOR, Westmount, Que.

**LET'S**

For proof that fits can be cured, write to **Mr. Wm. Stinson,** 134 Tyndall Ave., Toronto, Ontario.

Send for full particulars of simple home cure. Over 1,000 testimonials. Sole proprietors: **Medies, Limited, Dublin.**

THE SPICE OF LIFE.

It is a mistaken, though common opinion, says Country Life in America, that all Arab horses are either spotted or white. On the contrary, there are no spotted horses in Arabia, and the only white animals are those that change from the gray in old age. It has been estimated that about 50 per cent. are bays, 30 per cent. grays, and 20 per cent. chestnuts, with an occasional black or brown. One of the ways of telling Arabian blood is by the color of the skin rather than the color of the hair. The skin is always slate color, without the slightest spot of white or any other color.

It was the dreamy hour, when the Christmas dinner, having been eaten, was doing its best to digest itself, and the girls were talking in the hushed tones appropriate to the occasion.

"I've just heard of a new charm to tell whether anyone loves you, and, if so, who it is," whispered Elsie.

"What is it?" queried Sophie, absently fingering her new diamond ring.

"Well, you take four or five chestnuts, name them each after some man you know, and then put them on the stove, and the first one that pops is the one that loves you."

"H'm," said Sophie. "I know a better way than that."

"Do you?"

"Yes, indeed. By my plan you take one particular man, place him on the sofa in the parlor, sit close to him with the light a little low, and look into his eyes. And then, if he doesn't pop, you'll know it's time to change the man on the sofa."

Dr. A. M. Dougal, surgeon of the Carthaginian, was describing the splendid cures of seasickness that he obtains by means of hypnotism, says the New York Tribune.

"The most violent cases yield to my treatment," said Dr. Dougal. "Yes, some very violent cases indeed have vanished under my hand."

"I remember a particularly bad case."

Dr. Dougal stroked his mouth to hide a smile.

"It was a Philadelphia snail dealer. He sent for me the second day out. As I hurried to his cabin I could hear him groaning a corridor away."

"Do you feel very bad?" I asked the man, sympathetically.

"Oh, dear, yes!" he groaned. "Oh, my! I feel very, very bad, indeed."

"I looked at him. Serpentine undulations passed over his frame. He was racked and shaken as by an earth quake."

"Can't you keep anything on your stomach?" I inquired.

"Only my hands," he sighed. "Only my hands."

The clever young man was wandering up and down the platform of the railway station, intent upon finding an empty carriage in the express which was almost due to start. But, alas, his search was in vain. Still, it is difficult to disappoint a clever young man when he is intent upon getting something. An idea occurred to him, and, assuming an official air, he stalked up to the last carriage, and cried in a stentorian voice:

"All change here! This carriage isn't going!"

There were exclamations low but deep from the occupants of the crowded compartment; but nevertheless they scurried out of the carriage, and packed themselves away in other parts of the train.

The smile on the face of the young man was childlike and bland as he settled himself spaciouly in the corner of the empty carriage and lit a cigar.

"Ah," he murmured, "it's a grand thing for me that I was born clever! I wish that they'd hurry up and start!"

Presently the station master put his head in the window and said:

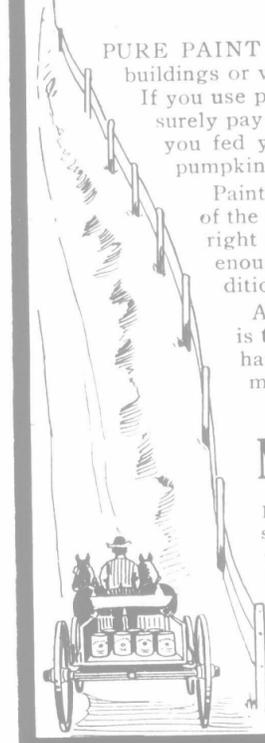
"I s'pose you're the smart young fellow what told the people this here carriage were not going?"

"Yes," said the clever one. And he smiled a dazzling, seven-carat smile.

"Well," said the station master, who was somewhat of a stammerer himself, "she isn't." The porter heard you telling them people, and he cut her off. He thought you was a director of the road."



# Paint That Preserves Farm Buildings



PURE PAINT is a sure preservative whether it covers buildings or vehicles or implements or anything else. If you use paint because it is cheap you will just as surely pay dear for it in the end as you would if you fed your stock with a mixture of corn and pumpkin seed.

Paint to preserve buildings must be made up of the right raw materials and mixed with the right skill and machinery to make it durable enough to withstand all severe weather conditions and variation of climate.

Any paint may look well but the only test is time. Yes, the old steady sun and the hammering storms will prove that common paint don't preserve.

Next time you're in town ask your dealer for

## Martin-Senour Paint

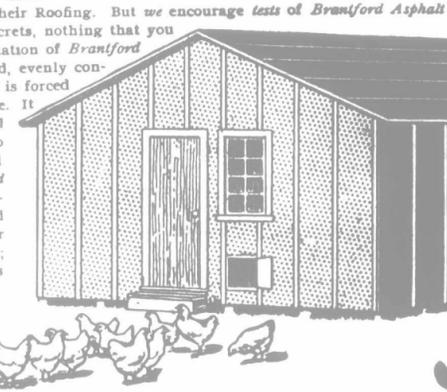
If he don't sell it drop us a postal and we will send you color cards and prices of one or more of the many good paint things we have ready for your use. Let us tell you all about them in our beautiful booklet "The Home Beautiful." Free upon request. Write to-day.

MARTIN-SENOUR CO., Ltd.  
MONTREAL.

## HOW THE VERY LIFE IS EATEN OUT OF MOST ROOFING.

Not two Roofings in a hundred can withstand the slow, secret, dangerous attacks of acid—a deadly enemy to most Roofing. Because few Roofing makers care to spend the extra money necessary to make such Roofing. Acids are caused by green or damp hay, or the cattle in your sheds. These cattle sweat, producing vapor which contains acids and gases destructive to most Roofing. These enemies attack the underside—which is weak in most Roofing—and does its ruinous work where you cannot see it, till too late. The first you know that it is not what the fellow claimed is the startling sight of a million "pin-holes" all over. Examine the Roofing of your barn now—you'll likely find this defect. This is caused by weak insides, which should be the strongest part, but the portion hopelessly slighted by most makers because you won't test it. Nearly all Roofing, except Brantford, has as a foundation wood pulp, jute, cotton cloth, etc., which cannot absorb sufficiently. It possesses nothing to hold it together, and is coated with cheapest covering obtainable: animal fats, greases, oils, tar, or some other refuse. These dangerous coatings are so weak that they are readily at the mercy of the acids. And the foundation! It has no barrier! It has already wilted. No amount of supposedly preventatives can save this Roofing. It is bound to go to pieces sooner or later and just when you least expect. Most Roofing makers will try to avoid the issue if asked to show insides of their Roofing. But we encourage tests of Brantford Asphalt Roofing. There are no secrets, nothing that you shouldn't know. The foundation of Brantford Asphalt Roofing is long-fibred, evenly condensed pure wool. Asphalt is forced into wool, soaking every fibre. It is heavily coated with special waterproof coating into which Silicia Sand is rolled under pressure. Brantford Asphalt Roofing is wear resisting, fire, water, weather, acid and smoke-proof. Rain or snow can't freeze or crack it; heat of sun cannot melt it. Its pliability prevents cracking or opening at seams. There are many other Brantford superlatives. Our Big Roofing Book with Brantford samples is free. Write us or your dealer now.

## Brantford Roofing



Brantford Roofing Co., Limited,  
Brantford, Canada.

Revolution in the Price of

### RIDING BREECHES

10/6 PER PAIR

SEND FOR PATTERNS And Easy Self-Measuring Forms. B. R. D., Farmer's Advocate, London, Ont.

YOU CAN SAVE 50% READ WHAT A CUSTOMER SAYS: Dear Sir, Breeches to hand, at all that can be desired; they certainly are better than a pair I paid \$11 for a few months ago. Please keep measure.—O.E.

This gentleman measured himself according to our easy measure instructions. MADE TO YOUR MEASURES. Testimonials from all parts of the World.

**BEDFORD RIDING BREECHES CO.**  
51, KINGLY STREET, REGENT STREET, LONDON, ENGLAND.

Also in better qualities at 13s.11d. & 15s.11d

### Electric Insect Exterminator

The only practical dry powder sprayer—no water required. With this sprayer, one pound of Paris Green will cover an acre of potato plants. Our patented device regulates the quantity of powder and prevents waste. Machine works up, down and sideways, so every part of the plant is reached and every bug killed. Children can keep out trouble, when you have the Electric Insect Exterminator. Illustrated catalogue of Sprayers, Seeders, Planters, Drills, Wagon Boxes, etc., sent free on application. The Eureka Planter Co., Limited, Woodstock, Ont.

### LAND FOR SETTLEMENT!

Lands are offered for settlement in some cases FREE, in others at 50 CENTS per acre, in various districts in NORTHERN ONTARIO. Write for information as to terms, homestead regulations, special railway rates, etc.

HON. JAMES S. DUFF,  
Minister of Agriculture,  
Donald Sutherland,  
Director of Colonization, Toronto.

### RUSH'S U-BAR STEEL STANCHIONS

are swinging Stanchions. See the comfort and freedom they give to cattle. Are strongly made to stand the roughest usage, and save lumber and labor in fitting up cow stables. Saves time in tying cattle because the latch is easily operated and absolutely secure. Made in five sizes. Write for Catalogues and prices.

**A. M. RUSH**  
PRESTON, ONT.

GOES LIKE SIXTY SELLS LIKE SIXTY \$65

SELLS FOR \$65

### GILSON GASOLINE ENGINE

For Pumping, Cows Separators, Churns, Wash Machines, etc. **ASK FOR TRIAL** Ask for catalog—all sizes

**GILSON MFG. CO., 150 York St., Guelph, Ont.**

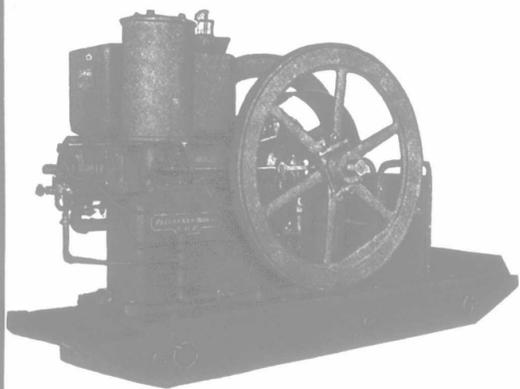
"Are you related to Barney O'Brien?" Thomas O'Brien was once asked.

"Very distantly," replied Thomas. "I was me mother's first child—Barney was th' s'vinteenth."

# PEASE "ECONOMY" FURNACE

EASIEST OPERATED

Manufactured by Pease Foundry Co., Ltd., Toronto, Winnipeg



## FAIRBANKS-MORSE

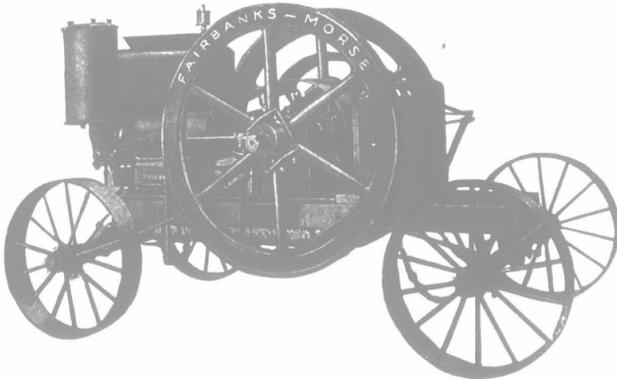
Improved Skidded and Portable  
Evaporator Tank  
**GASOLINE ENGINES**

These engines are built along the same lines as our Fairbanks-Morse Standard Horizontal Engines, with the exception that our improved Cast Iron Evaporator Tank is cast on top of cylinder, as shown in illustration.

No cooling tank is required, thus overcoming the difficulty of carrying the usual great volume of water. The lubrication difficulties of Air Cooled Engines are overcome in the above. There is very little water in the tank to take off by drain in the cold weather, thus saving time and trouble, and there is no water pump to freeze up. We provide a shield to prevent water slashing out of the Hopper Jacket.

The skidded engine is a very desirable outfit where it is necessary to move the engine, providing a means whereby the engine can be drawn about on its iron-shod runners, or can be placed on a farm truck or a bob sled. The engine itself is Fairbanks-Morse in every respect, and ensures to the customers the best there is in Gasoline Engine construction.

Send for our FREE CATALOGUE GE 102, showing our full line of Fairbanks-Morse Vertical and Horizontal Gasoline Engines and Machinery for farm work. It means money saved for you. Write to-day.



## The Canadian Fairbanks Company

(LIMITED).

Montreal, St. John, N. B., Toronto, Winnipeg, Calgary, Vancouver.  
FACTORY: TORONTO, ONT.

**Money Loaned with Privacy**

Loans quickly made on improved Farm and City property. No publicity. No extra charges for renewals. Lowest current rates of interest. Easiest terms of repayment. Land inspected free. Call or write:

**The Ontario Loan and Debenture Co.**  
A. M. SMART MGR.  
DUNDAS ST. - MARKET LANE

**WINDMILLS**  
THE HAYWARD WINDMILL CO., LTD., LONDON, CANADA.  
Manufacturers of the Hayward  
**Less Friction Windmill**

A new improved design of windmill. Mechanically correct. A marvel of simplicity and strength. If interested at all in windmills, send name and address for free catalogue.

Factory: 663 Bathurst St., London, Ont.

**Alberta! Alberta!**

Bow River Valley, the Land of Winter Wheat. Climatic and soil conditions coupled with a perfect irrigating system have made it a country of crop certainty.

NEARLY 75,000 ACRES SOLD IN APRIL.

For full information apply to **The Canadian Pacific Irrigated Lands Department.**  
**THE NATIONAL REALTY CO., LTD.**  
123 Bay St., Toronto, Can.

**'Tis Roofed with REX and All is Well**

The man who has his buildings covered by REX Flintkote ROOFING can feel that "all is well." The contents of his buildings are protected by roofs through which water cannot penetrate, that winds cannot blow off, that falling sparks cannot ignite. Furthermore, he has *lasting* protection, for

## REX FLINTKOTE ROOFING

is durable. REX ROOFING is good all through. Its body is high grade, long-fibre wool felt, heavy, dense and durable; the saturation or water-proofing is slowly worked in until the body is thoroughly impregnated with it—REX saturation will never dry out; the coating is of special rubbery, gummy compounds that unite with the body and the saturation, and present a surface that is absolutely weather-proof and fire-resisting; will not crack in cold weather nor blister, peel, scale or melt in hot weather.

**Write for Book and Samples—Free**

Make the fire test, try its strength, note its pliability; and when you go to your dealer's, be sure you are given the "Look for the Boy" trade-mark kind.

**J. A. & W. BIRD & CO.,** 20 India Street, Boston, Mass.  
Canadian Office: 29 Common Street, Montreal.

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# The Farmer's Advocate

## and Home Magazine

"Persevere and Succeed."

Established  
1866.

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### EDITORIAL.

#### The University Skirts.

Plausible to contemplate, but condemned by experience, are the arguments advanced in another column by a New Brunswick correspondent, who seems to reflect, in some measure, at least, the views of Dr. Jones, Chancellor of the University of New Brunswick, at Fredericton. University Senates and University staffs commonly believe that they can run agricultural colleges, and almost invariably make a dismal failure when they attempt it. There may be a very few exceptions where a strong leader is made dean of the course in agriculture, and gives it direction, impulse and character, independent of the university, but such men are exceedingly few. As a general rule, the agricultural faculty becomes submerged in the academic and much-too-impractical atmosphere and purpose of university life, fails to get into touch with the vital but stubborn everyday problems of the farm, draws few students to its courses; gives them a rather theoretical training, with much pertaining to the air, the rocks, the class-room and the laboratory, but little about the farm; and finally succeeds in turning out a few men indifferently equipped for agricultural professional life, and very few indeed inclined towards or qualified to succeed on the farm. Such a faculty is dwarfed by its own inefficiency.

New Brunswick need look no further afield than Truro, N. S., for a very typical and deplorable illustration of this tendency. In 1885, Nova Scotia established a chair of agriculture in connection with the Normal School there; in 1888 a farm was purchased near-by, and in 1892 a school of agriculture erected on this farm, the agricultural faculty being, however, still allied with the Normal School. The result was not quite a blank record of failure, but the next thing to it. It was not until the present excellent college of agriculture was opened, in 1905, under a new principal, and divorced almost entirely from the Normal School, that agricultural education in Nova Scotia began to make real progress. Since then the agriculture of the Province has been fairly revolutionized. The failure of the earlier attempt, and the magnificent success of the later effort, should carry an eloquent lesson for the educationists of New Brunswick, as well as of every other Province. In Manitoba there was a fight to keep the new agricultural college free from university absorption and control, for the success of which struggle the farmers of that Province have every reason to feel grateful. The splendid record of the Ontario Agricultural College, as a separate entity, is still another case in point, for the O. A. C., though allied with the University of Toronto for degree-conferring power, is in all essential respects a separate institution, with an identity, a purpose and an atmosphere all its own.

The suggestion that the university is already equipped in its scientific departments to teach many of the agricultural subjects, is born of complete misconception. A university professor may have his pate crammed with knowledge of chemistry, physics, botany, or entomology, and yet know very little of practical value concerning the agricultural phase of his subject. The truth is that any of these agricultural sciences is a large, specialized field, and unless they are taught by a specialist who understands what phases of them will be of most service to his students, and can adapt them to practical advantage, they will be of little use to his graduates. Chemistry is

taught by many an instructor in our High Schools and Colleges, but not one such master in a thousand is qualified to teach agricultural chemistry as it should be taught to an agricultural class. So with the rest of the scientific subjects.

Efficient agricultural teaching demands considerable expenditure for equipment, and the services of a large staff of trained agricultural specialists. These are not available at the University of New Brunswick, any more than they would be at Toronto or Winnipeg, and to provide them would involve larger outlay than the Province of New Brunswick would be justified in incurring for years to come, for, unless the thing is done well, it were better not attempted at all.

The halls of Truro, Ste. Anne de Bellevue, and Guelph are open to New Brunswick students on very favorable terms, and here a much better agricultural education can be afforded than an agricultural chair, at Fredericton could hope to offer.

The educational problem on which New Brunswick should concentrate her best attention is in the rational education of her public-school boys and girls, by encouraging and assisting in every possible way the more general introduction of nature study, school-gardening, manual training and domestic science, combined with an earnest effort all along the line to relate these subjects, if we may call them such, to the general work of the school, and to bring rural education into close touch with rural needs. To this end, suitably-trained teachers must be had, but we have no doubt the Macdonald College Normal course for teachers, if not, also, the special teachers' course at Truro, will be open to all the Normalites the Province of New Brunswick may care to send. When dozens of New Brunswick young men are taking an agricultural course outside the Province, when hundred of rural-school teachers are in need of and ready for special Normal training, and the New Brunswick Government is in a position to establish and liberally endow an agricultural college, with a Normal course for the special training of rural school teachers attached, it will be time to agitate this departure. Until then, effort may be better directed towards finding other ways of meeting the situation. And when such a college is established, keep it clear of the university skirts.

#### Irish Repatriation Movement.

"Is there to be a stemming of the tide of emigration from Ireland to America, or, rather, is there to be an immigration to Ireland from America?" asks our overseas contemporary, *The Farmer's Gazette*, of Dublin, in commenting upon a proposed Irish home-going movement, whereby 50,000 Irish residents in the United States are asked to return to the Old Country in 1910, to assist in the industrial revival which is so eagerly expected. *The Gazette* understands that the project has assumed considerable proportions, and that the promoters are confident a great influx of visitors, and possibly of residents, will take place. It is believed that Irishmen who have succeeded in the United States should carry back to Ireland ideas of government, manufacture, commerce and agriculture, besides capital, and the stimulus to agriculture that would follow increased population and introduction of new methods.

It is to be hoped the movement may prove successful, and that Ireland may be rejuvenated by her own sons. The present situation lends point to an observation of Thomas Augustine Daly, that the Irish and the Jews could control about everything they had a mind for—except Ireland and Judea.

#### Moisture; Aeration; Weed Destruction.

Every plant in the field is a pump, sucking up moisture containing plant food in dilute solution, the excess water being transpired through the leaves. In a recent editorial, the fact was mentioned that almost any of the cultivated crops withdraws three to five hundred tons of water from the soil for each ton of dry matter produced. The same article noted the fact that Prof. King, in some pot experiments, found that a three-inch mulch of earth, in one hundred days' time, saved from evaporation, at the rate of 331.6 tons of water per acre in a black marsh soil, to as much as 1,525.8 tons per acre in a virgin clay loam. Allowing for a lesser degree of efficiency from a mulch maintained in field practice, it seems clear that the extra moisture conserved by frequent surface cultivation should in many cases be sufficient to admit of the production of an extra ton of dry matter to the acre, equivalent to almost 4 tons of green ensilage corn. Another effect would probably consist in earlier maturity, with the resultant advantages of lessened risk from frost, and in some years greater feeding value. For the sake of conserving moisture, therefore, we must conclude that intertillage of corn and similar crops is well worth while. It acts favorably in two ways: first, by assisting in the rendering of more plant food available; secondly, in providing more abundantly for the transpiratory needs of the plants.

But this is not all. For the liberation of plant food in the soil, oxygen is needed, as well as moisture. Nature provides for the ventilation of the soil, as well as for the breathing of animals and plants. King explains six means by which the aeration of the soil is accomplished: (1) by the slow process of diffusion; (2 and 3) by the expansion and contraction of soil air, due to (a) changes in temperature, (b) changes in barometric pressure; (4) the suctional effect of the wind, especially when it is gusty; (5) the air absorbed and carried downward by percolating rain water; (6) suction resulting from the abstraction of water, whether by drainage, capillarity or root action.

When the surface of the land is puddled, and then allowed to bake, or even to crust over, soil ventilation is impeded, consequently plant food is more slowly elaborated. "Liberation of plant food" is an illogical and an unscientific reason often given in favor of cultivating growing crops. It is true that such tillage does conduce to the liberation of plant food, but it does it indirectly by conserving moisture and facilitating the aeration of the soil.

The third reason for intertillage of growing crops is destruction of weeds, which otherwise would rob the crops of moisture and plant food, besides establishing themselves, to prove a nuisance in subsequent seasons. In many respects weeds are a great blessing. They compel shiftless farmers to cultivate. He who truly appreciates the benefits of cultivation in conservation of moisture and soil aeration, will cultivate independently of weeds. Except for a little special attention to the kind of teeth used on the cultivator, weeds will demand little extra work from a good farmer. What weeds require for their extermination, he would give, anyway, and more besides.

While there is such a thing as overdoing intertillage, experience and science point to the wisdom, under average conditions, of cultivating a corn crop half a dozen times throughout the growing season, running quite deep at first, say four inches or more in the center of the space, and

# THE FARMER'S ADVOCATE

## AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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JOHN WELD, MANAGER

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1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairy-men, gardeners, stockmen and home-makers, of any publication in Canada.
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gradually reducing to a mere skimming of the surface by the time the plants have reached the tasselling stage. It is not necessary to use the cultivator every time. A weeder will do part of the work effectively, until the corn is two feet high. Cultivate as soon after each rain as the ground will pulverize nicely. To cultivate too soon is to impair the effectiveness of the work, for a damp mulch is less effective than a dry one. To wait too long is to permit the escape of moisture, unchecked for an unnecessary length of time, and on some heavy soils to prevent the preparation of an ideal mulch. The happy medium is best, but let the corn-growers' motto until mid-summer be, "Don't let the crust form."

### Significance of Emigration Figures

Americans have been consoling themselves regarding the exodus to our prairie lands by pointing out that, while in the fiscal year ending June 30th, 1908, 56,860 persons left the United States for Canada, 58,826 went from the Dominion to reside in Uncle Sam's domain, leaving a small balance of 1,966 in their favor. It would be interesting to know what proportion of these left each respective Province. Certainly, the blanching drain of blood which used to leave almost every Canadian community for cities in the Republic, is no longer in evidence, having been succeeded by a less-exhausting and decidedly encouraging flow Westward. There is, nevertheless, a constant tendency, more or less pronounced, for a proportion of our young people to leave the land for cities either in our own or foreign countries, and while this may never be wholly stemmed, and may, up to a certain extent, be necessary and beneficial, it points to the urgent necessity for so modifying and adapting our rural educational systems as to interest children in agriculture, and thereby retain as many as we can. It will never do to seduce or compel our boys and girls to farm, but it is legitimate and wholesome to spare no pains so to arouse an interest in the farm as to hold all who may choose it of their own accord. The life of the farm is a rational life

and a rational education, together with a rational conception pervading the home life, will not draw children from it, save only that inevitable proportion who are better "cut out" for some other vocation. This proportion is not nearly so large as the chronic cityward drift may have led us to suppose, but, to minimize it, we must educate our country children for the farm.

### The Dog Menace.

The menace of rabies, which has developed a serious degree of prevalence in the neighboring State of New York, and has occurred with uncomfortable frequency in Ontario of late, gives cause for serious attention to the recent report of a Toronto daily, that four children in Toronto had been bitten by dogs. In one case a St. Bernard had badly bitten a little boy in six places on the thigh and arms, having also bitten at least two other children. An application came before a magistrate that the dog be destroyed for medical purposes, in order to ascertain whether he had rabies, so that the child might be subjected to the Pasteur treatment, if necessary. But the owner of the dog refused, and contested the application by bringing counsel and experts to prove that the dog did not have rabies. After hearing the case, the magistrate confessed himself helpless under the existing law to compel the destruction of the dog. He could only make an order, and inflict a fine if the order were not obeyed; but, as the owner would probably pay the fine, this would not dispose of the dog. The case was adjourned for a week, the owner of the dog promising to keep him in the hospital for a while, and to muzzle him when on the street in future.

There is something queer about a law which does not endow any constituted authority with power to enforce the destruction of a dangerous canine, not even to determine the necessity of timely treatment necessary to save a child's life. No degree of sympathy or admiration for dogs should stand in the way of the destruction of dangerous ones. There are persons to whom any dog is a source of terror, and it is a grave question whether far too much liberty is not being allowed them in populous centers. Hitherto, the dog discussion has hinged on its relationship to the sheep business. It looks now as though human protection had become a still more pressing consideration. If the owner of a dog were obliged to put up a deposit to defray the expense of Pasteur treatment, it might cool off some warmth of unregulated sentiment. Wherever there is the least reason to fear rabies or viciousness, and in cities at all times, dogs allowed to run at large should be muzzled, and if not, should be destroyed by an officer of the law.

### Master or Victim of the Weeds?

After many years' experience with Austrian Bromus grass (*Bromus inermis*), introduced into Canada from Europe in 1886, and distributed from Brandon and Indian Head since 1890, Western farmers are divided in opinion as to whether this grass is a friend or foe. Its hardness and adaptability to Western conditions seem to be established, but in some cases it has won evil repute, on account of its persistency. There are a great many farmers in Western Canada who would not begrudge a good deal to be entirely free from it now, while others, having always been able to keep it under control, do not hesitate to recommend it. The difference may be due in some measure, to the greater adaptability of particular soils, but probably for the most part, to more thorough methods on the one hand than on the other.

There are comparatively few weeds which seriously trouble a good farmer. It is the man who buys cheap seed, gets behind with his cultivation, neglects fence-corners, practices an ill-advised cropping system, fails to use hoe, spud or scythe betimes, and lets seeds ripen in his hay fields by reason of tardiness in commencing haying, it is the man who does these things who has most trouble with weeds. The careful farmer will be occasionally troubled with thistles from seeds blown across his line fences, with mustard from seeds washed down from above, or with a dose of some bad weed from a threshing machine, or with some grass seed which he thought, to be safe,

but these are exceptional cases, and usually amenable to prompt treatment.

Our worst perennial weeds yield to persistent cultivation. Canadian blue grass, that tough, wiry, underground-rootstock creeper, which gives so much trouble on grain-and-hay farms in heavy-clay districts, can be effectually held in check by a short rotation, bringing corn after sod, followed by grain liberally seeded to clover. Even those two pernicious weeds, bindweed and perennial sow thistle, can be worn out by a summer of thorough surface cultivation preventing them from showing more than a day or so at a time above ground. While at first the cultivation may actually seem to benefit the plants, perseverance will have its reward about August or September, and a second year will complete the work, if the first does not. If the weeds are not too bad, this cultivation may be given with a crop of corn in hills, or rape, out bad cases of bindweed are probably best treated with a summer-fallow.

A good farmer masters the weeds with comparative ease; a poor one is ever their victim. Thoroughness and perseverance are the secrets of success.

### Agricultural Education in New Brunswick.

The report of the New Brunswick Agricultural Commission, which drew attention to the need of increased facilities for providing proper agricultural education in the Province, has to some extent revived the suggestion which is sometimes made, that there should be an agricultural college within its borders. Having regard to the fact that the college at Truro, N. S., is so close to the border that for all practical purposes it may be considered as in the Province, and also that the Macdonald College and the Guelph College are so easily accessible, it would seem that another college is scarcely necessary. However, Dr. Jones, the Chancellor of the University of New Brunswick, a few days ago, outlined a scheme for a course in agriculture in connection with the University which has much to commend it. By the use of the other departments, the work could be done there for a fraction of the cost of having it done at an independent institution, and there can be little doubt that the place for such education is in connection with other forms of technical education at the University.

That the University possesses admirable facilities for imparting instruction on agricultural matters, is beyond dispute. There is attached to it a good farm of about forty acres, including about twenty-five acres of cleared land already under cultivation. This farm could be freely used for experimental and research work in agriculture, if at any time an extension of the farm were needed, it could be easily accomplished by the purchase of adjacent lands. Besides, about a mile from the University buildings, there is an extensive tract of land, well wooded, also belonging to the University. This tract is upwards of three thousand acres in extent, and it contains much good farming land, and could be used for experimental orchards and other purposes. As it would greatly enhance the value of the remainder, the University would no doubt be glad to permit the use of such portion of this land as might be required for the purpose. In addition to the use of its lands, the University is ready to give the services of its teaching staff for the development of the study of agriculture. What this means to the movement can be inferred from the fact that more than half of the subjects usually forming part of an agricultural course are already taught at the University, and this teaching would be available for such a course without the expenditure of any more money. This shows the strong advantage of the University scheme, and the very great disadvantage of any scheme looking to the formation of a school of agriculture apart from the University. The principal point in such a scheme would be the appointment of a thoroughly competent man at the head of the department. The Senate could be trusted to attend to the proper administration of whatever finances the Government might make available for the purpose; and the arrangement of courses and the internal administration would be largely in the hands of the head of the department, aided, perhaps, by a joint committee of the Senate and the Provincial Department of Agriculture. If, as has been suggested, the Dominion Department of Agriculture would be willing to establish an experimental farm in the Province, provided the land were supplied by the Provincial Government, and the University farm and other lands could be obtained for the purpose, it would not only tend to give the proposed school a splendid standing in the general scheme of education, but a magnificent plant which, once established, which would be of general prevalence to the University, and at the same time a credit to the Province of New Brunswick.

G. BIDLAKE

**HORSES.**

**Registry Rules for Shire Horses.**

Following are registration rules of the Canadian Shire Horse Association:

1. The pedigrees of the following animals shall be admitted to registry:

(a) Animals recorded in the Shire Horse Society Studbook of Great Britain.

(b) Animals, the sires and dams of which are recorded in the American Shire Horse Studbook, in which case all ancestors back to and including the imported cross must be recorded.

(c) Animals, the sires and dams of which are recorded in the Canadian Shire Horse Studbook.

2. There shall be paid into the hands of the Accountant, National Live-stock Records, Ottawa, at the time of applying for registration, fees, as set forth in Section No. 11 of this article.

3. Every application for registration shall be made on a blank, which shall be furnished free for the purpose, must give the date of birth, name and registered numbers of the sire and of the dam, and must be signed by the breeder, except in case the person applying for registration purchased the dam after being served, then he must sign the application form. But a transfer of the ownership of the dam must be supplied, signed by the breeder, giving date of service, name of sire, and date of sale. Pedigrees of four-cross mares must be signed by the breeder, and shall be certified and sworn to, or affirmed by the breeder before an officer authorized to administer oaths. In the case of the application for the recording of imported animals, the foreign certificates of registration, as well as the usual application form, must be forwarded. When applying for registration of animals imported in dam, certificates of service must be supplied, signed by the owner of the sire at the time of service. Nothing, however, contained in this section shall prevent the acceptance of any pedigree for registration, if sufficient proof has been furnished, satisfactory to the entire Pedigree Committee.

4. The owner of the sire of an animal offered for entry must certify to service. Signature shall not be accepted unless such ownership appears on the books of the Canadian Shire Horse Association. This signature is not required for registration of pedigrees already on record in other books. In the event of its being impossible to secure such signature, the matter may be dealt with by the Pedigree Committee.

5. The breeder of an animal is the owner of the dam at the time she was served. The first owner is the owner of the dam at the time the foal was dropped.

6. Any person who wilfully signs a false declaration regarding a pedigree for registration, or who causes another person to do so, shall, on summary conviction, and upon information laid within two years of the commission of the offence, be liable to a penalty of not less than \$100 (63, 64 V. C. 33, S. 13) for each false pedigree signed or presented; said person shall pay, besides, the cost of the prosecution. His name shall be expunged from the records of the Association, and he shall be deprived of the right to have pedigrees of animals recorded in his name.

11. The fee for membership shall be \$2.00 for calendar year. The fee for registration of pedigrees shall be as follows:

To members—	
Animals under 3 years of age.....	\$1.00
Animals over 3 years of age.....	2.00
Transfer of ownership.....	50
Duplicate certificate.....	50
New certificate.....	50
To non-members—	
Animals under 3 years of age.....	\$2.00
Animals over 3 years of age.....	4.00

The above fees to come into force on July 1st, 1908.

In determining fees, the ages of all animals are to be computed from the first day of January of the year of foaling.

Blank forms of application for registry, on which the rules in full are printed, will, no doubt, be mailed free on application to "Accountant," Live-stock Records, Ottawa.

**Walk the Heavy Horses.**

The first and most important gait to teach any colt is the walk. A good walk spares many a leg, and is easier on the beast. One of the most successful teamsters we have known never allowed his men to trot his horses, and, of course, never did it himself. He usually kept two or three heavy teams of Clydesdales or Shires weighing seventeen or eighteen hundred each, and commonly loaded just double the loads taken by other teamsters in the neighborhood. Two yards of gravel was an ordinary load for one of these teams, and it is not a very level region of country, either. Such loads they handled with ease, and rarely showed a rib. The secret, in addition

to good care and feeding, was that they were never pounded out at the trot, not even with an empty wagon. In order to avoid this, the drivers would, on occasion, rise early, and start out on the road at half-past six, or even at six o'clock a.m. Kept at the walk, these horses, massive as they were, developed a long, free stride which carried them over the ground at three and a half miles an hour, or better, whereas similar horses, jogged along at every opportunity, settle into a snail's gait when allowed to come to a walk. There is no manner of doubt but that many a heavy horse is drilled down and prevented from giving a good account of himself, in comparison with lighter horses, by an ill-advised eagerness on the teamster's part to urge him into a jolting jog-trot, or faster, at every favorable stretch of road. Draft horses are for strength, not for speed.

His sire is Gratiano 1100, by Prince of Wales, and his dam is the registered pony Louise McCabe. He is perfectly formed in every respect, and, withal, quite a good colt."

**Methods with Heavy Horses.**

"The day has dawned when a change must come in connection with the heavy-draft horse industry. The trouble has been that people breed a show horse—one that looks well—and forget the main purposes of the heavy horse—strength and durability, or staying power. Take the draft horses of to-day. Too many are deficient in the middlepiece, or width of chest or rump, and too leggy to go nice. Lack of massiveness is the serious defect of many of our horses. I like character and breed quality, but quality is not everything. We must have animals that suit the plow, and all kinds of heavy work. Many of the stallions now boomed by prominent horsemen would not bring a fair price if castrated and put on sale at any of our horse sales."

This is how R. B. Young, of Erin Township, Wellington County, Ont., summed up the horse business recently, in conversation with a member of our editorial staff. The type of horse offered for sale by him at horse fairs, and also the type of stallion from which he breeds, shows that he practices what he preaches.

"As for treatment of breeding stock," continued Mr. Young, "it must not be forgotten that few mares—probably one-third of them—make good mothers. We must, therefore, have good young fillies coming on. I always sell brood mares at the age of 10 or 11 years, unless they have proven to be extra good. I have had mares raise me 14 or 15 foals, but I do not like to wear them out. It is best to sell while they will bring something worth while. On the average, a mare raises four or five, or perhaps six, foals before she is ten years old.

"It is not advisable to have a mare drop her first foal until she is four years old. A mare is never the same after she has been bred. I have bred them at two years. This stunts the growth, but a person has a colt worth probably \$100 to make up for depreciation in the value of its mother. In such cases, I always try to fit the mare into prime bloom as soon as the foal is weaned.

"My mares are given one or two chances to make good. If they are not considered satisfactory, I sell them at five or six years of age, at \$200 to \$250. The others, that are kept to ten or eleven years, usually bring \$150 to \$175. One of such mares averages five foals. The geldings net \$175 to \$300, depending on the individual and the condition. I like to sell in matched pairs. However, the advantage is not now so great as it was a few years ago. Repositories are in a position to fill the demand for pairs. Still, a man can make at least \$50 by mating.

**NO FOALS DROPPED IN JUNE.**

"I want either an early colt or a late one. Any month in the year except June for success. I prefer March or April, or August or September. The fore part of May is not bad. But in June



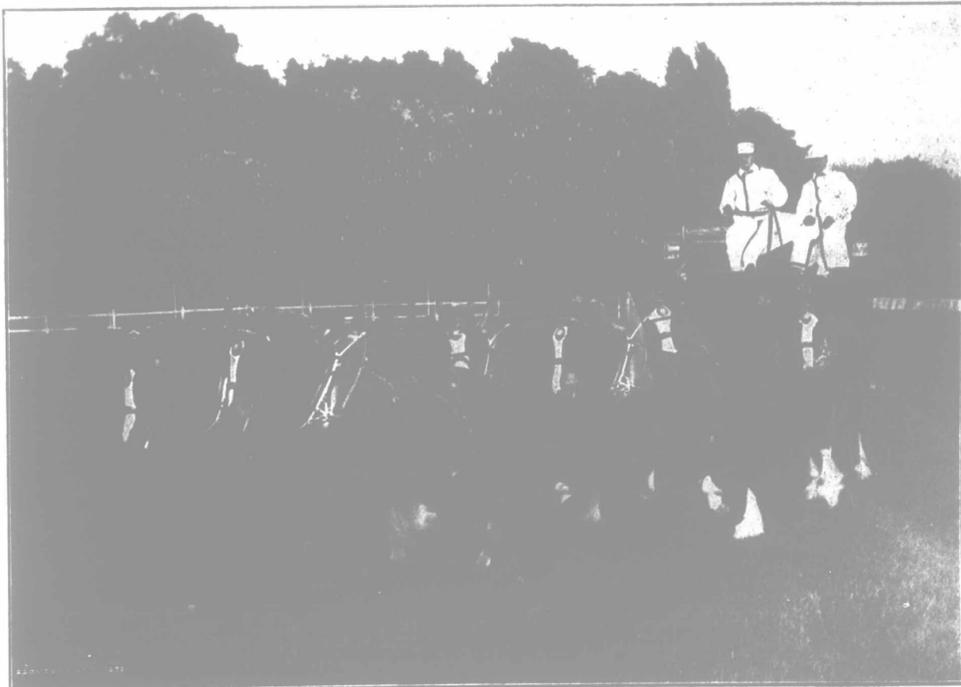
**Baby Shetland Pony.**

Photograph taken when one day old. Height, 16½ inches; weight, 14 pounds.

**"The Smallest Pony."**

The photograph on this page depicts a pony, in miniature, whose owner and breeder, in the letter, to the Horse World, accompanying the photo, said, regarding him:

"A man with one pony always is excited about the size of the colt he raises, believing it to be extraordinary in many ways, but for a man who has raised hundreds of them to become excited is more, perhaps, than you would expect of me; but I am enclosing you herewith kodak picture of the smallest pony I have ever bred. You will observe from the picture that this is either a very tall man or a very small pony. By way of explanation, will say the man is five feet six inches, and the pony 16½ inches, and weighed 14 pounds. This picture was taken when the colt was one day old.



**The Nelson Morris Team of Clydesdales.**

Competing at the International Horse Show, at Olympia, London, England, June, 1909.

it seems that there is a high percentage of loss. It may be because so many foals are dropped in that month, and diseases have a chance to spread. I know of several who had failure year after year when colts came in June, but when they changed to the fall, they succeeded right along.

"Common sense must be used when a mare is bred. She should be given reasonably good food. After being served, it is not judicious to allow her to run in the field with other stock for a time. I don't object to putting her at moderate work. Under ordinary circumstances, she is just as well at work. A great deal depends on the mare. In every case, she should be allowed to stand for at least one hour after service. Mares that are taken a distance to the stallion should stand an hour, and then be driven home quietly.

"One thing that is sadly neglected is fresh air in the stall in which the mare is kept. It is a big change from open-air pasture to stalls such as many farmers have. If there is anything a mare needs, it is pure air while she carries a foal. Oxygen is required for the youngster, and it must be secured through the mother. During winter, instead of being under the barn with hogs and cattle, she should be out working. Many farmers have thin horses, because they give them no exercise. The result is they are not fit for spring work when the time comes.

"A great deal depends on the handling of the foal the first season. When the colt is about three weeks old, the mare can be worked, but it is better to have her at work every day than only a day or two in the week. Hot milk from a working mare is not so very injurious to a foal, but changes such as are given when the mare is worked only occasionally, injure many foals. Never allow the colt to run with its mother when she is hitched. Teach it to eat and drink, and leave it in the stable every time. When weaned, at the age of five months, it thrives well if skim milk is available.

"All brood mares should have some bran or wheat ground with the oats. More foals are lost in winter because of too liberal feeding on roots and straw than from any other cause. Of roots, a few carrots, once a day, are sufficient. I used to give my brood mares silage, cut straw, and, occasionally boiled feed, but lately I feed grain and hay, working in some cut straw, and I have greater success. Just before foaling, it is all right to give boiled feed once a day, if there is no grass.

"But horsemen have not always sunshine. Last season, two good mares lost their foals when about six months gone, without apparent cause. This year I shall try carbolic treatment, starting with about four drops of crude carbolic acid, and increasing it to twenty-five drops in two weeks. The mares, as a rule, will take it on chopped oats. It can be given in salt, but this is not definite, as you never know how much a mare is getting."

The English Hackney Horse Society dealt, at its last meeting, with many applications for medals for various shows outside of Britain. It was finally decided to offer medals at Chicago, Winnipeg, and Philadelphia.

## LIVE STOCK.

### Our Scottish Letter.

#### BUSINESS AYRSHIRES FOR CANADA.

Ayrshires have been very much in evidence during the past few weeks. The month of May saw many changes in the tenancy of noted Scottish farms, and one which excited unusual attention was that of Andrew Mitchell, the well-known breeder of Ayrshire cattle, who left the farm of Barcheskie, in the Stewartry of Kirkcudbright. His ancestors had occupied this farm for many years, but, on account of difference with his landlord, Mr. Mitchell relinquished the tenancy at the earliest opportunity which offered. His displeasing sale, as we call the event here, occupied two days, and in the end he came out of the farm with a realized capital of over £10,000. He was paying about £900 of annual rent, and his two farms, adjoining one another, carried a dairy herd of between 90 and 100 Ayrshire dairy cows. Mr. Mitchell is a firm believer in the dairying properties of the Ayrshire. He does not go in for what are known as "milk" stock—that is, cows with fancy vessels and teats. What he aims at is the large-framed, stylish cow, with good body, and both the appearance and the reality of a large milk yield. At the sale, friends rallied around him from all quarters. The most extensive individual buyer was R. R. Ness, Burnside, Howick, Quebec, who got 11 head, including the highest-priced bull and the highest-priced cow, as well as the pick of the herd of all ages. The top price for a bull was 100 gs., or £105; for a cow, 72 gs., or £75 14s.; and for a three-year-old heifer, 62 gs., or £65 2s.; 297 head of all ages made an average of £19 16s. 2d. The average for 18 bulls was £31 13s. 6d.; and for 91 cows, £21 1s. 2d. The average for 21 three-year-old heifers was £21 13s. 2d., and for 53

two-year-old heifers, £23 8s.; 10 yearling heifers made £18 18s. 9d. apiece; 25 bull calves, £26 18s. 2d.; and 41 heifer calves, £7 1s. 10d. One heifer calf sold for £39 18s., and a bull calf made £27 6s. The outstanding feature of a great sale was the value of pedigree and reputation. Mr. Mitchell had a splendid quey named Orange Blossom, which carried all before her in the show-yards in her time. She and her descendants sold better than anything else in the sale all through. Her heifer calf made the top price of her section, and, through the enterprise of Mr. Ness, Canada got nearly all the best. It would be well were our breeders to put the value where Mr. Ness put it. The Ayrshire with constitution and a large frame, which fills the pail, is the animal wanted in our time. Happily, this is being increasingly recognized, and the results of the Barcheskie sale will speed the day when no other kind of dairy cow but the one that leaves a substantial profit will be tolerated in a dairy.

Mr. Mitchell is also known as a breeder of Clydesdales. His mares were wrought up to the day of the sale, except in the case of a few that had foaled. The 22 sold made the splendid average of £97 5s. 4d. each. Two made 170 gs. each, and both of these go to Canada, to Mr. Bruce, Lashburn, Sask. The best were daughters of Baron's Pride 9122, and very true specimens they were. Mr. Mitchell has meantime gone to reside at The Hill, Balmaghie, Castle-Douglas, but at Whitsunday (May), 1910, he enters on the tenancy of the noted farm of Lockfergus, situated about a couple of miles from the town of Kirkcudbright. There he will carry on the breeding of Ayrshires and of Clydesdales, as in the past.

#### SCOTS DAIRY AND MILK SUPPLIES BILL.

Two important measures, dealing with agriculture, have recently been introduced into Parliament. They are noteworthy because of the principles involved, rather than on account of their intrinsic value. Bills to regulate the milk supply, both of England and of Scotland, have been read a first time. Both make drastic proposals, but the Scots bill is in advance of the English bill. In Scotland, we have had for years pretty advanced legislation dealing locally with the regulation of dairies, and controlling the health of the cows. These bills have usually been promoted by the Corporation of Glasgow, which, in this particular, has been the pioneer in this country. The leading principles of the new Scots Dairy and Milk Supplies Bill is the provision for local authorities, through their medical and veterinary inspectors, having powers to examine and test the animals by which the milk is produced, the premises in which the animals are housed, and when the milk is distributed, and the persons by whom the cows are tended and milked, or the milk is distributed. It is not easy to frame regulations which will accomplish the end in view, and at the same time conserve that priceless heritage of the Briton, the liberty of the subject. In the bill now before the country, an effort is made, with a fair measure of success, to hold the balance even. There is, however, likely to be opposition. The sanitary inspectors are a body of men who take themselves very seriously. It is their business to see that the regulations for insuring a sound milk supply are honored, that the milk sold is up to the standard, and so on. But they would like to have the control of everything, and, as they are not overnamed in this new bill, they naturally feel aggrieved. That they will endeavor to find all the fault possible with this measure, goes without saying, and already the note of battle has been sounded by Peter Fife, the sanitary inspector for the City of Glasgow. He is not at all pleased that the members of his honorable company are treated as non-existent, and he does not mean to take it lying down. There will be a fight, and in the battle for precedence between the Medical Officer of Health, the Veterinary Inspector, and the Sanitary Inspector, possibly the much greater interests of the public weal will be overlooked. Your public official is in many cases a sorry creature. He thinks a deal about himself, and sometimes seems to forget that he is not himself an end, but only a means to an end.

#### PRINCIPLE OF COMPENSATION FOR TUBERCULOUS CATTLE.

The other measure is, strictly speaking, not Parliamentary, but administrative. It may, however, lead to Parliamentary action in the long run. The Board of Agriculture has issued an order, which, however, does not come into force until 1st January, 1910, in which a kind of provision is made for compensating owners of tuberculous cattle when these are destroyed in the public interest. These provisions, in themselves, may not amount to much. Their value lies in the recognition of a principle which has hitherto been challenged, if not denied, that compensation should be paid for tuberculous animals destroyed in the public interest. In these regulations no definite provision is made for payment of the compensation. Unless otherwise provided for, it will require to come out of the local rates, and

this is precisely the point about which parties are not at all agreed. It is argued by some that such compensation should be paid out of imperial taxation. We are not mindful, meanwhile, about the source whence the compensation may be drawn; the gratifying thing is that, now a provision is sanctioned for paying compensation, in lieu of animals slaughtered in the public interest. Such an arrangement means that the stock-owner becomes the ally of the authorities in tracing out tuberculosis to its source, and stamping it out. This is a great step gained, and when so much has been attained, more will follow. The fact that the order will not come into force until January 1st, 1910, indicates a disposition on the part of the authorities to have the matter thoroughly thrashed out, and a satisfactory result in the end arrived at.

#### DOES SCOTLAND NEED A SEPARATE DEPARTMENT?

A keen discussion goes forward here on the subject of the formation of a Department of Agriculture for Scotland, separate from the British Board of Agriculture. Many of those familiar with the splendid work which has been done by the Irish Department of Agriculture are anxious to see something of a like nature established in Scotland. The conception is worthy, and were it possible to have here a duplication of the Irish Department, it would be well worth aiming at and striving to attain unto. No department of State has more to show for its work than the Irish Department of Agriculture. It is splendidly endowed and equipped. Its staff is one of the best and most complete known in the Empire, and in all sections of its activities it has abundant evidence of its success. But Scotland is different from Ireland in more ways than one, and the very condition which assures success to Irish agriculture, through its department, is lacking in Scotland. Geographically, Scotland is linked to England, as Ireland is not. There is no borderland between England and Scotland, agriculturally. The markets on either side of the border are open indiscriminately to patrons from both England and Scotland. It would not be impossible, but it would be highly dangerous, to place the administration of the Contagious Diseases Act under the control of a dual authority. It might mean ruin to Scots stock-owners were they to be at the mercy of an independent administrative authority in London. Besides, there is no difference between the problems confronting the Department in England and those by which they are confronted in Scotland. Diseases like abortion, louping-ill, braxy, trembling, and such like, are the same on either side of the line which divides England from Scotland. What is really wanted is a thoroughly-equipped and endowed department, having ample resources, the best men in their several departments, at its call, and the best facilities for research. The way to get this is not to duplicate agencies, but to thoroughly equip one department so that it may undertake all the tasks to which attention need be directed. No one with any regard for accuracy means to affirm that the existing conditions are what they should be, but to place the agricultural interests of Scotland under the control of an official like the Secretary for Scotland, whose office is already overburdened, and its duties most unsatisfactorily performed, would not be to improve matters. It would be a sure method of insuring disaster to agriculture. Parochial ideas have a wonderful attraction for some minds. For ourselves, we avow our imperialistic proclivities. We desire British agriculture to flourish, and wish it to be represented in the Imperial Parliament by efficient ministers, and administered by men the pick of their profession, who will do what must be done in the best possible way, and to the advantage of the community at large.

"SCOTLAND YET!"

#### A Mammoth Canadian Steer.

A steer, raised on natural grass, will be exhibited at the Alaska-Yukon Exposition, at Seattle, this summer, to show the possibilities of Alberta as a ranching country. The animal stands 6 feet high, is 11 feet 2 inches long, measures 8 feet 8 inches around the girth and 6 feet on the hips, and weighs 2,560 pounds. The steer was used in an ox team all last summer, and rustled on the prairie during winter. He was raised in the Gleichen district.

The British butchers' boycott on unwarranted cattle does not seem to have accomplished much so far. Sales of cattle without any warranty are almost everywhere the rule, and in very few markets is any warranty given. The butchers themselves are not a unit in the demand, and farmers and dealers are firm in their opposition to the warranty. Live-stock auctioneers generally are on the side of the farmers. Undoubtedly, in this second round of the battle, farmers have, up to now, triumphed, and the shortage of cattle and brisk demand have helped to force the warranty question into the background.

**Sheep-raising Means Profits.**

When actual returns in cash and, in addition, weed destruction are considered, few branches of farming are more desirable than sheep-raising. In some localities, however, the ravages of dogs makes it hazardous. This can practically be overcome by bringing the sheep to the barn every night. For many years past, Peter Norris, of East Garafraxa Township, Dufferin Co., Ont., has been remarkably successful with this class of stock. Three years ago, 33 ewes gave birth to 52 lambs. One died, five were kept on the farm, and the remaining 46 brought \$260. This year, 23 ewes, many of which are yearlings, are raising 24 lambs.

A member of the editorial staff of "The Farmer's Advocate" recently had a talk with Mr. Norris at his home. "My flock is not as large as in former years," he remarked. "This is not because I do not consider sheep are profitable. The fact is my sheep bring me more money than any other line of farming—and that off my poorest land. I don't want more than 25 ewes now, as I have not enough pasture. I am breaking up some sod land that will be reseeded, and then my flock will be increased. I like rape, particularly for fattening lambs.

"Pea straw and turnips form the bulk of my winter feed. For three months after housing they get nothing else, except, perhaps, occasionally, some roughage from oats. Potatoes are a satisfactory substitute for turnips. Mangels, however, should not be fed to sheep, as they scour them. About the first of March I like to give clover hay and oats to increase the milk flow and to insure strong, healthy lambs. Too many farmers give no consideration to the strain there is on any animal raising young. A mare or a cow or a sheep must have kindly treatment and suitable food for some time prior to producing the young, or failure and loss is the result.

"During the winter months, my sheep are never allowed to mix with other stock. Salt is always before them, and they are out for exercise, with access to water in a trough, once a day. Sheep like to select their own temperatures for sleeping quarters. My pens are so arranged that they feed in racks in the large pen enclosed by stone walls. From this they can go to a covered shed, and from that to an open yard facing the sun. In bad weather, they sometimes go to the inside enclosure at night, but, as a rule, they prefer the covered shed all through winter. We must not forget that sheep want fresh air and sunshine. I wish to caution all against narrow doors for sheep houses. To avoid injury to the ewes, all entrances should be at least four feet wide.

"I am not in favor of early lambs. The average farmer cannot find time to take proper care of a large flock in late winter or early spring. Besides, when losses are counted, it pays better to have them come late—never before May 1st. Lambs generally do well if they come when there is grass.

"Taking one year with another, the Oxford Downs suit me best. Of course, when wool is high in price, I like to have some of the long-wooled breeds, as I get no more for one grade of wool than for another. The Oxfords, however, are excellent for carcass. In any case, the returns are satisfactory. On the average, I net at least \$5.00 per ewe for wool and lambs every year. Sometimes the profits are double that amount.

"There is another point that must not be overlooked in connection with sheep. You cannot find a bad weed on my farm. Sheep are great scavengers. I don't know of a weed, except Canada thistle, that they will not eat, provided the weeds have not become large and woody. Every farmer should have a few of these animals."

The barbed-wire strand has been extended so far into the domain of the cattleman in the Canadian West, that ranching, as known in the early days, has well-nigh disappeared. Wire fence has cut up the cattle runs and sheep pastures into grain farms, and, by its continued extension, will doubtless ultimately enclose all that vast hinterland to the north, now included in the meaning of that euphonious phrase, "The Last West." Its existence proclaims that the first step has been taken in the transformation of prairie-bleak, raw and uninviting—into farms and homes. Its gradual disappearance from the fields of its first use is one indication of that progressive evolution in agriculture that begins when the earliest settler set first his plowshare 'neath the virgin sod—of that evolution upward that must continue so long as men derive their sustenance from the earth. May its stay be a brief one, is the wish of every artist, and every humanitarian, as well.

**Profitable Sheep Farming.**

If sheep husbandry was a profitable business in Canada fifty years ago, as there is good reason to believe it was, it is difficult to understand why this industry is so largely neglected as it is now in many districts of the older Provinces, in which the number of sheep kept by farmers has for many years been steadily decreasing. The conditions, so far as one can see on the surface, are as suitable as ever for sheep-raising. The climate has not changed, the foods necessary for successful feeding of sheep can be quite as plentifully grown, and prices for mutton and lambs are as high as ever, wool being the only product of the flock that has ruled low in price in recent years, and this is a crop yielded by no other class of farm stock. The common complaint or excuse that dogs make the industry unsafe has no more foundation than it had half a hundred years ago, when the rural population was, in many districts, much greater per mile than now, and when there were more dogs kept than now, because there was more need for them when wild animals were plentiful, and live stock was allowed to run at large.

An article in the Canadian Agriculturist, published in Toronto, sixty years ago, pointed out the profits of sheep-farming as an auxiliary to successful grain-growing in Ontario at that date. From the article referred to, we quote the following:

"At the present time there is, about five miles from the Village of Bancroft, in Hastings County, a sheep farm, which the owner, Dr. Leavitt, has still, and which shows that the sheep industry is profitable, having developed into a thriving business. It consists of 1,200 acres, is nearly square, and encloses three small lakes, which Dr. Leavitt has plentifully stocked with trout and black bass.

"The acquisition of so large a property, it is stated, is the sequel to a chance investment in a flock of twenty ewes about twelve years ago. In November of that year, two settlers each took ten of the ewes, under an agreement to care for them and return at the end of three years double the number. Other settlers asked for the same chance on similar terms, and then Dr. Leavitt began to buy and supply pure-bred sheep of the kind best suited to the locality. All this systematic breeding led up to the sheep farm. As the industry grew, the business became so extensive and important that a central point was required, where selections could be carefully made, where people could come, buy, sell or acquire flocks under Dr. Leavitt's carefully-developed system of breeding. It is not alone the new settlers, either, who take a flock to double in three years, but well-to-do farmers also find the venture profitable.

"By giving the necessary care, a farmer taking twenty sheep on this plan, finds it an easy matter to become the owner of forty ewes, besides returning forty to the owner at the expiration of three years. The scheme has been found to work well, and has done much to develop the sheep industry of the district, and might, no doubt, be profitably carried on in other places."

As against the views expressed by an erst while subscriber, as quoted in the opening editorial of your issue of May 27th, I wish to congratulate you on the journal you are putting out. It is a credit both to you and our country, and I wish it every success. C. H. McNISH, Leeds Co., Ont.

**THE FARM.**

**Fight Canada Thistle with Corn.**

"Canada thistle," remarked R. D. Nodwell, of Erin Township, Wellington Co., Ont., to a representative of "The Farmer's Advocate," who found him applying manure to his corn field with a spreader, "is one of our worst weeds. The winter before last we had little frost, and these pests came in very seriously, particularly on grass lands. That field was a disgrace last summer. I plowed it last fall, and have used the cultivator this spring. Now I am putting on manure. Next I shall plow about four inches deep, so that the manure will not be buried too deeply. Then I will sow corn, and this summer put the thistles out of business.

"I want a dent variety of corn every time. Flint varieties give too many short suckers, making a heavy butt, hard to handle, and leaving much waste. The Bailey is the earliest dent I know that gives satisfaction. I have had it mature. I would like one that would mature in shorter time, if I could get as good a cropper. In fighting weeds, it is of great advantage to have a quick-maturing corn, so that you can plant late. I always try to get it in by May 24th or June 1st. I am a little late this year, but will sow thin, and so get a quicker growth and better cobbing. I find that I can handle six or eight acres of corn with half the labor required for the same area in roots, and clean the land better.

"I use silage for all classes of stock, but it is best for dairy cows. I generally have half a dozen or more cows in milk. This spring the silage was used early, and I noticed a great falling-off in milk supply at once, despite the fact that I fed sugar beets and the usual rations of other feed. They fell back at least one-quarter. The silage seemed to satisfy and give a good appetite.

"With the corn as well matured as mine is, there is no danger of injury to the stock. One year I had some that was immature, and it did not make satisfactory feed. There was too much acid in the silage."

**Approach-cellar Covering.**

What would you suggest for a covering for a root cellar under an approach to a bank barn? G. H. S.

Ans.—One of the most satisfactory root houses we have observed under a barn-approach has a flat, nine-inch cement ceiling, reinforced with two steel rails, and supported by two pairs of wooden posts under the rails. A large threshing machine, standing above it the first fall, revealed no evidence of stress. An excellent arrangement is to have the rails about four feet apart under the center of the driveway, and parallel to the wheel tracks of the wagon. One end of each rail could be let down into the wall under the driveway doors, the other end of the rails being correspondingly set into the opposite wall of the root house. Plank blocked up from below, with their upper face snug up against the bottom of the rails, would afford a support for the concrete until it hardened. After the cement mixture (one Portland cement to five or six clean, sharp gravel), had been filled in to the height of the rails, wire netting (expanded metal) or fence wire could be laid across the rails, and a finishing coat of cement, mixed about three of fine gravel to one of Portland cement, spread over this, rammed, floated and blocked, or cross-grooved. The roof or ceiling, as the case may be, should have a



Judging the Champion Shorthorn Bulls.

Bath and West of England Show, May, 1909. Duke of Hoole, the champion, on the left.

slight incline from the barn downwards, and it is left to the reader's judgment as to whether it should be erected low enough to allow of a covering of earth over the cement.

To throw the roots down, a manhole, two feet square, may be made in the roof. By raising the edge of the cement about the manhole slightly, and covering with strong plank door, protected with zinc, any wet that might soak through a covering of six inches of earth laid over all, will be shed. Some fill the approach-cellars with roots through windows at either side, or from door opening into basement passageway, but the trap is more convenient and speedy. The compartment can be ventilated through the windows in end and door into basement.

### Cultivating Quack-sod Without Plowing.

Editor "The Farmer's Advocate":

The article in your issue of May 27th, on fighting quack grass, contained a lot of information regarding the eradication of this troublesome weed, but, to my mind, needs a little revising to make it up-to-date.

Whether it is to my credit or not, as a farmer, I have had a good deal of experience in fighting this worst of all enemies of the Eastern Ontario farmer, and, in riding through this section, one would think, from the appearance of some farms, that there would have to be a fight between the owners and the quack grass as to who was to have possession of the farm.

Success in fighting quack, as in many other things, may be summed up in the word thoroughness. As an old farmer put it, it is dead easy to kill the first half, but the last half is the rub. There is nothing that quack delights in more than an occasional cultivating—just enough to keep it growing nicely. At this date, it is too late to say anything relating to the spring treatment of quack, so I will confine my remarks to after-haying conditions. I will assume that one has a piece of old meadow, more or less infested with this pest, that he wishes to eradicate in the easiest, speediest and most efficient manner. Don't plow. To my mind, this is a mistake; but, instead, go on with the King cultivator, or similar implement, gradually working down under the roots, and bringing them to the surface. About five or six times will suffice, or just about the time one would take in plowing, and when done you have your ground both plowed and cultivated. The trouble with plowing is that you loosen the ground, and when you go on with the spring-tooth cultivator the sods are apt to roll up in front of the teeth, causing no end of trouble. The difficulty in working a spring-tooth cultivator on quack is that, owing to the broad shanks, the roots gather on the teeth, causing both trouble and delay. After working as I have described, making sure that all the roots have been brought up and left on the surface, exposed to the scorching harvest sun and drying winds, the ribbers may be put on and the land ribbed, and left until after corn-cutting and root-pulling, when the fall cultivation would consist of more cultivating, and finally ribbing up for winter, to let the frost at any remaining roots. I might add that, in the first cultivating, if the land is very badly infested, and the roots get troublesome by clogging the teeth, put on the ribbers and throw the land in ribs, then the teeth won't clog; but, under no consideration would I recommend drawing off the roots, as, by leaving them on the land, you add considerable to the humus content of the soil, thereby improving its mechanical condition, as the one naturally follows the other. Above all things, be thorough. C. H. McNISH, Leeds Co., Ont.

### English Small-holdings Act.

There is a sharp conflict of opinion between Sir E. Strachey, who represents the Board of Agriculture in the House of Commons, and Liberal members, as to the workings of the new Small-holdings Act, writes an English correspondent.

The official view is that things are moving nicely, and that County Councils are active in providing land. The non-official view is not so rosy; the claim is made that laborers are unable to get land, and that many councils place all sorts of obstacles in the way of the acquirement of land. In some cases, boycott or eviction is said to have followed applications for land.

If no faster progress is made than has been done since the Act came into force, our friend concludes, many centuries must elapse before a peasant proprietary is installed. There is an insistent demand for a Minister of Agriculture in the Commons to look to the interests of agriculture. The official statement of the progress of land acquirement under the new Act is as follows: First six months (1908), 1,169 acres; second six months, 17,090 acres; next four months (1909), 41,754 acres; last six days, 1,169 acres.

### Back to the Farm.

By Martha Gilbert Dickenson Bianchi.

Back to the farm!  
Where the Bob White still is calling,  
As in remembered dawns when youth and I  
were boys;  
Driving the cattle where the meadow brook is  
brawling  
Her immemorial wandering fears and joys!

Home to the farm for the deep green calms of  
summer,  
Life of the open furrow, life of the waving  
grain—  
Leaving the painted world of masquerade and  
mummer,  
Just for the sense of earth and ripening again.

Down in the hay field where scythes glint through  
the clover,  
Lusty blood a-throbbing in the splendor of the  
noon—  
Lying 'mid the haycocks as castling clouds pass  
over,  
Hearing insect lovers a-piping out of tune.

Caught in the spell of old kitchen garden savors—  
With luscious lines retreating to hills of musky  
corn,  
And clambering grapes that spill their clustering  
flavors—  
Each in fragrant season filling Plenty's golden  
horn.

Off to the wood-lot where brier bloom runs riot,  
And wary forest creature no hunter's snare de-  
ceives;  
Virgin growth beguiling the solemn-hearted quiet  
With songs of winter fires a-ripple through the  
leaves.

Up to the bars in the twilight's soft reaction—  
Winding through the ferny lane to barns of  
stooping eaves,  
Welcoming at nightfall to simple satisfaction,  
When the reeling swallow her dusky pattern  
weaves.

Out in the dews, with the spider at his shuttle—  
In that half-dreaming hour that awakes the  
whip-poor-will  
And sets the nighthawk darting, sinister and  
subtle,  
E'er the full moon, complacent, loiters o'er  
the hill.

Back to the farm!  
With the friendly brute for neighbor,  
Where youth and nature beckon, the trust who  
would not keep?  
Back to the luxury of rest that follows labor,  
Back to the primal joys of hunger and of sleep!

### Clod Crushing.

In order to their best growth and development, plants, as is well known, require a finely-tilled soil, as they receive nourishment through their rootlets, and unless they have free course to ramify and spread in search of nutriment, their growth is checked and retarded, the result being a partial crop, where, with better preparation of the soil before seeding, a full crop might have been harvested. That, in some soils, and in some seasons, it is difficult to secure a satisfactory condition of the seed-bed, is admitted, and allowance must be made for such circumstances. We know that, on clay lands, in a spring like that of this year, when, in many sections, an unusually long continuance of wet weather prevailed, it was quite impossible to prosecute seeding operations satisfactorily, and it was simply a question of waiting beyond the usual seeding time.

While the foregoing is admitted, yet, in a drive through a district in which the soil is largely clay, one may have seen fields in preparation for seeding to corn and roots which may have been mismanaged by failure to use the roller and harrows immediately or very soon after plowing, instead of plowing a whole field, as is often done, and leaving the furrows to dry out and become hardened by the action of sun and wind, before other tillage is done, thus rendering the work of reducing the land to a fine tilth much more difficult and expensive of labor, if not impossible of successful prosecution, unless timely and sufficient rains come to the rescue. While waiting for rain, time is being lost, and the seeding may be too late for the possibility of a full crop, such as, if well managed, the same soil is capable of producing. Ordinarily, land left in the furrow for a few days after being plowed, dries out and hardens to such an extent as to require much more time and labor in rehabilitating it than is necessary if rolled and harrowed the day after it is plowed. And, besides this, by the time the soil is plowed, the moisture in the soil is retained, and the decomposition of any grass seed, or other

vegetable matter that may have been turned under, thus making it available as food for the coming crop. We are convinced that not nearly enough importance is attached by the average farmer to the value of the roller as a means of economical preparation of the land for seeding. Much time and labor of men and horses in harrowing and cultivating might be saved by the judicious use of the roller at the proper time. Clods make a miserable seed-bed. Their crushing is costly, and care should be observed to prevent, by timely measures, their formation.

### Shallow Drains in Clay Subsoil.

Editor "The Farmer's Advocate":

Tile-drainage increases the yield in all kinds of crops. Less cultivation is required to get a proper seed-bed. The land dries earlier in spring, therefore seeding is earlier, and tile-drained lands may be plowed in wide lands and no furrows need be run.

I have had experience only in draining a clay loam (6 in.) with a subsoil of clay (about 2 ft. 6 in.), then below that a hardpan.

The proper depth is about 24 to 30 in.; if the tile are put deeper draining is too slow. A 24-inch deep drain for 3-inch tile gives a covering of earth of 20 inches, which is deep enough to be clear of frost. Sixty feet apart is about the proper distance to place the drains.

The cost per acre for three-inch tile—704, at \$11 per thousand, delivered at railway station, \$7.75; 44 rods, at 20c. per rod for putting in and "blinding," \$8.80; approximately, for main drain tile, \$3; putting in and "blinding," \$2; making a grand total of \$21.55 per acre. Then there is the drawing of tile, spreading, plowing out trenches and filling in the trenches, which is usually done by the farmer himself, and which is rarely counted in the cost. However, if the cost of this is figured it will be about \$2.50 per acre.

"Blinding" means covering tile two or three inches with clay with spade, so the remainder of the earth can be thrown in with plow. Small stones falling in trench will not break tile then.

With fairly good seasons for untiled land, tiled land would pay for itself in about three years, but with unfavorable seasons (like the spring we are now having) tile draining is quite likely to pay for itself in one season.

About three inches of fall to 30 rods would be sufficient to make a good drain, and outlet should be protected with small iron rods (3-16 dia.), about 1 1/4 inches apart, to keep out muskrats and other small animals.

A three-inch tile is sufficient for lateral drains up to 60 rods in length, and a six-inch for main, reducing to five-inch, is sufficient for draining ten acres—the above with a fall of three inches to 30 rods.

A main tile through the center of a fairly level field, with smaller laterals emptying into it, is preferable to running several smaller tiles into an open waterway, because in the latter case there are too many outlets to watch and keep open and in a good state of repair, and if the open waterway is repaired or otherwise improved by teams the small outlets will, no doubt, be covered up and very hard to find, whereas one outlet to, say, 30 or 40 rods, can easily be kept track of.

I would advise doing the work as soon as the crops are harvested, if there is sufficient water in the ground to make it good digging, and enough water to draw the water level; if not then, then as early in the spring as possible.

I use the plow for the first 8 or 10 inches, then tile spades and scoop for balance.

One farmer here tried a big tiling machine for digging trenches this spring—drawn by four horses—but finally gave it up, finding it just as profitable to pay for putting in by hand; and, further, he had to go over a drain several times, in order to make the excavation deep enough. The horses made the wet ground too sad by so much tramping. JAMES CLAYTON, Kent Co., Ont.

G. F. Strawson has issued his tenth annual report on the spraying of grain crops for the destruction of charlock (wild mustard), writes our English editorial representative. Mr. Strawson claims that land free from charlock will yield from 25s. to 35s. more per acre for wheat than when infested by this pest.

As a result of long experimenting over a constantly increasing area, it is claimed that spraying does not injure the wheat, but benefits it in a marked degree; that the outlay is very small compared to the increased profit; that spraying is most successful when the weed is young and in soft fibrous, but good results follow even when the plant has advanced to the flowering stage, though later spraying means smaller wheat yield. Young charlock can be destroyed in wheat, without injury to the latter, by spraying with 50 gallons of 4 per cent solution of copper sulphate (15 lbs. to the bushel) per statute acre.

**Alfalfa in Dufferin County.**

"The importance of clovers and other legumes is being recognized in all parts of Canada. In many districts where a few years ago it was considered impossible to grow alfalfa, those who have tried it are now enthusiastic in their claims that it should be grown extensively all over the country. Several farmers in Dufferin County were interviewed by a member of 'The Farmer's Advocate' staff recently, and nothing uncomplimentary was heard as regards the value of alfalfa, either as a fodder for stock, or as a crop to benefit the soil.

In Mulhaur Township, Jas. H. McKee has seeded some land to alfalfa each year for three seasons, until he now has seven acres. Next year he will sow another five acres. His soil is clay loam over limestone.

"In 1907," said Mr. McKee, "I made a start with alfalfa by seeding down five acres that had been in roots the previous year. The land was in good condition and, I thought, free from weeds, but in preparing for that spring's crop, I suppose a fresh layer of weed seeds was brought to the surface, as these pests have since put in an appearance. I seeded down with barley as a nurse crop, sown about one bushel to the acre, but used only twelve pounds of alfalfa per acre. This, I find, is not enough. It is better to use twenty pounds. The extra cost for seed is not worth considering, when otherwise you have to wait a season or two for the crop to thicken. I also sowed broadcast behind the drill, and then covered the seed by using the drag harrow. I have since learned that it is best to have the alfalfa thrown in front of the drills. In 1908, and again this spring, an acre was sown in this way, and the results are much more satisfactory. Last summer I took a crop of hay off the 1907 seeding, but thin sowing and the prevalence of weeds gave me a comparatively light crop. I then pastured the five acres for the remainder of the season. A great improvement is noticeable this spring, but in places the stand was thin, so I put on some fresh seed. I didn't run the harrows over it, but I notice the seeds are germinating. I tried the disk harrow, but thought it was hurting the plants already established. The outlook now is for a heavy cut this summer, and when the bare places are filled in with the fresh seeding, I'll have as good as can be desired. I know my first cutting will be ahead of other hay crops.

"I have concluded that alfalfa is better than red clover, either for hay or pasture. Last summer, after the crop was cut, it was remarkable how fresh and green the alfalfa field was when grasses and clovers were dry and useless. The roots go so far into the ground that drought has little effect.

"When I say that alfalfa is superior to red clover, I do not wish to be understood to mean that the latter can be done without. The fact is that alfalfa should be left for a great number of years, and so cannot be worked into a general farm rotation of crops. Therefore, red clover cannot be dispensed with. However, alfalfa is just suited to our soil and conditions, and should be given a place on parts of the farm that can be left out of the rotation. For the first two sowings I treated the seed with nitro-culture obtained from the Ontario Agricultural College, but this spring the seed was not so treated, and I never saw a better stand. The fact is, I always get a better catch of alfalfa than of red clover. In 1907, all through this district, not one acre in five seeded to clovers was worth leaving, while six five acres of alfalfa, although seeded little more than half thick enough, was satisfactory. The same year, on similar soil, I hadn't five acres out of twenty-five seeded to red clover at the rate of six or seven pounds to the acre that was worth looking at. Alfalfa has come to stay on my farm. The crop improves every season."

In the southern part of the county, too, several farmers have given alfalfa a trial. George Lomas, of Amaranth Township, put in an acre on a sandy loam that had been overrun with native grass and used as calf pasture for two years. In 1907 mixed grains were grown on it, and in 1908 the acre was seeded to alfalfa, twenty pounds, without any culture, and with one bushel of barley as nurse crop. The barley was drilled in, and the alfalfa sown by hand, and buried by giving one stroke with a drag harrow. No clover of any kind had ever been grown on this land, and yet a fine stand appears this spring. On May 21st the plants were six to ten inches high, while, without digging, roots ten to fifteen inches long could be pulled.

"Yes, I am well satisfied with my experience with alfalfa," said Mr. Lomas. "I have eight acres on a hillside that has been in grass for fifteen years that will be sown to this crop just as soon as I can procure a good seed bed. I intend to break the soil, and sow to peas the first year. Then I shall summer-fallow, and sow rape late in the season. The following spring, 20 pounds of alfalfa and one bushel of barley to the acre will be used."

**Application of the Seed Control Act to Farmers.**

When the Seed-control Act was under discussion in the Dominion Parliament, a common impression was left on the public mind that the Act did not apply to farmers, and that they had the privilege of selling seed grain or small seeds to their neighbors for seeding purposes, with immunity, so far as the law was concerned. This conclusion was further confirmed by the careless reading of Section 5 of the Act, which reads:

"The provisions contained in the next following section shall not apply to the sale of seed that is grown, sold and delivered by any farmer on his own premises, for seeding by the purchaser himself, unless the purchaser of the said seed obtains from the seller at the time of the sale thereof a certificate that the seed is supplied to him subject to the provisions of this Act."

This exception applies not to the "following sections," as has been supposed by some, but to the next following section only (Section 6), which requires all dealers in seed grains, grasses, clovers, forage plants, to give their prospective purchasers information about the presence of any of the fourteen weed seeds named in Section 6, if they are present in the seeds in sufficient quantity to require a label. Section 5 says, in effect, that the farmers selling and delivering seeds on their own premises need not do this unless they sell the seed with a certificate that it is sold subject to the provisions of the Act.

However, when it comes to selling red clover, alsike or timothy seed it is quite different, and farmers cannot lawfully sell for seeding purposes seed that is any dirtier than that which can be handled by the seed merchants or seed dealers of this country. If such were the case, the law would be of little value in the seed-producing districts, for no headway could be made in checking the spread of noxious weed life, and it would be very unfair to the seed dealers.

In order to demonstrate that the law does apply to farmers in this respect, two representative cases have been tried in the courts recently, and in both cases farmers were fined for violation of the Act. In the one case, a farmer living near Newmarket had red clover seed for sale which he offered to a dealer in Newmarket. He was told he would have to take less than the price asked, on account of so much buckhorn being in the seed. The reply was that if he could not get his price, he would keep it at home and retail it there. One of the inspectors was informed of the circumstances, and went to this man's farm and bought some of the seed for seeding purposes. An official sample was taken in the proper way, and the Pommon Seed Analyst's report confirmed the suspicions of the inspector, and showed that there were eleven noxious weed seeds per one thousand of good seed, whereas five per thousand is the maximum allowed for red clover, alsike and timothy seed sold for seeding purposes in Canada. At the rate of contamination which this seed showed, any farmer sowing it at the rate of ten pounds to the acre would get approximately 36,000 noxious weeds per acre, not to say anything about other weed seeds not considered noxious.

The other case was of a farmer living in the vicinity of Brantford. An inspector found him on Brantford market with red clover seed exposed for sale. The purity was suspected, and the analysis of the official sample showed that the seed was being offered for sale in violation of the law, as it ran eight per thousand of good seed.

A farmer sowing such seed at the rate of 10 pounds per acre would get approximately 25,000 weed seeds per acre.

These two cases should dispel any doubts that seed dealers and farmers may have had as to the application of the law to farmers when they sell or offer for sale low-grade seed for seeding purposes. Of course, they can sell it to the trade for re-seeding, and its value will depend very largely upon the kind and quantity of the weed seeds present.

What farmers should aim to do is to produce clean, pure seed, for which they will not need to offer an apology. This can be done by care in using clean seed on clean land, and following this up with weeding in the field. The Seed Branch is always open to test farmers' as well as vendors' seeds free of charge, and not even a postage stamp is necessary to send an ounce or more of the sample, up to five pounds, through the mail.

We should also work together to check the further spread of weed life, even though we fail to exterminate it.

J. G. RAYNOR,  
Seed Inspector.

Japan has now 145 regularly equipped technical schools, including 201 devoted to agricultural arts.

**Turnip Culture.**

The time usually preferred for sowing turnips is from the middle to the end of June, but we have known an excellent crop secured from sowing as late as the twelfth of July. The lateness of the sowing of most crops this year, owing to the unusual wetness of the spring months, may in some cases delay the turnip seeding to a later period than usual, but this may not prove a disadvantage, provided the land can be properly prepared—that is, reduced to a very fine tilth—which is absolutely necessary to a successful germination of the seed and rapid growth of the plants. The best preparation of a field for turnip-growing is probably fall manuring and plowing. But if the manure is not available in the fall, it may be spread upon the plowed land as made during winter or early spring, or even spread in the open drills, the drills or ridges being then split to cover the manure. We have known capital crops obtained by the latter process. The ridges should be brought to a sharp point at the top, so that an even depth of seeding (about one inch) may be effected, after which the ridges may be flattened with the field roller, unless the drill is furnished with rollers following the seed pipes.

Two pounds of seed per acre is ample. Much less would be sufficient, but it is well to provide for a possible visitation of the turnip fly, and have enough and to spare. In clay land, it is preferable to sow after a rain, rather than before, as, when the land is very fine, a dash of rain, followed by sun and wind, is likely to cause a crust to form on the surface, preventing the tender plants from getting through. In such case the roller may be used to advantage to break the crust or so loosen the surface as to allow the plants to make headway. The horse hoe should be started as soon as any weed-growth begins to show, and should be run narrow the first time to avoid throwing earth upon the plants, but should be used the second time in a few days, and run as close to the row of plants as is safe. This not only to destroy weeds while young, but also to prevent dissipation of the moisture of the land, and to admit the air, both of which are essential to rapid growth of the plants and their getting too strong to be mastered by the fly.

Singling the plants, which should be done early, while the plants are in the second rough leaf, is done with the hand hoe, which should be about nine inches in width, the full width of the hoe being cut away with a stroke, leaving a space of about two inches, in which several plants are left, and these reduced to a single one with a square corner of the hoe, leaving, as far as practicable, the strongest plant of the bunch. The too-common practice of leaving the surface of the soil bare and hard between the plants should be avoided as much as possible, as such practice tends to dissipation of the moisture in the land, with consequent baking of the surface and starving of the plants. Rather leave a loose mulch of soil between the plants and around them to conserve the moisture, and thus hasten their growth. The idea that turnip plants are better—or, at least, not worse—for being knocked about in the process of thinning, and left lying prone on a bare, hard surface, is a great mistake, and, in a dry time especially, seriously handicaps them in their growth. The horse hoe can scarcely be too frequently used, especially during dry weather, and should certainly be used as soon after a rain as possible, to move the surface soil between the rows and as close up to the plants as is safe. This, also, to conserve moisture, as well as to keep down weeds.

**THE DAIRY**

**Siberian Cheese in British Market.**

In the Dairy Department of "The Farmer's Advocate," issue June 10th, page 958, appeared a brief interview with L. E. Annis, of Toronto, who spent last summer in Great Britain. In this article Mr. Annis was represented as saying: "Although Canadian cheese is popular in the Old Country, there seems to be a gradual falling off in the demand for our product. Siberia is coming in as a strong competitor. Conditions there are much like those in Canada, while land and feed are cheaper."

This statement was observed with incredulity by some of our dairy readers, who had no idea that Siberian cheese was becoming a factor of any importance in the British market. Search of statistics would seem to bear this impression out. The annual statement of the trade of the United Kingdom with foreign countries does not mention Siberian cheese at all. If there were any cheese imported from Siberia, it would be included under "Other Foreign Countries," and the amount of cheese imported under this heading for 1907 is 1,501 cwt. So that, if Siberia contributed any at all in that year, the amount must have been very small. The total export of cheese from Russia, as given by the Yearbook of the U. S. Department of Agriculture in 1906, was 1,733.

411 pounds. It is not stated just where this cheese was exported to, but it shows that the exports of cheese from all Russia at that time were very small.

Correspondence with Mr. Annis reveals the fact that our interviewer misquoted him by representing him as saying that there seemed to be a gradual falling off in the demand for our product, whereas it should have read, "in the supply of our product."

"The British people ask for our cheese in increasing quantities," adds Mr. Annis, but, as the supply does not keep pace with the demand, the consumer, rather than do without cheese, takes home other cheese, and Siberian is, therefore, getting a footing, and must be taken into consideration."

### Larger Milk Yields Possible.

Why should cow-testing be carried on? Mainly because individual cows in the same herd are likely to vary in production about as much as—sometimes much more than—individual cows in different breeds. Then, too, must be considered the strange variations in milk and fat from day to day, even with a cow handled as carefully as possible. Such variations are very apt to be overlooked, unless the record is carefully kept. Another point: Two cows stand side by side; one gives 20 pounds milk a day, or 10 pounds at a milking; the other gives 9 pounds. The difference in weight, or the difference in bulk in the pail, especially if there is a lot of froth on top, is not easily gauged by the ordinary milker. But multiply that by the 300 days of a milking period, and it is seen that one cow gives 600 pounds more milk than the other. Yet, the ordinary milker would have said, "These two cows give just about the same." But is not the extra 600 pounds worth having? Many members of the cow-testing associations say that the hired man milks better, with more endeavor to milk clean, if the record hangs before him constantly, and an extra 500 pounds per cow has often been obtained since the introduction of the pencil and ruled sheet. Try it, not simply for the extra milk or fat, but for the immense personal satisfaction in knowing that each cow is being made to do better—to do her best. C. F. WHITLEY.

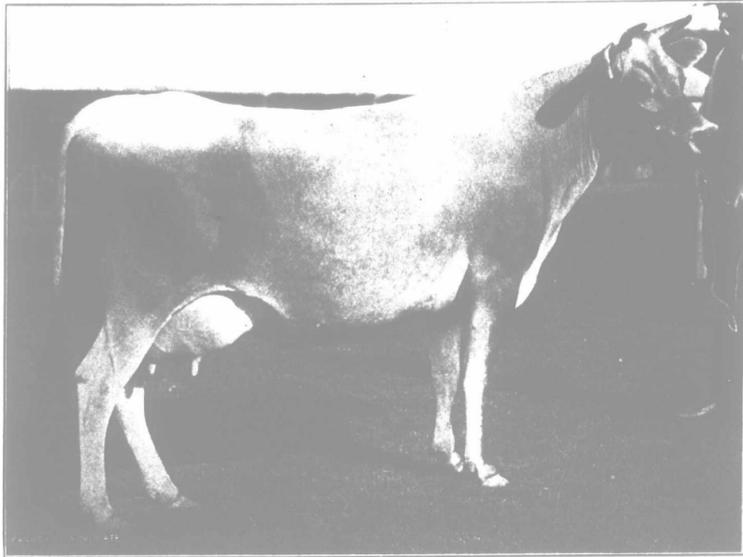
### Thamesford Cheese Factory.

In the year 1883 a joint-stock company took out a charter for the manufacture of cheese and butter. The company bought a factory which had been operated on Harris St., south of Ingersoll. This building was taken down and moved up to Thamesford, and the business of cheesemaking was carried on under the company for about twelve years. The company made several mistakes. For instance, they went and bought wagons for the milk-drawers, which turned out to be an unprofitable move, and ultimately the wagons were sold, and the drawers allowed to furnish their own wagons. Quite a number of people had taken stock in the company who were not patrons, and these expected their dividends regularly. So it was decided to sell the factory to a cheesemaker who would run the business on his own responsibility.

In the year 1895 the factory was put up at auction, and was purchased by Chas. Jenkins, a practical cheesemaker, who has made cheese every year since, to the great satisfaction of the patrons. The curing-room of the factory was a two-story building, large enough for a barn, but very unfitted for curing cheese in hot weather. In 1907 Mr. Jenkins sold this building to a farmer, to be used as a barn, and he built a complete new factory of cement and cement blocks. The full size of the building is 101 x 38 feet, with an engine-room 16 x 26 feet. The make-room is 38 x 65, and there is room for six vats. The weigh-porch is on the south side, and there is a roof over the team that is unloading. The boiler is built in such a way that it is frost-proof, and the water keeps warm from one day to another, so that it is easy to get up steam, and the fuel bill is very little more than half what it was before. To the north of the make-room there is a fully-equipped cool-curing room, 26 x 38 feet, where the cheese is cured. There is an ice-chamber to the north of this curing-room, 10 x 38, which is filled with ice every winter, and by means of this ice-chamber the temperature in the curing-room can be kept down to fifty degrees in the hottest weather. The ice is never taken out of the ice-chamber, but there are slides between the ice-chamber and curing-room, by which the temperature in the latter can be regulated to a nicety. The whole building is laid with cement floor, which is easily kept clean. The make-room is well lighted, and the ceiling is 10 feet high. The roof is flat, and is of tar-gravel. To the north of the ice-chamber is a frame dwelling-house, where one of the hands who work in the factory lives, and he boards the other hands. The total cost of the new factory was

about \$4,000. The patrons of the factory are much better satisfied with the way the business is conducted as a private enterprise, than they were when it was conducted as a joint-stock company, for Mr. Jenkins, the proprietor and maker, is a thoroughly capable man, and is also a good cheesemaker and a good business man. Quite a large number of the patrons haul their own milk, and the cheesemaker would much prefer if they would all do so.

At the annual meeting, held some time ago, the auditor's report showed that 3,787,085 pounds of milk had been received during the season of 1908, from which had been manufactured 310,350



Hasty.

Winner of first prize and the Blythwood Bowl for best Jersey cow in milk, at Oxford, England, Show, May, 1909.

pounds of cheese, which was sold for \$39,700.84, the average price being 11.66, and the ratio 11.12, the net return to patrons who hauled their own milk being 95½ cents per 100 pounds. There were about 90 patrons. The whey is returned to the patrons in the milk cans, without being pasteurized. The milk has been paid for by the result of the Babcock test, plus 2 per cent., since the year 1899, and has given pretty general satisfaction. At this annual meeting, only four patrons voted to return to the old method of pooling the proceeds. The patrons of this factory are getting more into Holstein cows, and are generally doing very well. The largest patron, who owns 300 acres, received \$1,780.39 for his milk. One farmer, who has only about 110 acres, received \$954.90. Quite a large number of patrons who work 100-acre farms received from \$200 to \$860 for their season's milk. And when we remember that the most of these would sell from \$500 to \$1,000 worth of hogs, we see that this system of dairy farming pays pretty well. Of course, very few farmers here sell any grain, except, perhaps, two or three hundred bushels of wheat. We forgot to mention that one 50-acre farmer drew \$426.20 for his season's milk, and two years ago he went over the \$500 mark. One 100-acre farmer, whose farm is not considered good, got over \$600. D. L.

thereby get exercise, which is needful for a laying hen. Sunflowers make a good shade, and don't forget the dusting box.

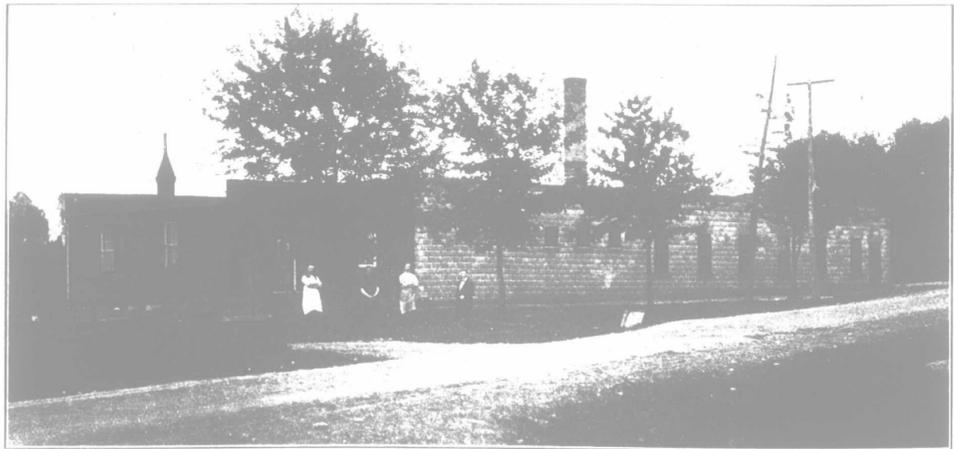
Many poultry-keepers pen their hens up in a bare yard, giving them any old kind of a shed to roost and lay in, and then wonder why their fowls are always ailing.

Make a frame of chicken wire and place over the drinking pans, and the water will be kept clean. Rub insect powder into the hen's feathers once every little while. Handle a pure strain, if possible. Have a good grassy range in summer, and plenty of straw in winter; clean house, good ventilation, fresh water, sand or grit around the place, and the fowls will always be healthy.

St. James, Man. MRS. H. M. JOHNSON.

To clean up a poultry house thoroughly, it must first have been built properly to lend itself to cleaning in a time-saving manner. The walls should have as few and small intricacies as possible, and roosts, nests, water-shelf and other fittings should never be fixed to the building, but attached by clips, hooks, or in other manner, so as to be readily removed and carried outside, where they can be emptied of all contents, and completely cleaned.

A. B. SMITH.  
British Columbia



Cheese Factory at Thamesford, Oxford Co., Ont.

View from north-west corner. In the foreground to the left is a frame dwelling house covered with metallic siding, which makes it resemble the cement block work. Weigh porch is at the south end, and the wheel tank just east of the dwelling house. Mr. Jenkins, the maker, stands on the left, the other being helpers. One of Oxford's best dairymen stands in front of the factory.

## POULTRY.

### Whitewash Recipe and Other Pointers.

A movable floor in the poultry house goes a long way in helping to keep the poultry clean. Our floor is built in four sections, with holes bored to allow a fresh current of air to pass through, without being drafty. I took the floor out once a week, scrubbed it, put it in the sun to dry, placed it into position again, with a good layer of sawdust and chaff. The floor was built three inches above the ground.

The poultry house should be lime-washed out about once a month during the summer. Prepare the lime-wash this way: Slake half a pail of lime with warm water; put half a cup of disinfectant fluid, such as one uses to keep the dairy clean, or carbolic acid; throw in half a block of salt, and thicken with ground rice. Scrape all perches thoroughly, as lice have a habit of hiding in cracks. Turn all nests out, giving the whole interior a good lime-washing. Open the doors and lids of the nests, and let the sun do the rest.

As for the surroundings, lots of green stuff growing is essential. The hens will pick around this, and

thereby get exercise, which is needful for a laying hen. Sunflowers make a good shade, and don't forget the dusting box.

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A. B. SMITH.  
British Columbia

### A Spring Egg Yield.

Editor "The Farmer's Advocate":

Thinking my little experience might be of interest to other young farmers and poultrymen, I pass it on. On April 14th, 1909, I bought nine Barred Plymouth Rocks—one cockerel, three yearling hens, and five pullets. I don't know how they laid during winter months, as they were in a large flock. In the remainder of April they laid 130 eggs, and no hens were broody. In May they laid 166 eggs, and two hens broody. I set one of them May 8th, and one May 12th. Out of 24 eggs set, I got 22 chicks and two clear eggs.

For feed for hens, I fed such as I had in equal parts, by measure, goose wheat, barley and oats, about six handfuls to a feed, morning and evening, in about six inches of straw. I fed a little mash every day at noon, as the birds seemed to look for it; it was composed of the above grains ground. I fed about a pint of the meal, with the addition of a handful of oil-rake meal moistened with any kind of milk, and seasoned with a little salt. I find my closest feathered, longest-bodied and deepest-breasted birds lay most eggs.

Wellington Co., Ont. GEO. MCKAY.

### Preserving Eggs in Water-glass.

Perhaps the simplest and best means of preserving eggs for autumn use is to put them away in water-glass (sodium silicate). Water-glass is a substance resembling honey in consistency, and is of two kinds, English and American, the former being much thicker. Dilute the water-glass with boiled water (cooled) until it will allow an egg to sink. This will usually require about one part of American water-glass to seven parts of water, or one part of the English silicate to twelve of water. Place the solution in a tub, in which the eggs are immersed.

As unfertilized eggs keep better than fertile ones, do not allow males with the laying hens. Collect the eggs daily, and keep the nests clean, so the shells may not become soiled. Put into pickle no eggs not known to be absolutely fresh, and be sure that each egg is completely immersed throughout the whole period of preservation. It is better to keep the tub of eggs in a cool place.

With the foregoing directions carefully followed, the water-glass method will, at a cost of about a cent a dozen, preserve eggs four to six months in a condition quite good enough for use. Beyond that length of time results are not so reliable, although, in some experiments by the Aberdeen and North of Scotland College of Agriculture, eggs kept in water-glass four years were preserved in a condition not unsuitable for culinary purposes. Eggs immersed in water-glass come out looking fresh, with a clean appearance, after the chemical is washed off them.

The following changes in the classification of the Poultry Department have been made for the next Provincial Winter Fair, to be held at Guelph, Ont., on December 6th to 10th, 1909. In addition, there are a few alterations in the classes for three or four of the non-utility breeds:

The class for Polands, Buff Laced, was changed to read, Polands, Buff Laced, Bearded.

Sections were added to the sale class for Rhode Island Red male, and for Rhode Island Red female.

## GARDEN & ORCHARD

### Early Spraying With Lime-sulphur Prevents Curl Leaf.

Editor "The Farmer's Advocate":

We use the homemade lime-and-sulphur solution for peach-tree curl-leaf—17 pounds sulphur, 22 pounds lime, to 40 gallons water, boiled 45 minutes, and sprayed on trees just before the buds burst; for, as soon as growth begins in the tree, the fungus which causes the leaf to curl starts to grow, providing the weather is favorable for fungous growth.

We have one orchard that was very wet, so we could not get on the ground with the sprayer until the leaves had begun to grow. That orchard shows considerable curl-leaf. We also have two trees in one orchard that was not sprayed at all that are completely covered with curl-leaf, while the rest of the orchard, which was sprayed early, is practically free of the disease. We consider spraying thoroughly from 1st to 25th April will be sure preventive of curl leaf.

J. W. SMITH & SONS,

Wentworth Co., Ont.

Enclosed you will find \$3.00, payment of subscription to "The Farmer's Advocate" for 1909 and 1910. About the only excuse I can offer for late remittance is neglect, and that it may not occur in the same way next year, I remit the amount in advance. It is certainly too good value for the money to do without.

Lennox and Addington Co. F. P. INSTANT

### Co-operative Fruit-growers Hold Annual Meeting.

The annual meeting of the Co-operative Fruit-growers of Ontario was held in Toronto on June 15th. The attendance was not as large as it should have been, considering the importance of the co-operative movement and the need for closer relations and a pulling-together, on the part of the local fruit-growers' associations. The local organizations represented at the meeting were: Forest, Georgetown, Norfolk, Oshawa, St. Catharines, Clarkson, Newcastle, Cobourg, Wicklow, Brant and Sparta. There are thirty-seven co-operative societies in Ontario, so that less than one-third sent a representative to the central gathering.

#### GOOD YEAR FOR CO-OPERATION.

The President, D. Johnson, of Forest, in his address, stated that the year's report regarding the progress of co-operative fruit-growing was much more favorable than a year ago. The financial depression of a year ago affected many weaker associations, and several had gone out of business. Last fall was a very favorable one for the co-operative societies. Good prices had been received for all the fruit, and he felt safe in saying that the co-operative associations had received fully 50 per cent. better prices for their fruit than ordinary growers did. Co-operation did away, to some extent, with the middleman, which helped to increase the price to the producer. The outlook for co-operation was much brighter than it had ever been. He commended very highly the weekly reports regarding the markets and the output sent out by the secretary to the affiliated associations.

The report of Secretary P. W. Hodgetts showed that there are thirty-seven co-operative associations in Ontario, five of which are new. An instructor in packing apples had been sent out by the Government last fall to assist the local associations. His work had proven very satisfactory, and the number of instructors would have to be increased. Legislation had been secured allowing the co-operative societies to buy and sell to their members all chemicals used in spraying, except white arsenic.

#### PACKING INSTRUCTOR'S REPORT.

The report of Instructor Backus, which was read by the secretary, covered the work very fully. He stated that there was too much ground to be covered thoroughly by one man, and advised the appointment of additional instructors this season. He had found that outside buyers endeavored to break up the membership by circulating all kinds of reports detrimental to co-operative work. This seriously affected the weaker associations, which found it difficult to retain their membership. He strongly recommended the central packing-house, in preference to packing in the orchards. The pack was more uniform, and more in accordance with the requirements of the market. The packers employed by local associations, with two exceptions, were doing better work than the average outside packer. Though about all of the associations were doing honest packing, many did not know what was required in packing fruit according to the Fruit Marks Act, and to get the best return on the market. There was a tendency to put up more No. 1's than the quality of the fruit would admit. It is better to have a uniform pack of good No. 1's than a lot of poor No. 1's. He found a few packers who thought they knew all about packing, but their knowledge of what was required was very meagre indeed. The packer must use more judgment in his work. The use of a distinctive brand was one of the best advertisements the Associations could have. The proper management of orchards was a large secret of success. He found that the Associations which had faithfully followed spraying, pruning and proper cultivation were the ones which were packing the most No. 1's. A few associations thought spraying was of little use.

Mr. Backus closed his report by giving in detail the actual conditions which he found at the associations visited. Some of the details, for obvious reasons, could not be made public.

#### MORE INSTRUCTORS WANTED.

On motion of Robt. Thompson, seconded by Jas. E. Johnston, the following resolution carried: That, having heard the report of the instructor in packing, this meeting would recommend to the Government that two additional instructors be employed this season, and an instructor in box-packing, as well.

Considerable discussion took place on the question of box-packing. There is a growing demand for first-class fruit packed in boxes. Nothing but No. 1's should be packed in this way. The advisability of securing a man from Oregon or California, where box-packing is made a specialty, was discussed. A suggestion of Mr. Thompson's, that O. A. C. students, who are making a specialty of the fruit business, be trained for this work, met with considerable favor. By sending such men to places where they would get a thor-

ough training in box-packing, they would be able to assist the associations in this work as effectually as if outsiders were brought in, and the cost would be much less.

#### INCORPORATION.

The most important matter discussed was that of securing incorporation for the central body. A stage had been reached where it was necessary to secure incorporation, if the central body is to continue to do effective work. It would then be able to buy spraying and other material in large quantities, and distribute it to the local associations at much lower prices than they are now paying. The saving in this particular was estimated at from 10 to 50 per cent. Not so much enthusiasm was shown as a year ago, in regard to the central body acting as selling agent for the local associations. In response to a letter sent out by the secretary last season on this question of selling, the larger majority of the associations stated that they preferred to manage their own business so far as the selling end was concerned. As to the buying of material, etc., a different view was expressed, and incorporation would be worth while on this account alone.

In this connection, the meeting discussed the advisability of taking over the charter of the Niagara District Fruit-growers' Stock Co., which is a Dominion one, obtained thirty years ago, and allows for carrying on business outside of Ontario and the establishment of selling agencies in Great Britain. The Niagara Company, which has done valuable work for the fruit-growers of the Niagara Peninsula in the past, finding that the work it has been doing is not needed to-day, is prepared to give up its charter. The company is being wound up, and has already ceased to do business. While the representatives were favorable to taking over this charter, it was found that it would cost a great deal more to do so than to obtain a new Provincial charter, which would serve their purpose just as well. It was finally decided to apply for incorporation under a Provincial charter, and the new executive will proceed at once to obtain incorporation.

A rather difficult question was to decide upon the size of the shares. To secure incorporation, it will be necessary for at least ten of the local associations to take shares in the central organization. Some thought the shares should be \$100 each. Others thought \$50 would be large enough. This matter was left to the executive to work out, and to make a proposition to the local associations.

#### FRUIT-CROP REPORTS.

One of the advantages the affiliated associations have had from the central body for the \$5 fee paid in has been the weekly reports sent out by the secretary. These were sent out last year, beginning in July, and were continued till the close of the season. The plan adopted is to obtain from the various associations reports as to the condition of the fruit, the amount each would have for sale, the amount already sold, and any other information that would be of value in disposing of the crop. These reports were compiled by the secretary, and, in condensed form, sent out again to the associations. In this way, one association knew what every other association was doing, what prices were being paid, the amount of fruit in the country, etc. Representatives spoke highly of the value of this information, and the pains taken by Mr. Hodgetts in preparing the reports. These reports are not given to the public, and no one but the affiliated associations receive them.

In the past they have been confined to apples. There is a demand for the same thing from the growers of tender fruits, and, on motion of Jas. E. Johnston, seconded by Elmer Lick, it was decided to have the reports cover tender fruits, also, and have them sent out as early in the season as possible.

#### MORE COLD STORAGE WANTED.

Reference was made by some representatives to a statement made by a member of Parliament at a recent Farmers' Institute meeting, that the Dominion Government should guarantee 5 per cent. interest on investment in cold-storage plants. A strong feeling was expressed that something more tangible should be done than is being done to assist in building cold storages for the handling of fruit. The British Columbia Government has recently passed an act providing for a Government guarantee up to \$3,000 of the cost of erecting cooling plants and receiving depots for fruit. There is a desire for something of this kind in the other fruit-growing centers of the Dominion.

Robert Thompson, St. Catharines, whose association has had a cold-storage plant in operation for many years, pointed out the advantages to be derived from thoroughly cooling fruit, especially early fruits, before they are shipped. The plant at St. Catharines cost about \$10,000, and the expense of running it about \$500 a year, exclusive of help. He estimated that a suitable plant for cooling and storing fruit could not be erected for less than \$5,000. The cost of the

refrigerating machinery alone would be about \$3,000.

#### FRUIT INSPECTION.

The local co-operative associations want more thorough inspection under the Fruit Marks Act. It was moved by Mr. Barber, of the Georgetown Association, seconded by Mr. Pearce, of the Sparta Association, and carried, that fruit inspection in the neighborhood of the local associations be made more strict, and that inspectors visit these districts more often than they have done in the past.

Several representatives reported that buyers of fruit outside of the associations have been packing all kinds of stuff. This is especially true where orchards are bought up. Packing in these cases is usually bad, and not in accordance with the requirements of the Fruit Marks Act. This fruit is shipped out of the country, and much of it reaches its destination without being detected. Local associations that are endeavoring to put up an honest pack, find it difficult to retain their membership where conditions like the above prevail.

#### SELLING AGENTS ABROAD.

Mr. Barber proposed that something should be done in the way of securing reliable agents in the leading fruit markets of Great Britain and elsewhere to handle the fruit put up by the co-operative bodies. This brought out considerable discussion. As already stated, the local organizations do not favor the central body acting as selling agent for the local associations. If, however, the central body could select reliable parties in the leading markets that the associations could with confidence do business with, it would be a great help.

In California, the president stated, fruit exchanges handle the fruit for the local associations, and the plan has worked well, resulting in a more uniform price being received.

Mr. Lick pointed out that letters received from buyers in leading markets spoke favorably of the co-operative plan of packing and selling fruit.

Mr. Thompson, speaking of shipments of early fruit to Great Britain, stated that they had not been very satisfactory, so far as his experience was concerned. He thought there was an inclination on the part of the trade there to take advantage of the situation, and not give the shipper his just due. Judging from the very satisfactory reports received from shipments of the same fruit sent to private parties, as to the condition in which it arrived, he was inclined to think that the trade did not report fairly as to the condition in which the regular shipments arrived.

It was finally decided to have the secretary find out the names of reliable dealers, and send these to the associations, and also send a list of the co-operative associations in Ontario to reliable dealers in the Old Land and elsewhere. It was pointed out that the fruit trade in Western Canada is gradually being corralled by one firm, a branch of an American firm. This firm's methods of doing business are said to be not of the highest character. An effort will be made to reach the independent dealers in the West.

#### AN ASSOCIATION BRAND.

The last topic discussed was that of having a uniform brand issued by the central body that could be used by the local associations on all fruit packed by them. As such a brand could only be of value if used under restrictions as to the quality of the fruit and the kind of packing done, it was decided to defer action until incorporation was secured, when regulations governing the use of the brand could be enforced.

#### AUDITOR'S REPORT.

The auditor's statement showed receipts from affiliated societies totalling \$95. Expenditures totalled \$30.15, leaving a balance on hand of \$64.85, as compared with a little over \$18 last year. On motion, \$50 was voted to the secretary for his services.

The old officers were re-elected, as follows: President, D. Johnson, Forest; 1st Vice-President, Robt. Thompson, St. Catharines; 2nd Vice-President, Jas. E. Johnston, Simcoe; 3rd Vice-President, Elmer Lick, Oshawa; Secretary-Treas., P. W. Hodgetts, Parliament Buildings, Toronto; Auditor, C. W. Gurney, Burford.

#### Spraying for Peach Leaf-curl.

Editor "The Farmer's Advocate":

The curl-leaf certainly has been worse this year than it has been for many years. Many growers—in fact, I should say 75 per cent. of the growers—were unable to get on their land to spray at the proper time, but it appears that those trees that were sprayed with lime and sulphur are badly affected, if of varieties that are greatly subject to curl-leaf. I have heard of one man who sprayed with Bordeaux mixture after the leaves expanded who has no curl-leaf. We really should have a meeting of growers to discuss this matter. So far, it is largely hearsay as to whether lime and sulphur has been of any use this year or not. I know of one large orchard in Ontario that was

sprayed, that is almost useless, so far as any crop this year is concerned, the leaves looking as if they were scorched and shrivelled. The Crawford type of peach, which is not easily affected by curl-leaf, will probably give us our crop of peaches this year. I think consumers need not look for a heavy crop and low prices of either peaches, plums or pears, but only a moderate crop of each.

Wentworth Co., Ont.

E. D. SMITH.

#### Eye-spotted Moth of the Apple Tree.

"A Constant Reader," Durham Co., Ont., has sent some twigs from his apple trees, which are being badly injured by a small caterpillar. Both leaf and blossoms are destroyed, they being tied together in a mass and devoured by the worm which takes shelter amongst them. This little caterpillar is about one-half an inch in length when fully grown, dark brown, with a black head and collar. It will soon have completed its larval growth, and will then form its chrysalis, out of which a small moth will come about ten days later. The moth is ashen-grey in color, with a milk-white blotch across the middle of each of the fore wings, and two minute, eye-like spots, one near the tip, and the other at the hind angle of the wing. From these spots it gets its name. Our correspondent wishes to know the best method of destroying these creatures, and states that he has gone through his orchard and pulled off both leaves and blossoms that are affected. This is, no doubt, a very excellent plan, if the worms are destroyed by burning or crushing under foot, but it is somewhat laborious. Usually speaking, the spraying for the codling worm, before the buds open, and after the blossoms fall, is effective in destroying these worms; but if no spraying has been done, it will be well to resort to that now. However, before very long the course of the creature will be run, and they will disappear. They do not usually attack anything but the terminal leaves and buds or blossoms, and do not strip the entire foliage from the limb, as some of the larger caterpillars do. Next year it will be advisable for our correspondent to use a strong Paris-green wash for spraying about the first of May and a week or so later, before the blossoms are opened. With this might be combined Bordeaux mixture, for the destruction of fungous diseases.

He also desires to know how best to destroy the aphid on currant bushes. Usually speaking, the various kinds of plant lice can be got rid of by spraying with kerosene emulsion, or a wash made of whale-oil soap. It is difficult, however, to apply either of these to the aphids on the currant bushes, because they are on the under side of the leaves. Their attack produces a blistered or warty appearance on the upper side, and in the cavities thus formed the aphids are feeding below. It will be necessary, therefore, to have a bent nozzle, and spray from the surface of the ground upwards, in order to reach the lice.

C. J. S. BETHUNE.

Ontario Agricultural College.

#### Ventilated Apple Barrels.

There is need in this country for a ventilated apple barrel, such as they have in many of the fruit-growing districts of the United States. Such a barrel is especially needed for the earlier apples. Fall apples, packed during the warm weather in the ordinary barrel, will not keep so well as in a ventilated barrel.

At the Co-operative Fruit-growers' Meeting the other day, the question was discussed in an informal way. Ventilation of barrels, by boring holes at either end, was found not to be effective. Barrels, when stored in the warehouse, or on board vessels, are placed on their sides. Ventilation of the ends is, therefore, of little use in creating a circulation of air through the barrels. The ventilation must be such that advantage can be taken of the perpendicular circulation of air in any building or compartment. Warm air ascends, and cold air descends, so that the current is commonly up or down. Openings in the staves just at the bilge are found to be the best way of ventilating barrels. If, say, four staves in a barrel have an opening about an inch deep and several inches long cut out, there would be plenty of circulation through the fruit when stored. This could be done at little additional cost, and the barrel would be worth considerably more for carrying apples. Barrel manufacturers should take this matter up. The Norfolk County Association will try ventilation of this kind this season.

At the Ontario Fruit-growers' Convention, last fall, Joseph Twozelle, of Wentworth Co., told of his experience in ventilating apple barrels by boring two half-inch holes near the edge of four of the staves, one hole of each pair being on either side of the bilge. The inner edge of one stave was split out, leaving four such slots, one on each side. Apples shipped during warm weather

in these ventilated barrels arrived in the pink of condition, while fruit shipped in unventilated barrels did not land in nearly such good condition.

Growers are finding it more difficult every year to procure the right kind of barrels. Suitable timber is scarce, and some pretty poor stuff is put into barrels. Growers who are catering to the best trade would sooner pay 50 cents each for good barrels than use some of the trash that is being used, at half the cost. A good barrel nowadays cannot be produced and laid down for less than 40 cents each. This adds considerably to the cost of the fruit. But it pays to buy good barrels, even if they cost more than this. A well-made barrel, that will stand the strain of loading and unloading, and look well at the end of the journey, will help to sell the fruit.

The bulk of the apple barrels are made with a nine-sixteenth bilge. Jas. E. Johnston, of the Norfolk Association, is making all his barrels this season with a five-eighths bilge. He claims this gives a better-looking barrel, though it costs a little more to manufacture.

Growers present at the Co-operative annual meeting reported prospects good for fruit. In some sections the crop of Baldwins will not be as large as last year, and in a few districts the fall fruit may not be so plentiful. But, generally speaking, the outlook is good. W. J. W.

The Massachusetts Crop Report for May states that the Gypsy and Brown-tail moths are evidently extending their areas in that State.

## THE FARM BULLETIN

### Oxford Co. Farm Notes.

We have just gone through our fall wheat, pulling out the yellow docks and cockle, and now I think our wheat is as clean as any at the College. There is straw enough to carry forty bushels an acre, if we get favorable weather when it is in the milky stage. It was sowed 1 1/2 bushels to the acre, but I believe it would have been better a little less, as it is too thick. Our barley is looking splendid, but the oats are not so good. Part was sowed early, and part after the rain was over. We had a wonderfully wet season this spring, and the majority of farmers were very late in finishing seeding. Clover is doing splendidly, and will in all probability be a very heavy crop. We sowed some alfalfa, and it is doing well. Pastures are very good, and cows are milking fairly well. Our mangels are doing splendidly, and will soon be fit to thin out. The corn is up nicely, but quite a number of farmers have only finished sowing and planting. Young toads are doing pretty well, and there are quite a large number of mares being bred, mostly to Clydesdale horses, in this part of the country. There seems to be a good many complaints about the infertility of eggs this season. Some farmers are getting very few chickens. We have just turned out our heifer calves; the oldest is four months old, and the youngest a little over two months. They are in a good shady pasture, and we won't give them any more milk—just a little chop and bran twice a day; they are good feeders, and eat heartily. Live hogs have reached a great price—\$7.60, D. L. (Note:—This item, intended for last week's paper, was held over, owing to pressure of space. —Editor.)

### Special Work by Prof. Shaw.

Readers of "The Farmer's Advocate" will be interested to learn that Prof. Thos. Shaw, so widely known as an agricultural educationist and author, is at present engaged in a special line of Farmers' Institute work in North and South Dakota and Montana that promises important and far-reaching results in the farm practice of those States. From among the leading farmers whom he will meet at the Institute gatherings or personally on their farms, he will secure a corps of experimenters who will undertake the cultivation of clover, alfalfa, winter wheat, and the Canadian field pea, according to approved methods. The results of these demonstrations will be gathered subsequently by Prof. Shaw, and published for the general benefit, while, at the same time, each farm so engaged will be an object lesson in its own locality.

The Chief Sanitary Inspector of Chester, Eng. Land, estimates that, in spite of prohibitory laws, London pays £70,000 to £80,000 per annum for water in milk. Dealers risk the chances of detection. London pays about £1,500,000 a year for its milk supply. The inspector claims that the price paid to farmers for milk are too low to insure the production of a pure article. It is a sad state of affairs. High prices will not insure pure milk, unless a dishonest dairyman nor will low prices induce him to adulterate. It is a sad state of affairs for all.

### P. E. Island.

The middle of June, and fine weather at last. The spring months have been cold and backward. Our season is a week later than last year. We had a lot of rain in April and May, but since June came in it has been very dry. Hay meadows are backward, and in some cases thin, though we see some very fine fields of clover. From present appearances, the hay crop will not be nearly up to last year, and if we do not soon have rain it will be very much less. Grain crops have started well, and promise a good yield, if weather conditions suit. The crop is now all in, except turnips, which are occupying our attention. The extra duty on potatoes, resulting from the new American tariff, will result in a less acreage of potatoes being planted, and more roots being grown.

Fruit trees are just now in full bloom, and the promise is for the biggest crop of apples for some years. Plums, also, are making a good showing so far. A. McNeill, Chief of the Fruit Division, Ottawa, comes to the Island in a few days, and will address meetings in each county.

Cheese factories are all open now, and are doing a little better than is usual in the month of June. The high price of cheese is stimulating milk production, and milch cows have generally been well wintered, and are ready to do their best.

The markets here are the best we ever had for farm products. Since navigation opened, oats have sold for over 50 cents per bushel, and now they have gone up to 60 cents at some shipping ports. Potatoes sell at about 35 cents a bushel. Horses are higher than ever known here, and are being bought up and shipped in large numbers, at from \$175 to \$225 for draft, and from \$150 to \$250 for good drivers. Eggs, which are a very large and profitable article of export at this time of the year, have never gone below 16 cents this season. Beef and pork products are also high in price. Last year has been perhaps the most profitable one that P. E. Island farmers ever had, and things look promising for the future.

Wild fruit promises an abundant crop, and cultivated strawberries have come through the winter well, and promise a good yield. The wild bees, which have been so exceedingly scarce for some years, are here this spring in greater numbers than ever. W. S.

### South Ontario.

Spring seeding has been very backward, especially the latter part, owing to the wet season, but since finishing seeding, no rain of any consequence had fallen until the 11th of June. This will make rather a light crop of hay; there is plenty of undergrowth, but, with the exception of low land, there is little top. Corn is mostly all in, and the crows are doing their best to destroy the crop, and are succeeding better than usual. Many more silos are being built this year than usual; cement and stave are used; owing to the decrease in price of Portland cement (about \$1.50 per barrel, in bulk), a cement silo can be built almost as cheap as a stave. Much interest is taken in steel for the material, but as yet steel is only an experiment, and none care to risk it.

The apple crop promises fair, with the exception of Baldwins. The Oshawa Fruit-growers' Association handle many of the orchards, and they are doing a grand work, and giving the best of satisfaction. There is talk of forming an association for handling hogs and cattle on the same principle as the above company handles the fruit, but this is not so badly needed, as we get a fair price now.

Hogs are very scarce; very small interest is taken, even considering the price; the farmers claim feed is as high, accordingly, and very hard to get, which will leave a small profit, if any. We are pleased to see the Government is about to send a deputation of farmers to Europe to investigate the hog industry. This will undoubtedly awaken more interest in the hog, as we are confident there is money in hogs when properly managed. The quality of live stock is gradually increasing; almost without exception, only pure-bred males are used.

Manure spreaders are quite common. Personally, I believe their value is overestimated, still they are a useful machine to the man who does not draw his manure direct from the stable to field.

The supply of farm laborers about equals the demand, while good wages are paid, and who is more deserving of it? F. H. WESTNEY.

Ontario Co., Ont.

Sir Robert Perks, the British capitalist and contractor, has left for England, after a final interview with Sir Wilfrid Laurier, in which the latter told him that for this year, at any rate, the Government could not consider the offer of the Georgian Bay Canal Company to build the canal, in return for a Government guarantee of bonds, with conditions attached that the Government shall have control of rates and the right to expropriate at any time upon reimbursing the company for its outlay.

### Late Season in Quebec.

It may be of interest to you to hear from this part of the Province of Quebec. We have had a very late spring; the first twenty days of May were wet and cold; seeding was late; weather cool all the time. Grass light, owing to burning drouth of last year. Recent rain has done good, but yesterday (June 18th) was the coldest day we ever experienced so late in June; snow fell two or three times during the day. Vine stuff looks as if the life was about out of them, and corn is at a standstill. We need more heat than we have had to push crops along. The outlook is anything but encouraging; this following the two years of extremes makes it still harder; 1907 was the wettest, and 1908 the greatest drouth, this county ever saw, and this is one of the latest seasons so far. P. P. FOWLER.

Shefford Co., Que.

### B. C. Stock-breeders.

On the evening of June 11th, the directors of the British Columbia Live-stock Breeders' Association met in the office of the Agricultural Department, Parliament Buildings, Victoria, to discuss the work to be taken up for the season. President A. D. Patterson was in the chair.

1. The Association voted \$500 to assist to the amount of one-half railway fare, in the transportation of live-stock and poultry to the Alaska-Yukon Exhibition, the amount expended on transportation of stock not to exceed \$500.

2. The Association decided to assist stock-breeders who were members of the Association, in the transportation of stock from the East.

3. The question of holding a Winter Fair was taken up, and it was decided that the matter be left with the Secretary-Treasurer, R. W. Hodson, to deal with, he being advised to interview Mayor Hall, of Victoria, and Mayor Douglas, of Vancouver, on the question.

4. Two cups will be given for stock-judging to Victoria Fair, and also for Westminster Fair for the same purpose.

The Association appointed the following committees to deal with their respective classes:

Horses.—Light: D. C. McGregor, G. H. Hadwen, J. H. Wilkinson. Heavy: D. Montgomery, Geo. Sangster, Mr. Patterson.

Cattle.—E. A. Wells, J. M. Steeves, Mr. Bishop.

Sheep.—Alex. Davie, Sam Smith, G. H. Hadwen.

Swine.—Messrs. Shannon, Thompson and Webb.

Poultry.—W. Bayliss, Secretary of the Vancouver Poultry Association, Secretary of the Nanaimo Poultry Association.

R. W. Hodson to act on each and all the committees.

Hon. Capt. Tatlow, Minister of Agriculture, addressed the meeting for a few minutes on the past work of the Association, and the work which was still to be done.

R. W. HODSON, Sec. Treas.

### Excursion to O. A. C.

A member of "The Farmer's Advocate" staff took in one of the excursions to the Ontario Agricultural College, at Guelph, on Friday, June 18th. Four train loads, from different parts of the Province, were landed in Guelph that day, the number of excursionists being estimated at 1,900. The day was fine, though somewhat cool. The College grounds, with much of the shrubbery in bloom, and everything freshened by the rain of the preceding day, looked their very best, and the usual courtesy of the officials contributed to the enjoyment of a very pleasant day. There is no doubt that the steady interest of the farmers of Ontario in the College and Experimental Farm is maintained in great part by the personal visits of so many during the month of June. The trouble that the College authorities take to entertain visitors is not fruitless, by any means.

Crops on the College farm looked well, though somewhat later than usual. President Creelman reported, for last year, a total of 1,225 students, counting both male and female, with good prospects for the coming season.

### Niagara District Fruit Prospects.

Good prospects for strawberries, barring a lot improbable curtailment of the season by hot, dry weather; satisfactory indications of raspberry fields, especially in the western part of the district; a very ordinary outlook for peaches, thanks to curl-leaf, induced by cold, wet weather of spring and early summer, which favored the blight, and interfered with the spraying that might have checked it; A good crop of pears and an encouraging setting of apples wherever the trees bloomed satisfactorily, with a good promise of grapes, except in more-exposed localities, where some of the lower vines were killed in the winter—such is a summary of a Globe correspondent's report of the fruit situation in Niagara District. Intensification of fruit-farming, keen demand for

land at high and rapidly-rising values, many Englishmen, together with some retired business men and returned Westerners coming into the district; fruit-growers prosperous, and still planting extensively, are a few of the other salient facts with which he was impressed.

### Jersey Breeders Celebrate.

On Saturday, June 19th, some seventy invited guests, principally breeders of Jersey cattle, were entertained at a banquet by Mr. and Mrs. David Duncan, and their interesting family, at Moatfield, their beautiful farm home, hard-by Duncan Station, on the Canadian Northern Railway, in the valley of the Don River, ten miles north-east of Toronto. On arrival of the special train from the city, the visitors spent a couple of interesting hours in inspecting the splendidly-kept 350-acre farm, the grand crops of clover and alfalfa, and the promising fields of corn, all of which give abundant evidence of the benefit of tile-draining and of feeding to live stock, on the place, the bulk of its produce, thus conserving and increasing the fertility of the land. The commodious, well-lighted and cleanly-kept stables, freshly whitewashed by means of a spray pump, and supplied with pure water in individual bowls in the stalls, conveyed to one set of buildings by underground pipes, by gravitation, from springs on the higher portion of the farm, and to another steading by a windmill to a tank in the barn, give evidence of careful and intelligent management, and of the possibility of comfortably housing stock in convenient quarters, with moderate expense, the buildings all being plain, and such as the average farmer can well afford.

Attention was next given to the splendid herd of some 75 registered Jersey cattle, recognized as one of the principal herds in the Dominion, as the prominent place taken by its members at the Canadian National Exhibition for many years amply evidences. Greatly admired for their approved type and character were the two noted and richly-bred herd bulls, Fontaine's Boyle, now in his four-year-old form, twice a first-prize winner at Toronto, and last year head of the first-prize graded herd; and his sturdy lieutenant in service, Brilliant's Golden Fern, now in the two-year-old class, and a promising rival of the senior sire in the show-ring. Seldom indeed are two such typical and high-class bulls in breeding found at the head of one herd; and the progeny of the elder, seen in a score of charming yearling heifers in the pasture, and a bevy of his baby calves in the boxes, eloquently testify to his prepotency in perpetuating ideal dairy type, together with strong constitution, which is a prominent feature in his own make-up.

The long line of milking matrons seen in the stables at midday with their sizable and shapely udders, their strong backs, level quarters, and deep bodies, giving capacity for working food into milk, together with their handsome heads, bulging, sweet eyes and slender necks, formed a living picture of beauty and utility combined, difficult to duplicate, and such as a lover of animal life sees with satisfied vision.

The system of farming followed at Moatfield Farm, selling the cream, and feeding the skim milk to calves and pigs, of which latter, nearly one hundred thrifty youngsters growing into money, were seen in the pens, is certainly the safest and most profitable that can be adopted, and well accounts for the comfort and thrift noticeable on the fine farm in question.

The limits of space available forbid extended reference to the proceedings of the banquet, which was held in a handsome tent on the beautiful, well-kept and tree-bordered lawn, where tables loaded with luxuries were set for nearly one hundred guests, including a considerable number of ladies, including members of the family, friends from the city, and neighbors, all of whom did justice to the splendid spread, and enjoyed to the full the social character of the gathering, after which the toast list was tackled, with the chair occupied by ex-Mayor R. J. Fleming, Manager of the Toronto Street Railway Company, and President of the Canadian Jersey Cattle Club, when a number of toasts were proposed, and responded to by Professor H. H. Dean, of the O. A. C.; W. F. McLean, M. P.; R. Reid, Secretary of the Club; D. O. Bull, Vice-President; W. P. Bull, K. C.; G. S. Henry, Warden of York County; J. C. Snell, and H. B. Cowan, and, after the passing of a cordial vote of thanks to the Duncan family for their generous hospitality, and the singing of "They Are Jolly Good Fellows," the assembly dispersed, with the feeling that an exceptionally pleasant and profitable day had been spent at Moatfield.

Allow me to express my appreciation of your paper. I take several, but, while all are useful, and none equal, for general farming, to yours. Annapolis Co., N. S. W. S. PINEO.

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Assets, \$41,000,000

## Bank of Toronto

## MARKETS.

### Toronto.

#### LIVE STOCK.

At West Toronto, on Monday, June 21st, receipts were 54 cars, consisting of 1,189 cattle, 5 hogs, 173 sheep, 12 calves. Quality of cattle generally good, especially exporters. Trade quiet. Prices firm for export steers, \$5.85 to \$6.40; export bulls, \$4.75 to \$5.25; prime picked butchers', \$5.75 to \$6; loads of good, \$5.30 to \$5.60; medium, \$5.15 to \$5.25; common, \$4.60 to \$5; cows were 25 cents to 50 cents per cwt. lower, at \$3.50 to \$4.60; calves, \$3 to \$5.50 per cwt. Sheep, \$3.50 to \$4.50 for ewes; rams, \$3 to \$3.50; lambs, 8½c. to 9½c. per lb. Hog market firm; \$7.90, fed and watered at market, and \$7.65, f. o. b. cars, country points.

#### REVIEW OF LAST WEEK'S MARKET.

The total receipts of live stock at the City and Union Stock-yards were 363 carloads, consisting of 5,790 cattle, 4,746 hogs, 2,313 sheep and lambs, 1,025 calves, and 170 horses.

The quality of fat cattle generally was good, but there was a sprinkling of grass cattle, which have started to come on the market. Trade was good, with prices quite as high as they have been all season. Nearly 200 carloads had arrived at the two markets on Monday and Tuesday, all of which were quickly absorbed, as the demand was strong; but, on Wednesday, when 63 carloads more arrived, trade eased off, and only stall-fed cattle maintained their own, while prices for grassers broke from 50c. to 75c. per cwt., especially for cows.

Exporters.—Export steers sold from \$5.85 to \$6.50, the bulk going at \$6 to \$6.25; heifers, \$5.75 to \$6; bulls, \$5 to \$5.30.

Butchers.—Prime picked lots of steers and heifers sold at \$5.80 to \$6, and one prime, 18-months-old steer, 1,260 lbs., sold at \$7.50 per cwt., the buyer afterwards being offered \$8 per cwt. Loads of good sold at \$5.50 to \$5.75; medium, \$5.15 to \$5.35; common, \$4.75 to \$5; cows, \$4 to \$5.25; grassers, \$3 to \$3.75 per cwt.

Stockers and Feeders.—The market for stockers and feeders was quiet, few being offered. Steers weighing from 900 to 1,000 lbs., sold from \$4.40 to \$5; stockers, 400 to 700 lbs., sold from \$3.50 to \$4.25, according to quality.

Milkers and Springers.—Receipts of milkers and springers were large. Good to choice quality cows sold at steady prices, from \$45 to \$55, and a few at \$60 each, but light, common cows were hard to cash at \$25 to \$35 each. The latter class is not in demand.

Veal Calves.—Receipts were large, quality a little better than usual. Prices ranged from \$3 to \$5.50 per cwt., for the bulk, but a few choice, new-milked calves, sold at \$6 to \$6.50 per cwt. More calves of the latter class would sell readily.

Sheep and Lambs.—Receipts are growing as the season advances, prices for

sheep were easier, while spring lambs held steady, with a strong demand. Export ewes sold at \$4.25 to \$4.75; rams, \$3.25 to \$3.75; spring lambs sold at \$3.50 to \$6 each, and 9½c. to 10½c. per cwt.

Hogs.—The market for hogs was strong, at \$7.85 to \$7.90, fed and watered at the market, and \$7.60 to \$7.65, f. o. b. cars at country points.

Horses.—Trade at the Union Horse Exchange for the past week was much improved. At Monday's and Wednesday's auction sale last week, over 125 horses were disposed of at better prices, because the quality of many of the horses was good to choice. There were buyers from many parts of Ontario, besides several from Western Provinces. Prices ranged as follows: Drafters, \$160 to \$215; general-purpose, \$140 to \$180; express and wagon horses, \$150 to \$200; drivers, \$100 to \$170, serviceably sound, \$40 to \$85.

#### BREADSTUFFS.

The wheat markets are reported easier, but locally unchanged. Wheat—No. 2 red, white and mixed, \$1.38 to \$1.40; Manitoba—No. 1 northern, \$1.38; No. 2, \$1.36; No. 3, \$1.34½. Rye—No. 2, 80c., outside. Peas—No. 2, nominal, at 95c. Barley—No. 3 extra, 61c. to 63c.; No. 3, 61c. Oats—No. 2 white, 61½c.; No. 3, 60½c. Corn—No. 2 yellow, 83½c.; No. 3 yellow, 82½c., track, Toronto; Canadian, 77c. to 78c., track, Toronto; Buckwheat—No. 2, 70c. to 75c. Flour—Ninety per cent. patents, Ontario, \$5.65; buyers' sacks, on track, Toronto, and \$5.40, outside. Manitoba first patents, \$6.20 to \$6.40, at Toronto; second patents, \$5.70 to \$6; strong bakers', \$5.50.

#### HAY AND MILLFEED.

Market steady; prices unchanged. Hay—Baled, car lots, on track, Toronto, \$13 to \$13.50. Straw—Baled, car lots, on track, Toronto, \$7.50 to \$7.75. Bran—Car lots, on track, Toronto, \$25. Shorts—Car lots, on track, Toronto, \$26. Manitoba meal, \$33 per ton. Flax-seed meal, \$3.75 per cwt.

#### FRUITS AND VEGETABLES.

The only Canadian fruit arriving on the market thus far is strawberries. White & Co., wholesale dealers, received about a dozen cases of these, grown at St. Catharines, which sold at 15c. per quart.

#### HIDES AND WOOL.

E. T. Carter & Co., 85 East Front street, Toronto, report paying the following prices: No. 1 inspected steers, 60 lbs. up, 12½c.; No. 2 inspected steers, 60 lbs. up, 11½c.; No. 1 inspected cows, 12c.; No. 2 inspected cows, 11c.; No. 3 inspected cows and bulls, 10c.; country hides, 10½c.; calf skins, 14c. to 16c.; horse hides, No. 1, \$2.75; horse hair, per lb., 31c.; tallow, per lb., 5½c. to 6½c.; sheep skins, each, \$1.30 to \$1.50; wool, unwashed, 11c. to 13c.; wool, washed, 17c. to 19c.; wool, rejects, 14c. Raw furs, prices on application.

#### COUNTRY PRODUCE.

Butter.—Receipts large; prices easy. Creamery pound rolls, 22c. to 23c.; separator dairy, 19c. to 21c.; creamery solids, 22c.; store lots, 17c. to 19c.

Eggs.—Market firm, at 19c. to 20c. Cheese.—Old, steady, at 14c. to 14½c.; new, easier, at 12½c. to 13c. per lb.

Beans.—Still scarce, and prices firmer, at \$2.20 to \$2.30 for primes, and \$2.40 to \$2.45 for hand-picked.

Potatoes.—Prices easier, on account of liberal receipts. Car lots, on track, Toronto, sold at 85c. to 90c. per bag.

Poultry.—Receipts were light, but spring chickens are becoming more plentiful, and spring ducks made their first appearance last week on the Toronto farmers' market. Turkeys sold at 17c. to 20c.; ducks (spring), 50c. per lb.; spring chickens, 35c. to 40c., and a few extra-quality lots, 45c. per lb.; last year's chickens, 11c. to 16c.; fowl, 10c. to 12½c. per pound.

### Chicago.

Cattle. Heeves, \$3.20 to \$7.25; Texas steers, \$4.75 to \$6.30; stockers and feeders, \$3.50 to \$5.50; cows and heifers, \$2.50 to \$6.30; calves, \$5.75 to \$7.75.

Hogs. Light, \$7.30 to \$7.90, mixed, \$7.45 to \$8.10; heavy, \$7.55 to \$8.15; rough, \$7.55 to \$7.75; good to choice heavy, \$7.75 to \$8.15; pigs, \$6.25 to \$7.15; bulk of sales, \$7.65 to \$8.

Sheep and Lambs. Native, \$3.75 to \$6; Western, \$4.25 to \$6.90; yearlings, \$6 to \$7; wethers, \$5 to \$8.25; Western, \$5.75 to \$8.25; spring lambs, \$6 to \$9.

### Montreal.

Live Stock.—Practically all the cable advices from Great Britain last week spoke of a firm market and higher prices. The weather was hot at Liverpool, but trade was firm, and prices were ½c. to ¾c. up. Exports of live stock from the port of Montreal during the week before last amounted to 2,277 cattle, against 2,571 the previous week.

Grass cattle reached the market last week, this being almost the first of the season. The bulk of the offerings, in fact, are now grassers. The prices realized were high. Extra-choice steers sold at 6½c., choice being 6¼c., and fine 6c. to 6½c., good 5½c. to 5¾c., medium 4½c. to 5c., and common 3c. to 4c. While demand for small meats was on the dull side, supplies were fairly liberal, the result being that sheep sold lower, at 4c. to 5c. per lb., spring lambs being steady, at \$2 to \$6 each, and calves ranging from \$1.50 to \$3 for poor, and \$4 to \$7 each for best. Although advices from the other side of the Atlantic were easier on bacon, the local market for hogs was about steady. Demand fairly good, select stock sold at 8½c. per lb., weighed off cars.

Horses.—Dealers report a falling off in the demand, which made itself marked during the past few weeks. Supplies continued very light, being rather scarcer than before. Shipments to the West, from Ontario, still continue, this having a firming tendency on prices. Heavy draft, 1,500 to 1,700 lbs., \$225 to \$300 each; light draft, 1,400 to 1,500 lbs. each, \$185 to \$240 each; small animals, weighing from 1,000 to 1,100 lbs., \$100 to \$150 each; inferior, broken-down animals, \$75 to \$100 each, and choice saddle or carriage animals, \$300 to \$500 each.

Dressed Hogs.—In good demand. Abattoir-dressed, fresh-killed hogs sold at the former price of 12c. per lb., for selected stock.

Potatoes.—Market firm; demand good, supplies gradually diminishing. Dealers were selling here, carloads, on track, at 95c. per 90 lbs., for red potatoes, up to \$1.07½, for Green Mountains, and paying within about 5c. of these figures in the country.

Eggs.—Straight-gathered stock seemed to be rather easier last week, owing, no doubt, to the falling off in quality. Buyers were paying about 16½c. to 17c. per lb., at country points, and selling the same stock here at 18½c. to 19c., with the bad out. For No. 1 candied eggs, 19½c. was paid, and for selected stock, 22c.

Butter.—The market advanced fractionally again at country points, as high as 22½c. being paid in the Townships, and nothing choice being available under 22½c. It is claimed that exporters were responsible for the advance, having buying orders on hand. Dealers were finding much difficulty in realizing 22½c. to 23c. here, wholesale. On Monday, 21st, prices advanced ½c., both in country and here. Montreal quotations touching 22½c. to 23½c. Some very nice dairy butter, in tubs, was sold at 18½c., the range being 18c. to 19c. per lb.

Cheese.—Market advanced, both in the country and here. Buyers have been compelled to pay a fraction over 12c. at country points, for Ontarios. Here, they sold at 12c. to 12½c., while Townships were almost as high, being 12c. to 12½c., and Quebecs 11½c. to 11c. per lb. Export demand very fair.

Grain.—Oats are fluctuating daily. Prices, 60c. per bushel for No. 2 Canadian Western, 59½c. for extra No. 1 feed, and 59½c. for No. 1 feed, No. 3 Canadian Western oats being 59c. No. 2 barley is 72½c. to 74c., Manitoba feed barley being 67½c. to 68c., buckwheat being 69½c. to 70c. per bushel.

Flour.—Manitoba first patents, \$6.30 to \$6.50, seconds being \$5.80 to \$6, and strong bakers' \$5.60 to \$5.80. Ontario winter patents have been steady, at \$6.75 per bbl. for winter wheat patents, \$6.30 to \$6.60 for straight rollers, in barrels.

Feed.—Ontario bran and shorts, not quoted. Manitoba bran \$22 to \$23 per ton, in bags, shorts, \$21 to \$25.

Hay.—No. 1 hay \$1 higher than at last report, at \$14 to \$14.50 per ton. No. 2 extra hay, \$13 to \$13.50; No. 2 hay, \$11.50 to \$12; clover mixed, \$10 to \$10.50, and clover, \$9 to \$9.50 per ton.

Hides. Prices of hides of different kinds continued to edge gradually upwards. Last week lamb skins advanced 2½c.

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to 20c. each, sheep skins being still \$1 each, and horse hides \$1.50 for No. 2 and \$2 for No. 1. Calf skins advanced 1c. per lb., dealers paying 14c. per lb. for No. 2, and 16c. for No. 1 and 11c. for No. 3 beef hides, 12c. for No. 2 and 13c. for No. 1, selling to tanners at ¾c. advance. Rough tallow sold at 1½c. to 3c. per lb., and rendered at 5½c. to 6c. per lb.

### Representative Cheese Board Prices.

Woodstock, Ont., 11 9-16c. Madoc, Ont., 11 9-16c. to 11½c. Peterboro, Ont., 11½c. Belleville, Ont., 11½c. to 11 11-16c. Brockville, Ont., 11 13-16c. Ottawa, Ont., 11½c. for white, 13½c. for colored. Listowel, Ont., 11½c. and 11 11-16c. Huntingdon, Que., white cheese, 11½c.; colored cheese, 11 11-16c. salted butter, 23½c. Perth, Ont., ruling price, 11½c. to 11½c. Picton, Ont., 11 13-16c. Cornwall, Ont., white, 11½c.; colored, 11 13-16c. Vankleek Hill, Ont., white, 11½c.; colored, 11 13-16c. Napanee, Ont., 11½c., on street. Iroquois, Ont., 11½c. Kemptville, Ont., 11½c. London, Ont., 11½c. St. Hyacinthe, Que., butter, 22½c.; cheese, 11½c. Cowansville, Que., butter, 23c. to 23½c.; cheese, 11½c. Chicago, creamery butter, 22c. to 25c., dairies, 20c. to 28½c.; cheese, twins, 14c. to 14½c.; Young Americans, 14½c. to 14½c.; longhorns, 14c. to 14½c. Liverpool, finest Canadian white, old, 65s.; finest Canadian colored, old, 66s. 6d.

### Buffalo.

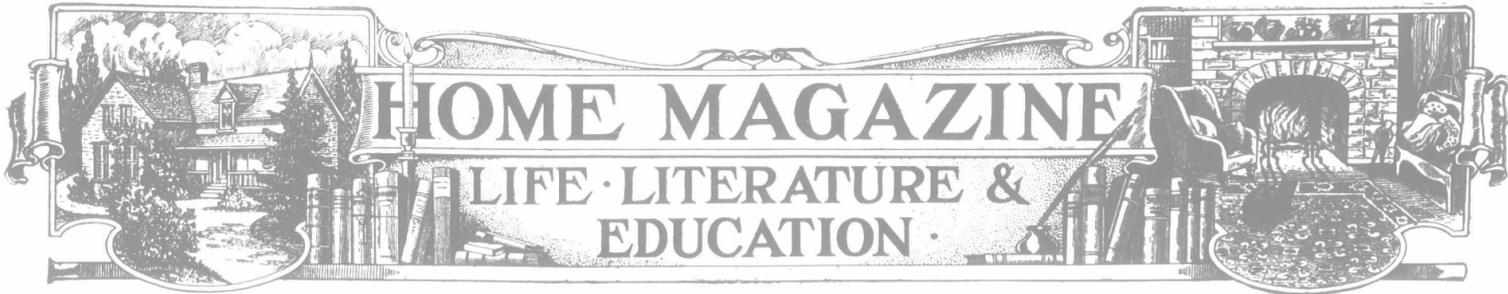
Cattle.—Prime steers, \$6.75 to \$7.25. Veals.—\$6 to \$9. Hogs.—Heavy, \$8.30 to \$8.35, mixed, \$8.20 to \$8.35; Yorkers, \$7.40 to \$8.25; roughs, \$6.90 to \$7.10; dairies, \$7.60 to \$8.15. Sheep and Lambs.—Lambs, \$4.50 to \$9; yearlings, \$7 to \$7.50; wethers, \$5.75 to \$6; ewes, \$4.50 to \$4.75.

### British Cattle Markets.

London cables for cattle 14½c. to 14½c. per lb. for Canadian steers, dressed weight; refrigerator beef, 10½c. to 10½c. per lb.

ARSENATE OF LEAD.—As a spray for all insects which eat the tissue of leaves or fruit, Paris-green solution has long since come to be regarded as the standard. There is no doubt that when properly made, it is an effective insecticide, though not unattended with a certain degree of risk of injuring the foliage, particularly when a sample containing much free arsenic acid is applied without lime to neutralize it. Then, too, unless combined with lime, it does not adhere so well as it might.

A substitute for Paris green that is growing rapidly in favor is arsenate of lead, which, being mixed with water, adheres very much better, and may be applied alone in water in almost any strength, without danger of injuring the foliage. "The Farmer's Advocate" is this season making a comparative test of arsenate of lead as a spray for codling moth, in its demonstration orchard, and while it is too early to determine the results, we have every confidence in its efficacy, and would not hesitate to recommend orchardists and potato-growers to at least give it a trial. Arsenate of lead is made in Canada, by the Chemical Laboratories, Limited, 148 Van Horne Street, Toronto, Ont., from whom any desired quantity may be obtained. Write for particulars.



Japan, that marvellous little country, semi-barbarian but a generation ago, to-day one of the foremost in civilization, to be reckoned with as an educational, commercial and naval power, has now 445 technical schools, with over 4,500 preparatory technical schools. Of the 445, 204 are agricultural schools, 90 apprentice schools, 38 industrial, 15 marine products, 10 maritime, and there are 28 others. The Japanese have evidently realized, what might be more frequently realized in older countries, that, whatever be the life-work, foundation counts immeasurably; that life is too short to waste time in learning by experience what can be grasped in much less time by early instruction and practice, and that, upon industrial development rests the real progress of any nation.

A new possibility of the negro problem is occupying the serious attention of the Southern United States, where the white firemen on the Georgia Railroad have struck against the employment of negro firemen on the line. The danger is that the attempt may spread to other branches of labor. If the negro can be driven from one employment, he can be from another, and the fewer the vocations open to him, the greater the mass left a hopeless incubus on the South, ready for the disorder and crime that must come from dissatisfaction and idleness. The employer who recognizes in the negro a source of cheap labor, is anxious to retain him in that capacity. Some few among the philanthropic believe in developing him, uplifting him, admitting him to the unions, and giving him equal privileges with the whites. The masses of the laboring people, on the other hand, refuse to be put on the same level with the colored man in the same occupations, and recognize in him only an enemy to good wages and a breaker of strikes—a species of animal who should never have been brought to the United States, and who is little worth the blood shed for him during the Civil War. The negro problem has long been recognized as a festering sore in the South, and many of the Southern publications are expressing the fear that this new development may be but the beginning of a more serious trouble than has yet been encountered.

**People, Books and Doings.**

The Presbyterian General Assembly, which met at Denver this month, passed a resolution declaring that neither ministers nor laymen should use tobacco.

"The Chinese honor the man of peace and despise the soldier. They wear their gayest clothes in civil life, and dress their officers in any old thing. They are above all things honest in trade, and their songs are invariably of peace."—Nation.

An automatic camera, to measure the speed of automobiles, by registering two snapshots at an accurately-timed interval, has been invented by Daniel Comstock and Herbert T. Kalmus, of the Massachusetts Institute of Technology.

The Transcript Clerk of the Day tells the story of "a very sinful vag," who was lurching with Dr.

Abbott, and referred repeatedly to his connection with Outing. At last Dr. Abbott could stand in no longer, and protested: "But, my dear sir, I am not the editor of Outing. I have never had anything to do with Outing. While I live I hope never to edit Outing. I am editor of The Outlook." "Why, bless me, so you are!" cried his vis-a-vis. "Funny I should have made that mistake. Really, couldn't have confused two periodicals more strikingly different. Whereas Outing makes a religion of sport, The Outlook—" The self-respecting Clerk refused to complete the antithesis.—(Christian Register).

A Polish inventor named Proszynski has made an improvement in the cinematograph, by which the fluttering effect has been practically overcome.

The Jews are at last in hopes that a preliminary step towards their final occupation of the Holy Land is in sight. A short time ago an invitation was given to the Jews, by Ahmed Riza Bey, President of the Turkish Chamber of Deputies, under the new government, to create a Jewish state in Mesopotamia. A movement is now afoot, under the leadership of Mr. Jacob H. Schiff, a wealthy banker, and Mr. Israel Zangwill, to carry out the project, and a geographical survey commission has been sent out by the Ica Society, to which the late Baron de Hirsch left \$45,000,000 for colonization purposes, to investigate conditions. The preliminary reports show that the land is fertile, only needing irrigation and thorough tillage to make it very prolific.

**"Twentieth Century Canadianism."**

By the Spartan.

In order to realize the recent enormous growth of distinct national sentiment in Canada, one has but to glance retrospectively over a decade. The days have come when the Dominion is visibly feeling her way in nationhood. Perhaps Imperialism has not lessened amongst us—nay, it seems to have increased—yet Canadianism has doubled and trebled. The Empire is dear; Canada is unmistakably dearer. This process of change to new sentiment has been both rather romantic and rather subtle. To develop national feeling, without stepping out of the ranks of the Empire, is our task of the day—not unaccompanied by delicate considerations. The flag of complete independence is, beyond question, the most potent of stimuli to thorough patriotism, but Canada does not want that particular flag at present.

Perhaps no other country in the world is so uniquely placed in this respect as the Dominion. In place of such flag, she prefers, seemingly, allied brotherhood of nations and virtual independence, with conscious, lofty bonds of sympathy, free from manifestations of any sovereignty. The slight semblance of authority at Rideau Hall has long since ceased to be anything but a symbol of the motherland's courtesy, on one hand, and recognition of allegiance on the other. Slowly but surely we think the name "colony" will disappear. Decidedly, Lord Rosebery's term, "Oversea Britain," is more acceptable to a nation of the dimensions of an empire.

Glancing backward a few years, one

pauses at a certain episode in the House of Commons at the time of the outbreak of the South African war. When the news was flashed to that great body of legislators, there was a prompt rising to feet "en masse," one spirit possessing all, and such singing of National Anthem as was never heard there before. Every member of that assembly felt that a game of nations had begun—that Canada, too, would be scrutinized over the wide earth; that she was, in this crisis, a national entity. Decidedly, she was.

The despatching of seven thousand of her manhood, bearing maple leaf on shoulder-strap, and Imperial banner above them, did make the one-time "colony" throb with a novel "boast of heraldry and pomp of power" significant enough. It was something undeniably higher than jingoism.

And of this latter, let the true patriot beware. These are days of decision—dutiful decision of one's spirit towards the nation and towards the empire. Fanfaronading and blowing of factory whistles on impulse of successful combat-at-arms is not necessarily patriotism; it may only be intoxication and spread-eagleism. Nevertheless, the keen interest which Canada manifested throughout the war was undoubtedly a sincere and national enough pride. The status of Canada was being elevated. Every intelligent citizen felt this to be so, and none were without a certain wholesome exaltation.

Again, one cannot but note the significance of the press comment that swept over the country at the time of the Alverstone fiasco. Not a Canadian but was proud of Sir Louis Jette and Mr. Aylesworth, standing out like rugged Abbot's Sampson for right unqualified of their native soil. The indignation that flamed up from Halifax to Vancouver then, has died away gradually, almost to extinction—and better so—but, in respect to national sentiment, it was eloquent enough, and not to be ignored, in conscientious decision of this obligation of right spirit to one's patria.

Perhaps the Prime Minister's own sentiment was most representative of general feeling at the time. Rising in his place in the House of Commons, he delivered his historic protest, couched in perfect language and in equally perfect justice, straight to the heart of every member present. "Larger treaty-making power" must be ours, if episodes of this kind were to be repeated.

It is a point full of interest, too, to decide, in the light of such episodes, just how far Canadian patience would go in these latter days. A few square miles of frozen soil in British Columbia and the Yukon was a matter of small moment, but the invisible principle was vast, and may well have provided food for reflection for certain of Britain's Ministers—however strong, theoretically, may be ties of blood that is "thicker than water." Better for the health of national sentiment if Ashburton and Alverstone fiascoes are now wholly of the past, and never again paralleled.

Even in things commercial there are signs eloquent, also. It is by no means a factor to be despised that this land of ours is manifestly destined to be the granary of the Empire. Wealth centers where grain grows. Canada must become enormously wealthy within the coming

three or four decades. Wealth is strength, and a great builder of national confidence. No Canadian, with eye upon this fact, and upon such huge enterprises as the Grand Trunk Pacific, the Georgian Bay Canal, and the Canadian Northern—destined to be transcontinental sooner or later, also—will fail to record a distinctly unctuous thrill from his observation.

Another lesson in respect to commerce is the gratifying independence of attitude which Canada has assumed towards the United States. Sir Wilfrid Laurier has many times declared that future overtures touching reciprocity and kindred matters must come from the Republic. Pilgrimages—so fruitless—to Washington are, once and for all, things of the past. This commercial optimism and self-respect is agreeable to look upon, and part of the unmistakably changing feeling of the Canadian.

And now, in the epoch of Dreadnoughts and bustling militarism, another great milestone is in sight. Sentiment throughout the land seems favorable to the construction of a Canadian navy.

The days of dependence for defence on "big brother" are to pass for those of self-confident reliance upon home-bred bone and sinew. There is little doubt but that the conception of this scheme will bear fruit in due season. No panicky mis-spending on Dreadnoughts, but the consistent and sound building-up of a modern and efficient navy, with the primary object of coast-defence, seems to be the plan in a nutshell. Canada, by the way, has a very large number of seafaring folk—sailors of both "fresh" and "salt." Material will be plentiful when it comes to the personnel of the fleet, and increased spirit of nationhood will be there along with it.

Glancing at the magnificent morale of the British fleet, and its consequent force in national spirit, one can readily see something of the influence which the proposed navy will exert on Canadianism in general—a fitting climax, indeed, to the rapid growth of the new sentiment within the past decade.

Not that Canadians have no earlier epics. On the contrary, they possess as heroic and romantic a history as can be found in the entire story of modern nations. No Greek Marathon ever surpassed the defence of the Long Sault. No Caesar ever fell more royally than did noble Brock on the Heights of Queenston. The struggles of 1812-1814 are rich in rustic chivalry and epic romance. Strange that our native authors have completely ignored those troubled days. Nevertheless, their coming centennial will mark a new beating of the national heart. Few, however, in the great Dominion will be without their thrills of just pride in the forefathers of that undying epoch. Nor is there a Canadian of these latter days who can longer look disinterestedly upon the significance of the changes which the succeeding century has wrought.

**A Correction.**

Mr. Afleck writes us to say that a mistake appeared in the reference to his letter, as he holds that the Biblical wine was unfermented. The mistake was due to a slip in the manuscript. We trust this correction will be sufficient to remove any misapprehension on the subject.

## Hope's Quiet Hour.

### What Will You Have?

"What will you have?" quoth God,  
"Pay for it and take it."  
—Emerson.

This morning I received a letter from one of our readers asking for a chat on the subject of Psalm xxxvii., 4, 5: "Delight thyself also in the LORD, and He shall give thee the desires of thine heart. Commit thy way unto the LORD, trust also in Him, and He shall bring it to pass." Thanking the writer of the letter for her kind words—as I thank the other friends who help on the "Quiet Hour" by their sympathy and prayers—I shall do my best to carry out her wishes.

It is a great thing to have the assurance that God is pledged to give us the desires of our hearts, for, of course, we all want to get what we have set our hearts on. But there are conditions, you see—it is a covenant with conditions attached. Those who "delight" in the Lord, and trust themselves and all that they have in His hand, can safely expect to have their desires granted; for they are desires He wants to satisfy. It is impossible to delight in God, and trust in Him, without setting one's heart on personal holiness and the power and opportunity of service. Because our Beloved is beautiful, with the beauty of shining holiness, we want to be holy too. Because we love God, we must love our fellows, and love is always eager to serve.

What will you have? If your heart's desire is only to attain some coveted pleasure—a pleasure that perishes as you grasp it—why, you will have to begin all over again, as soon as it is attained, and perhaps years will have been wasted with nothing to show for them. If your heart's desire is to become very rich, then you may waste the whole of life in piling up wealth, and go out through the door of Death into the mysterious life beyond, with a starved soul, "naked and all in rags." What profit will it be then to a man to have "gained the whole world," if his glorious possession—the soul—be shrivelled and weak, mean and stunted and miserable? If your heart's desire is to win the praise and admiration of your fellows, in country or city or continent, that also will seem a very paltry ambition when you look back on life's journey from the door of Death. It really makes less difference than we are apt to imagine whether we are praised or blamed—except so far as it affects our daily life's struggle. If praise is an encouragement and inspiration to climb higher and do better, then it is a gain. If it should make us rest on our oars, then it is a serious loss. If blame and criticism crush out effort, arouse bitterness or cool enthusiasm, then its consequences will be disastrous. But if it should open our eyes to our faults and warn us to trust less in ourselves and more in God; then it will be a great advantage. So the matter lies in our own hands. Praise may be a gift or a catastrophe, and so may blame—or anything else that comes our way, for that matter. We all possess the Midas-touch, which can convert what we touch into living gold—the gold of strong and beautiful character. As Van Dyke reminds us:

"All the bars at which we fret  
That seem to prison and control,  
Are but the doors of daring set  
Ajar before the soul."

But if you delight in the Lord, and if your heart's desire is to climb nearer to Him in unstained purity of heart, while reaching out a helping hand to struggling comrades beside you, then the promise of the text is all your own. God will most certainly give you your heart's desire, little by little, as you are able to hold it, but it must continue to be your heart's desire. While a man wants any thing with all his might, he will work steadily nearer to it. To want good ness, and the power of service, only by fits and starts, will be to slip back weakly. Steady effort in any direction means steady progress. Are you steadily pressing towards your goal? Then you must be nearer it than you were last year, and God is pressing into your hand the gift you asked Him for. A man who was discouraged by repeated defeats, was once

walking purposelessly along the street, ready to give up the battle altogether. He stooped to pick up a bit of crumpled paper at his feet, and read on it these words: "If you are tempted to turn back, go on, sir, go on!" He was not really beaten—people never are—he only thought himself beaten. He took courage, and, with Hope instead of Despair as his counsellor, came out a victor.

Does God often give the touch needed for the direction of His children? Does He guide His people through the wilderness as unerringly as Israel of old? Have we also the pillar of fire by night and the pillar of cloud by day, so that we can say undoubtingly: "God told me to do this?" Why, of course, we have. Sometimes we make mistakes; but that is when we have not committed our way unto the Lord, and have been too eager in going our own road to see the way He was pointing out. May I give you a leaf out of my own experience?

Last fall I was tied to my sofa for many months, and my opportunity of service seemed to have grown narrow. Suddenly a thought came to me: "Why not write a book?" was the insistent message that seemed ringing in my ears. At first I laughed at the idea, but it came again and again, until I felt that to push it aside would be to refuse an opportunity which God had given me of delivering a message from Him. How could I ask Him to open the door for service, and then turn my back on the door He had opened wide when He shut others? I grew more uncomfortable while I debated the question, and only found life peaceful again when I made up my mind to go ahead. Some may think it very presumptuous to say that God told me to publish the book—"The Vision of His Face"—which is now ready. But, in my opinion, it would be far more presumptuous to publish a book unless God very plainly directed me. I have committed it to Him, trusting that He will fulfill my heart's desire regarding it—which is that it may help all who read it to see more clearly the Vision of the King in His beauty. A daring ambition, as it is not, but I will go forward like Jehonathan, saying: "It may be that the LORD will work for us, for there is no restraint to the LORD to save by many or by few."

I am very sure that if we try to keep the desires of our hearts fixed on God and goodness, He will never fail to give us plain directions, so that we may steer safely towards the haven where we would be.

"Ah! if our souls but poise and swing,  
Like the compass in its brazen ring,  
Ever level and even true  
To the toil and the task we have to do,  
We shall sail securely, and safely reach  
The Fortunate Isles, on whose shining beach  
The sights we see, and the sounds we hear,  
Will be those of joy and not of fear."

We must all walk by faith and not by sight, even in everyday matters. The farmer plants his seed, trusting that God will send the sunshine and rain, and trusting also that there is life in the seed itself, which will reach out and assimilate nutriment from everything within reach, and will grow thereby. He needs quite as much trust as the sower of spiritual seed. A man starts out in business, and must spend large sums on his building and stock-in-trade, trusting that he will gain in proportion to his careful but generous outlay. Many years are spent in obtaining a good education—at the cost of patience, work and money—in faith that in years to come the life will be enriched according to the way the foundation has been laid. We live through the winter in faith that the summer will come and prove our faith by preparing for it beforehand. We spent youth in preparing to make use of the opportunities which faith promises us in the future. Don't let us allow faith—faith which has helped us to conquer in our daily fight to tremble as we move very near to the veil which hides the new life from us. We are being educated here for greater opportunities in the future. Let us commit our education to the great Master in sure faith that He can and will make all things work together for good, so that we may gain our heart's desire, yes, even when it seems impossible. Like Ahab, being fully persuaded

that what He has promised He is able also to perform.

DORA FARNCOMB.

"Enquirer" than's all who have given answers to "Saints" and "Reverend." Would like to have seen those on the latter in print, but as space was not allowable, the best way was taken. I do not desire to continue this subject, only in brief reference to Hope's remarks in regard to King Edward's messengers. It is true that if one of them came to this country he would, no doubt, have all the honor due conferred upon him, but would any of the King's loyal subjects call him by the King's title, or would he himself dare assume it? ENQUIRER.

Reading the contents of the page entitled "The Quiet Hour," of April 28th, I have a desire to help "Anxious Mother" in her enquiry as to Heaven, and whether we shall know each other and remember our relationship to one another in this life. Therefore, I advise that she should procure literature which treats this subject thoroughly. It is supplied at bare cost, and free to those who do not feel able to pay for it. Address, Brooklyn Tabernacle, 13-17 Hicks street, Brooklyn, New York, U. S. A. A BIBLE STUDENT.

## Current Events.

The keels of four Dreadnoughts were laid at St. Petersburg on June 16th.

An association has been organized in Berlin, Germany, to promote better trade relations with Canada.

Ten thousand skilled steel workers in Pittsburg are threatening to go on strike at the end of this month.

The first Canadian experiment with airships for military purposes will be made at Petawawa Camp in the early future.

Plans and estimates of proposed extensions of the T. & N. O. Railway into Elk Lake and Gowganda are being prepared.

## The Beaver Circle.

Dear Beavers—A few very good compositions on "The Hornet" have not been published yet. As you may wish to read some of them, here they are.

Dear Puck,—On looking over the paper I came to the picture called "Spring-time Discovery," and I decided to write at once and tell what I thought it was and all I knew about it.

I think the boys discovered a hornets' nest, which is made of a paper-like substance the color of ashes. It is in layers, round and round; it is fastened by the top or sides with a small hole at the bottom for the hornets to enter.

Inside there is a round thing hung from the top by a small tough piece of the same as the outside, its top is rough, and the bottom is like a honeycomb. In large ones there are three and four honeycombs.

The size of the nest is from the size of an egg to the size of a person's head. I have had a good deal of experience with the hornets. Their sting is very painful, and sometimes very severe.

In the fall the hornets leave the nest, so if any of the boys or girls want to get one, wait till late in the fall and then go and get it. It can be taken apart.

I have a small one I got in the puppen. I took it apart. I also have a large one my sister got under a bridge. I first saw one in a tree, but I have seen several here on the side of a hill where the earth is very deep, because of the soil at the top of the hill.

ests are built where they do not even much wet. They also build on telegraph poles, just below the bar that goes across the top. I think I have told all I know, and, perhaps, taken too much space, so I will close, hoping to see this and many others in print.

ANNE MACKAY.

Dear Puck,—We got "The Farmer's Advocate" to-night, and I saw my composition was not the right kind. About fifteen rods from our school is a large pond, and we boat-ride on it. We had a raft, but we used to get our feet wet, so a kind man gave us a boat. There is a large woods on one side of our school and we go out picking flowers in it. We are much interested in birds. Our teacher put a bird calendar on the board. There are two columns; one for the name of the bird and the other for the date on which we saw it. She writes it down with the color of chalk like the bird.

I saw a picture in "The Farmer's Advocate" where three little boys are looking at something in a tree. I think it is a hornets' nest. On the other side of our school is a swamp. One day last summer, when we were down playing in it, we found a hornets' nest about a foot long. When any one went near it they would come buzzing out at us. Of course we did not take it, because we thought it was cruel, after the hornets working so hard to build it. Inside of one of these nests are all little holes where the little hornets are hatched. When they are not very old they look like a small white worm. I will now close, hoping my letter is interesting enough this time. Allenwood, Ont. LUCILLA SPRING.

## Our Letter Box.

Dear Puck,—This is my first letter to your previous Corner. I have one brother and one sister, and I live on a farm about nine miles from the City of Hamilton. We are within a mile of either the H. & B. Electric Railway or Mineral Springs Station on the T. H. & B. R'y. In the winter-time I skate and sleigh-ride quite a bit. Sometimes I go to a rink, but I usually skate on the mill-dam. I like the summertime better than the winter. My sister and I often go gathering wild flowers in the woods and along the creek flats on our farm. Violets are my favorite flowers. Which kind do you like best? I passed my entrance examinations when I was twelve years old and I have taken quite a few music lessons since then.

MARILLA DIMMICK (age 14).  
Mineral Springs, Ont.

Which flower do I like best? Why, they are all so beautiful I can scarcely tell, but I believe the dainty little hepatica—the "celandine" and "wind-flower" of the poets—is my favorite, perhaps because it comes first of all.

Dear Puck, I would like to know whether you are a man or woman. It seems to me that you talk somewhat like a man. It seems to me that you are a man all right enough.

I milk a cow every night, and put down the ensilage nearly every night. We feed 25 head of cattle with ensilage, and it certainly takes a lot of the stuff. I always go, rain or shine, to school. Arithmetic and algebra are my worst subjects. This rainy weather is hard on the farmers, isn't it, Puck? I have a pair of ducks, and the duck lays every day. It is fun to watch them in the pond.

Say, Puck, may we make suggestions about the Beaver Circle? That is, may any of us make suggestions for postal showers or games, or anything like that? Being a new Beaver I will close, wishing the Circle success.

MACK ADAMS (age 13).

Aylmer (West), Ontario.

I believe you are a farmer after my own heart, Mack, and I can sympathize with you over the arithmetic and algebra, too. But isn't it fine to think that if the hard things which make us what we ought to be? As Dr. Grenfell, of the Labrador, says: "Do not be afraid of the hard things, the soft ones are the pleasant ones."

So, you may make suggestions about the Beaver Circle, and I will be delighted to consider them.

**The Junior Beavers.**  
Story of a Dandelion.

A dandelion grew at a garden plot  
In the shade of an old stone wall,  
Her slender leaves made an emerald mat,  
Where the stem grew straight and tall.  
In the cool spring days she had worn a  
hood  
That was small and tight and green;  
She wore it as long as she possibly could,  
Till many a hole was seen.

Then she sent down word through her  
stem, and mat  
To the storehouse under her feet,  
That she needed at once a bright new  
hat.  
With trimmings and all complete.

It was fine as silk and yellow as gold,  
Like a star that had fallen down,  
With brightest trimmings, fold on fold,  
The gayest hat in town.

And next she wanted a summer hat,  
Adorned with small white plumes,  
So they sent her one, in place of that.  
They had sent with yellow blooms.

For many a day she waved and danced,  
And bowed to the birds and bees,  
For many a day the sunbeams glanced  
Through leaves of the friendly trees.

But a brisk little wind went by one day,  
"Please give me your hat," he cried,  
He carried the little white plumes away,  
And scattered them far and wide.

Edot A. Curtis, in Kindergarten Review.

Dear Puck,—This is my first letter to the Beaver Circle. My father has taken "The Farmer's Advocate" a good many years, and we like it very much. I like to read the young people's letters. I go to school every day when I am well and it is not too stormy. I have to walk one and a half miles to school. We live three and a half miles from Fingal. I have a dog. I call him Tough. We are going out West to live next year. My papa is going next week to take up a homestead, and we will move out next spring. I think in the Spring-time Discovery, of April 22nd, the boys found a hornets' or yellow-jackets' nest. If it is a hornets' nest, and the bees are alive in there I would not want to be as close to it as the boys are, for I have had two or three meetings with hornets, and did not like them very well. There is a bird called the oriole, that builds her nest something similar to what the boys have found, but I think on a higher tree or limb. I hope to see this in print.

HERBIE HENDERSON  
(age 7),  
Burwell's Corners, Ont.

Dear Puck,—having seen the picture in "The Farmer's Advocate," I think that it is a wasps' nest. They build their nests along the bank of a stream, or in some dry place or in a tree. When they have chosen a proper place they go to work and start to build their nest. They build their nests of bits of wood and a kind of glue. They get the wood off fence rails or posts and go with it to where they are building their nest, and then fix it together with the glue. They then flatten this substance till it looks like a thin gray paper, only it is finer. They then make a hole in their nest, so as to get in and out. The pillars they make inside are very strong. I will close with a riddle. What is the oldest tree in America? Ans.—The Elder tree.

ELSIE BENNETT (age 8).

Dear Puck—My father has been taking "The Farmer's Advocate" for nearly a year now. What he brings it home I

take to the children's Corner. I like to read the letters that little boys and girls write. I have never written before, but I have often thought of writing. I would like you to put this in print, but I don't think this is worth a prize, do you? Do you think this is selfish of me? I do not want to take up too much room, so good-bye.

WILLIE MUNRO (age 9),  
Ottawa, Montreal.

Write again and tell us something about your beautiful city, Willie.

Dear Puck—We have taken "The Farmer's Advocate," and think it is a good paper. I have a dog named Collie, and a cat named Willie. We have fifteen lambs. I was down to my sister Lillie's for five weeks this winter when Norma had the diphtheria. I will close for this time.

LORENCE GOSNELL (age 8),  
Highgate, Ont.

**A Competition.**

Some of the Junior Beavers have done so well in writing about hornets that I am going to give a "Junior Beaver Competition." Write about anything you like. Prizes will be given for the most interesting letters. Only Junior Beavers may try this time, so be sure to "put down" your age, then we will not mistake you for Senior Beavers if you do very well.

**Beaver Circle Notes.**

The following would like some of the Beavers to write to them:  
Catherine MacDonald (age 12), Upper Welsford, Queen's Co., N. B.  
Jennie MacRobert (age 12), and her sister Vera (age 15), Florence, Ont.  
Nellie Graham, Aurora, says she has

**The Ingle Nook.**

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

Dear Chatterers,—I do not know whether any of you ever have anything to do with choosing books for libraries or not, but I presume that some of you are on Public Library Boards, and that you are sometimes in doubt as to the advisability of admitting some of the new books on the shelves. It would be a greater wonder, indeed, if you were not sometimes in doubt, considering the deliberate nastiness of many of the works of fiction which have appeared during the past three or four years. Indeed, I sometimes wonder what future generations will think of our time, judging it from our literature. Will they think us all immoral, or what? For I think the craze for "problem novels" will pass, and that the literature of the future will be clean and wholesome as literature should be.

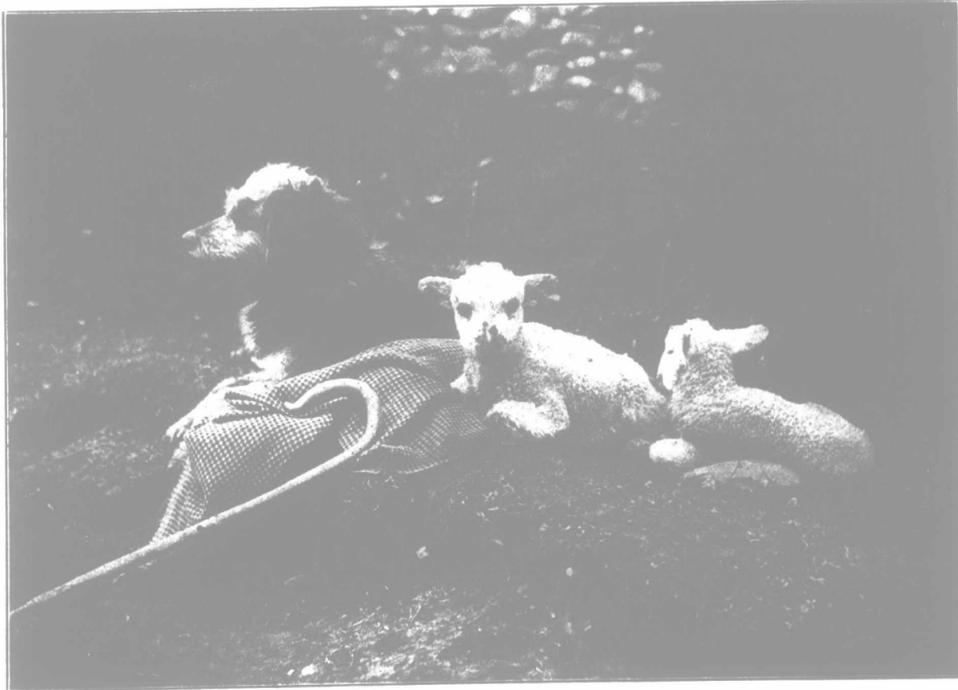
Most of the new novels, and practically all of the best sellers, are distressingly alike in some respects. Either an unmarried man is in love with somebody's wife, or an unmarried woman in love with somebody's husband; occasionally both man and woman (in love, of course) are married, but not to each other, and once in a while neither man or woman is married, but both hold opinions which they "hadn't oughter" in regard to that relation. And the worst phase of the matter is, as Jerome K. Jerome ob-

scured up over anything, but, like the philosopher that he is, takes things as they come, quite prepared to get the best out of life, and let other people do the worrying. And so he tells, with a quiet humor, of the quaint old books which he unearths from the old bookstore, and of the people whom he meets, dwelling on the little foibles of the latter with an easy indulgence, but with a keenness of vision that makes these paper people very real to us. He smiles at them, and we smile with him, too, when we do not chuckle outright.

Among the most real of these people—for a number are just touched upon with a light brush—are: his landlady, who rejoices in the name of Mrs. Duckie, and in two (to her) very brilliant children; "Alf. Pinto," a singer in entertainment halls of the vaudeville order, and Miss Beatrice, or "He-trice"; old Bemerton—who is, however, but a shade among his books, which are to Kent the real presences—and his niece, Miss Wagstaff, a "bitter mercantile virgin"; and, last, but not least, the step-sister's family, which, chiefly, as it proves, consists of a very winsome young lady of twenty-nine, Naomi, with a pretty sister and slangy brother as understudies.

You are not long left in doubt as to which of these girls is the favorite. "Naomi," he says, "although she could not be called clever, and certainly is not witty, is so full of what, to save much language, one might call womanliness, and the best womanliness, as to suggest profound sanity." . . . and again, "Drusilla is very pretty, but Naomi, I think, is beautiful."

Drusilla proves to the most of us, however, a very winsome witch. "Drusilla, when I first arrived," says Kent, "was a Slade student, a suffragette, and beyond correction, or even instruction on any point under the sun." . . . "Drusilla, now, I feel, might easily follow some such remark as 'Please pass the salt,' with the statement, made equally coolly, that she was engaged. If so, it would probably be to a Fabian with long hair, a blue flannel collar, and a red tie, or some youthful artist whose genius carries with it a perpetual dispensation from soap and razor. All her friends seem to be young men of these two brands, who like drawing to be ugly and poetry to be Irish. I meet her now and then in St. James's Park with a retinue of them, and we stand on the bridge and exchange views of life for a few moments, or draw each others' attention to the light over Whitehall, and the color of London. Then they move off . . . and Drusilla and I walk to Queen Ann's Gate together." . . . From all of which you may gather that Drusilla is very opinionated, very much devoted to art, very attractive withal, and that living with her is very much like living with a miniature volcano under the same roof; and you are not at all surprised when, before long, she is



Faithful Jack and His Charge.

made a garden of her own with both vegetables and flowers. Perhaps she will write us about it.

The names of the prizewinners in the flower competition will be announced next time.

**In and Out of Society.**

A macaroon,  
A cup of tea,  
An afternoon,  
Is all that she  
Will eat.  
She's in society,  
But let me take  
This maiden fair  
To some cafe,  
And, then and there,  
She'll eat the whole  
Blame bill of fare.

—Mystic Times.

serves, that the very nastiest of the books are, as a rule, written by women—"devil's helps" he calls them.

Enough, however, of this unpleasant subject. I want to tell you about a book which I have just finished reading, and which you need have no hesitation about purchasing on sight. It has the fascinating, though rather incomprehensible, title, "Over Bemerton's," and purports to have been written by one Kent Falconer (E. V. Lucas is the actual author), who, at the age of fifty-five, has just returned to Old London from Buenos Ayres, after many years' absence. Here he takes lodgings over a second-hand bookstore, "Bemerton's," forms a connection again with his step-sister's family beyond St. Ann's Gate, and proceeds to re-learn the big city, which, after so long a separation, is full of surprises.

But he is an easy-going, "comfortable" man, this Kent. He never gets greatly

arrested with a party of suffragettes, and Kent is somewhat put to it to get her free. She does not kick and scream at the arrest, however; she goes "like a lamb," as the policeman says, "a pretty little piece, in green and terra cotta."

Two very interesting characters of the book are Mr. Dabney, editor of a very independent sheet, "The Balance," and Mr. Trist, a bachelor-philosopher and old-time friend of Kent's, both of whom serve the purpose of voicing the caustic things and the mildly sarcastic things which give the book flavor and poignancy without interrupting in the least the easy, good-humored rambling style which the author affects. Kent tells the story, but Mr. E. V. Lucas often speaks, through the mouths of Dabney and Trist, and not infrequently the words hit hard.

Mr. Dabney arranges our want of inde-

pendent action. "We vote for one man," he says, "because we are sorry for him; for another because we once met him somewhere and he was very pleasant; for another because his father's horse won the Derby; for another because his opponent is So-and-so, whom we detest." . . . "Virtue," he thinks, "we still consider the best goal for others, but for ourselves, success." And he goes on to show us as they are our weakness in journalism, in literature, on the stage, etc., in no temporizing manner.

Especially he assails the famous dance of "Salome," which has created such a furore in London during the past year—a matter of interest to us, since the dancer is a Canadian girl. Of her he says: "The other day, in one of the large music halls, a dancer appeared nightly in nothing whatever but a skirt of beads, and capered as provocatively as she was able round a waxen head. The dancer affected to be Salome, the daughter of Herodias, while the waxen head was intended for that of the decapitated John the Baptist. . . . So far as I could discover, I, who am a professed sceptic, was practically the only person in London whose feelings were outraged."

Though a sceptic, Mr. D. is concerned, as most sceptics are, with religious questions: "I have often amused myself by speculating on the probable reception that Christ would have were He now to appear in London. A character sketch, expressing the profoundest admiration in *The Daily Mail*, His portrait in *The Daily Mirror*, probably beside that of public men whom He more or less resembled; a guarded leader in *The Church Times*, and in *The British Weekly* an appeal to Nonconformists not to lose their heads—yet—not until a little more was known."

Mr. Trist's acuminous observations are more personal, if not more worldly-wise. "The art of life," says Trist, "is never to be out of small change."

"The art of life," says Trist, "is to keep down acquaintances. One's friends one can manage, but one's acquaintances can be the devil."

"The art of life," says Trist, "is to show your hand. There is no diplomacy like candor."

—And so goes on this modern Solomon. As a foil to these two critics, is Miss Gold, Kent's one-time sweetheart, now an invalid, who is all goodness, and benevolence, and kindness of heart.

But I must stop—although I could go on for an hour, telling you about this delightful book—even though I must leave you in doubt as to whom Kent marries, for he does marry, even at fifty-five. Enough if I have given you an inkling of the quiet charm, the sly humor, the pleasing, rambling style, yet the evident purpose, which have made the volume of pleasure to me, as I trust it will be to you, if you have a chance to read it. You must look for no intricate plot, for no startling denouements in "Over Bemerton's," but you will find in it what is more to the point, real life, and some little degree of inspiration. D. D.

Bacteria.

PRIZE ESSAY.

Many people seem to think that bacteria are animals or bugs, but we shall hope to show what these organisms really are. Bacteria are plants, but are so very small that a powerful magnifying lens is required to see them. These plants vary in size as other plants do. The smallest that we can see are about one fifty-thousandth of an inch in diameter, and the largest about one ten-thousandth, others are sizes between these two extremes. It would seem impossible to measure objects so small that fifty thousand laid side by side would make a layer only an inch wide. There are different kinds of bacteria, and they differ in shape. There are three general shapes—rods, spheres and spirals. A stack of chalk, a ball, and a corkscrew, would illustrate these kinds. Others look like rods slightly bent, and still others are branched or irregular in shape. Bacteria plants are everywhere about us in air, water and soil.

In the soil there are a number of kinds of useful bacteria. There are in all soils potash, phosphoric acid and nitrogen compounds, but they are often locked up in a chemical combination which the plants are unable to use for food. Some of these bacteria are able to break

compounds, placing the plant food in a condition to be used. Other kinds of bacteria help to decompose manure and humus of the soil, thus making food of it for grain plants. All these desirable kinds require plenty of air for growth. It is partly because of this that the earth is cultivated so well when a good crop is wanted. Another kind of bacteria in the soil forms little nodules on the roots of some plants, such as clovers, alfalfa, peas, beans and the like, and draws upon the nitrogen from the atmosphere, and stores up this valuable food in the roots and stems of the plants. This adds to their value as fertilizers. Then, in the dairy, the lactic-acid bacteria cause milk to sour and cream to ripen, and give to butter its flavor. Bacteria are also concerned in the ripening of cheese and imparting to it its desirable flavor. Vinegar depends upon the yeast and bacteria which make up mother of vinegar and which cause the sweet cider to ferment, first to hard cider (alcohol), then to vinegar.

There are many harmful bacteria which produce disease. Filth bacteria are harmful in milk, causing sickness in infants who are fed with it. The bacteria plants multiply in a peculiar manner. The plant simply increases slightly in size, then divides through the center into two, sometimes four individuals. Each of these again enlarges somewhat and again divides up, and so on. [Also by "budding."] If the conditions for growth are suitable, this new formation of plants may take place very rapidly. New plants may be formed every 10, 20, 30, or 60 minutes.

Now, in order that bacteria may live and grow, certain conditions are necessary. They must have food like other plants, some one kind and some another. Bacteria require the same chemical elements for growth as plants, viz. carbon, hydrogen, oxygen, nitrogen, and some others, and the changes we see caused by bacteria are made by their endeavor to get these foods. Another condition for growth is plenty of moisture. The bacteria are made up mostly of water, and unless there is enough moisture they cease to grow, and die. Another essential for growth is a favorable temperature. They will not grow where it is very cold, and a high temperature, as of boiling water, soon kills them. Most bacteria grow very rapidly in "summer temperature." Oxygen, or a good air supply, is also needed to make them grow and multiply well. The most common kinds of bacteria, then, require these four conditions for growth—proper food, moisture, favorable temperature and air supply.

If milk is desired to be kept sweet, it can be done by cooling the milk to a temperature of about 40 degrees Fahrenheit, at which the bacteria increase very slowly. Other bacteria which get into milk with bits of straw, manure, hairs, and other filth, cause putrefactive odors and flavors. Care should be taken to keep these out of milk by strict cleanliness. The preservation of meats by salting depends partly upon the water being drawn from the cells so the bacteria are unable to grow. Smoking meat kills the bacteria. Drying meats, fruits, etc., draws out the moisture, thus killing the bacteria. Keeping food in a refrigerator will prevent spoiling, because the bacteria cannot grow in the cold atmosphere. In the preserving of fruits, the high temperature kills the bacteria and moulds which are always present on fresh fruit.

There are disease-producing bacteria about us, but the best way of fighting these is to keep our bodies and those of our domestic animals in a vigorous, healthy condition, by strict cleanliness and right methods of living, so that the disease bacteria are unable to get a foothold. Our houses and barns and yards should be kept clean, so that bacteria are unable to grow.

Now, in fruit preserving, the selection of the fruit is the first step in obtaining good results. The fruit should not be under or over ripe, although it is safer to use it a little under ripe, and it should be sound and clean. In the preservation of fruit by canning, the essentials in the process are the sterilization of the fruit, of all utensils used, and the sealing of the fruit in the jar, and gases entering, so keeping out all disease-producing bacteria. The water in the jars should be in a well-watered condition, and the jars should be placed

in a clean, well-ventilated place. The application and employment of heat is a most effective preservative, and the best one consistent with safety to the user of the food.

The enemies we seek to overcome in canning fruits are chiefly ferments and moulds. The jars should be perfectly clean, thoroughly scalded with boiling water, filled to the top and left in for a while, rubbers and covers should be boiled and good rubbers used. The rim of the jar should have no flaw in it. Jars should never be put away imperfectly cleaned. Some people use sugar when canning, and some do not, according to preference. Sugar is not necessary, although if made into a syrup it will keep the fruit. Many of us like fruit put up without sugar, it being added after. There are two methods of filling the jars. One is to put the cold fruit in and cook in the jars, the other is to cook the fruit, fill and seal the jars. Either way is good, some like one way and some another. E. FLATT.

Wentworth Co., Ont.

Bacteria.

PRIZE ESSAY.

A very disturbing question at the present time is that of bacteria. If the word bacteria is mentioned, people imagine all sorts of bugs and slimy things in the water in the ditches, and probably some remember some rancid butter or putrid cheese they have met with. Perhaps some think of typhoid or some other dreadful malady. . . . But all the time people are finding out more on this subject and most people have some idea of what bacteria are. It is believed that most of the every-day transformations that go on around us are due to these bacteria, the souring of milk, ripening of cream, fermenting of fruit, etc.

Over three thousand forms of bacteria are at present known. They occur in an infinite number of shapes, and are so minute that it takes a powerful microscope to see them. If we take a drop of souring milk and place it on a glass and on it put a small glass cover-plate, and view this through a highly-magnifying microscope, we will see these forms. They are nearly all single-celled, lowly-developed, plant-like organisms. Some are flat and oval; others rodlike or spiral, together with an infinite number of twisting, twining, whirling forms. They are quite active, and their reproduction takes place by budding. A small plant starts to form from the side of an old one, and when it is big enough it separates from the old one and a new plant is formed. Under favorable circumstances, their reproduction is so numerous that their number may be doubled in half an hour, or less.

These minute forms exist everywhere. Many of them are free, floating around in the air; others are in water and decaying or putrefying substances are full of them. There are certain temperatures which are favorable to their rapid growth. Some thrive well at the temperature of the room, 65 degrees or 70 degrees; others do best at blood heat, 98 degrees, etc. If the temperature varies too much from this, reproduction ceases. Boiling will kill the plants. They do best in moist, dark places, at their favorite temperature. The free forms in the air will settle on any favorable locality, and start their work, of which there are many kinds.

Some change starch into sugar. This occurs when germinated barley is steeped in warm water. Then others change sugar into alcohol, which occurs when yeast is mixed with sugar at ordinary temperature. These actions are in a class called fermentations; and that is what occurs when fruit spoils. Then there is a certain class of bacteria which causes alcohol to change to acetic acid. This occurs when light wines and beer are made into vinegar. Strong alcohols, such as whiskey and rum, kill this ferment-producing organism, and so vinegar cannot be made from whiskey or rum. Yeast is the ferment-producing substance that changes sugar into alcohol, and the gas (air) on dioxide which is formed in burning wood. This gas forms bubbles in the dough and makes the "nexting-bread." Souring of milk and ripening of cheese also comes under this class of fermentation, as somewhat sweetened milk is spoiled by certain bacteria.

Then certain bacteria cause a process called "rot" or decay. As an example, we

waste away under this action; plants mould and decay somewhat similarly. The spoiling of meat and rotting of eggs and changes in milk, are also due to these causes. Butter is partly a combination of glycerine and butyric acid, and when bacteria act under favorable conditions, this butyric acid is separated, and it has a particularly offensive odor.

There is also a form of nitrification due to bacteria which is useful in changing manures into soluble nitrates suitable for absorption into plants. This process is due largely to bacteria. Many diseases are due to bacteria causing certain disturbances. Some bacteria change our food into tissue-building elements which form muscle or fat. These are necessary to our growth and life. Some bacteria, however, get into our bodies, and, instead of forming necessary elements, form poisons which, if present in large enough quantity, make us sick with typhoid fever, boils, ulcers, etc. Some of the diseases, as lockjaw, due to these harmful organisms, can be cured by giving the patient other forms of bacteria to kill the poison-producing organisms. To prevent the admitting of these bodies into the system, it is necessary to pay prompt attention to scratches or other injuries, and to have one's surroundings clean and sanitary. Rotting piles of leaves or garbage and undrained ground prove excellent lurking places for these villains who are only too ready to do us harm. Flies and mosquitoes, which are our unwelcome visitors in the summer, carry around on their legs thousands of bacteria, many of which may be harmful. So it is best to have as few flies in the kitchen as possible.

There are several ways of ridding ourselves of undesirable bacteria. One of them is to subject our food, butter, meat, fruit, etc., to cold. This prevents reproduction. For this reason the refrigerator is used for milk, butter, etc. If ice is not obtainable, the cistern may be made use of. For milk, cans with a tight-fitting lid could be lowered into the well, or placed in cool, running water.

Boiling is a sure remedy, as it kills the bacteria. Drinking water suspected of contamination should be boiled, or typhoid may result. After washing the dishes, particles of food or grease may adhere to the cloth, and, if put away moist, conditions for bacterial action are favorable, i. e., moisture and temperature. Scalding before using each time would insure the killing of the germs. So it is necessary that all the kitchen utensils should be frequently scalded and kept clean and bright. Sunshine and air do much to keep things dry and wholesome. In canning fruit, the bacteria should be all killed by scalding the jars, lid and rubber, just before using, and put in the hot fruit right away and seal tight, so that the jar is perfectly air-tight. [Better boil jars and lid and scald rubber.—Ed.]

Certain preservatives may be used to keep fruit, meat, etc., as alum, sugar, and salt; the salt more so for corn and green peas, beans, and meat; the sugar for jellies and marmalades. Meat or apples will keep better if they are dried, as bacteria require water to work.

Kent Co., Ont.

Answers to Questions.

The following answers to questions have been selected from various papers:

1. Why are dried beef, dried fruits, etc., so easy to "keep?"

"Dried fruit keeps because the juices are all dried away, and bacteria cannot work where there is no moisture."

"In the case of dried beef, the salt and saltpetre used in curing are both agents which prevent the multiplication of bacteria."

2. Why will milk and foods of various kinds keep sweet and fit for use so much longer when in the ice chest than when in the cupboard?

"The low temperature of the ice chest is unfavorable for the growth of bacteria."

3. If you had no ice, yet wished to keep milk sweet longer than it is likely to in hot water or what would you do?

"Where no ice is handy, milk could be kept longer by putting it into a double boiler and heating almost to boiling point, and then sealing it up in thoroughly sterilized covers, as in canning fruit. . . . The jars should be that is, put it in

a vessel and heat to 165 degrees, then seal in sterilized jars and put in a cool place." [Prof. Dean says pasteurizing may be done by heating from 145 to 185 degrees, 155 degrees for 20 minutes being the average. Milk so heated and thoroughly sealed in sterilized sealers, will keep sweet two or three days longer than ordinarily, if kept in a cool place. If sterilized or boiled, and then so sealed, it will keep sweet indefinitely, but is not quite so digestible as when merely pasteurized. Other correspondents, in answering this question, say they would add a little soda and keep the milk in a cool place. This would have some effect, on the principle that an alkali counteracts an acid, the alkali in the soda counteracting the lactic acid of the milk.]

4. Why is it that the following "keep" with so little care, comparatively: Very rich fruit, jelly, marmalade, salt pork, corned beef, salt fish, pickles, mincemeat and sausage?

"Bacteria take food by osmosis, i. e., they draw in through their cell walls the nourishment they need. In the articles mentioned, the medium is so thick that they cannot do so."

"Very rich fruits, jelly and marmalade keep easily on account of containing so much sugar, sugar in quantity not being a favorable substance for the reproduction of bacteria. Salt pork, corned beef, etc., keep because the processes they undergo give them a tough outer skin, and the sugar, molasses, salt, saltpetre and spices used in curing are all detrimental to the life and multiplication of bacteria. Pickles keep because the vinegar is already full of the bacteria of fermentation and is not a good growing place for the bacteria of putrefaction." "In mincemeat and sausage, the fat assists the other preserving agents in checking the work of bacteria."

5. Why is very frequent scalding necessary to keep a dish-cloth pure and harmless?

"In no article in the house does bacteria revel as in a dirty, moist, dish or milk-pail cloth. By all means wash such cloths well every day, with soap and water, boil, and dry in the sunlight."

"A dirty dishcloth is about the dirtiest thing a house can harbor; as it fairly reeks with bacteria, multiplying in its moisture and filth. Boiling and sunlight are death to bacteria; the dishcloth should be treated to both every day."

(To be continued.)

**Milk in Breadmaking.**

Dear Dame Durden,—I have long thought I would draw my chair closer into the circle again, but, as you know, "procrastination is the thief of time."

Now, you asked if any of the readers had used milk in making bread. I think sweet milk much better than water for the bread. I scald it, and use just the same as water, only it takes a little more of the milk for the same amount of bread. I remember seeing my mother scald sour milk and use the whey, and such delicious bread we had, but some of us never see any sour milk since the advent of the cream separator. I think nothing could be better than bread made with the sweet milk. It is a little more trouble, but that is nothing when the food value is considered.

Another thing I would like to tell the Chatterers is that I have found a way to hull corn without using the lye as our grandmothers did. Take two quarts of corn, or, for that matter, as much as you like, soak it all night in warm water; in the morning wash and put on the stove in almost boiling water and add a tablespoonful of baking soda to each quart of corn and boil until the hulls will slip off, then pour it out into cold water and rub and wash until the hulls are all off, changing the water until it looks clear and not cloudy, then put on stove and cook until tender. This recipe should come in the fall, but if any wish to try it, they will keep it until then.

EDNA.

**From Another.**

I often use skim milk when baking. I do not like the look of the bread so well; it does not rise as nicely and has a yellow look, but tastes good.

Daily Wants say:

"Bread made entirely with milk becomes dry much sooner than that which is moistened with a portion of water. If the flour and yeast are good, water

alone will yield the most wholesome and nutritious bread." SCOTTIE, Middlesex Co., Ont.

**Dandelion Wine, Etc.**

1. Will you send me the recipe for dandelion wine; also for grape wine?

2. Have a rain coat which lets the rain through. Could I oil or paint it to prevent rain soaking through? If so, what kind of oil or paint is best? The inside is a gray, and outside is striped goods.

3. Can you tell me how to take old paint off and leave the boards natural color?

Will send a few good recipes.

Beef Loaf.—Two lbs. tough beef of any kind, 3 crackers rolled, 2 eggs, pepper and salt to suit taste, 1 can tomatoes. Roll all in a loaf and put half of tomatoes with other ingredients and the other half over the top of the loaf. Put in oven and bake about an hour.

Cabbage Salad.—1 head of cabbage, 3 apples cut fine. Dressing—Butter size of an egg, 1½ tablespoonfuls of flour, ¼ cup vinegar, 1 teaspoonful salt, ¼ teaspoonful pepper, 1 teaspoonful mustard, 2 table-spoons sugar, 3 or 4 of cream. Boil until thick and beat well. This is excellent. QUIET OBSERVER, Stormont Co., Ont.

Dandelion Wine.—1 gal. flowers, 1 gal. water. Let steep three days. Strain. Add 3 lbs. sugar, 3 sliced lemons, 3 sliced oranges. Boil. Take off, and, when lukewarm, add ½ yeast cake. Ready in a month. When serving, put 1 table-spoonful in each glass and fill up with water.

Grape Juice.—Weigh the grapes, then cook in a very little water until soft. Press and strain through a cloth. Add 3 lbs. sugar to each 10 lbs. grapes. Simmer a while, bottle hot, and seal. Add a little water to the juice when serving.

Grape Wine.—To each gallon of mashed grapes add a quart of boiling water; let stand overnight and strain; then to every gallon of juice add 3 lbs. white sugar. Drop a few pieces of well-toasted bread into it to hasten fermentation; stand in a cool place until it finishes fermenting, bottle and seal.

You do not say whether your raincoat is of material such as cravenette, or whether it was formerly coated with rubber on the inside. If the former, you might try "Lowry's Process": 2 ozs. soap, 4 ozs. glue, 1 gal. water. Soften the glue in cold water, and dissolve it, together with the soap, in the water by heat and agitation. The cloth is filled with this solution by boiling it in it for several hours. Next wring out, expose to the air until nearly dry, then put for 5 to 12 hours (depending on thickness of cloth) in a mixture made of alum 13 ozs., salt 15 ozs., water 1 gal. Finally wring out, rinse in clean water, and dry at a temperature of about 80 degrees F. This method is given by Scientific American.

To remove the paint, make a solution as follows: Take equal proportions of soda and quicklime. Dissolve the soda in water, then add the lime and apply with a brush to the old paint. Leave on a few moments, then mop off with hot water. Afterwards, if you wish to re-paint, wash well with vinegar to remove all trace of alkali.

**A Correction.**

Dear Dame Durden,—I most humbly beg your pardon for returning so soon, but either you or I made a mistake in the price of the breadmaker. It should read \$2.50, instead of \$1.50.

Do you answer letters by mail if a stamped envelope is sent? I always thought the suffragettes were a sensible lot. They evidently don't spend all their time in studying how to make themselves look ridiculous. OPHELIA.

In "extreme" cases I answer letters by mail, if a stamped envelope is enclosed, but you can readily see that I have very little time to do much of that, much as I would like to. About the suffragettes?—oh! oh!—but you are only joking.

**Recipes.**

Strawberry Shortcake.—2 eggs, ¼ cup sugar, 1 cup milk, 2 of flour, 1 table-spoon butter, pinch salt, 1 teaspoon baking powder. Beat the butter and sugar, add the well-beaten eggs and the milk. Sift the baking powder with the flour, stir into the other ingredients. Roll out about ¼ inch thick, and bake in four tins. Arrange in layers with crushed berries and sugar between. Put whole berries, covered with a meringue, on top.



Sherbet Glass and Custard Cup.

Useful for serving ice cream, fruit salad, etc., daintily.

Strawberry Ice Cream.—1 quart cream, 1 quart berries, 1 small pint sugar. Mash berries and sugar together and let them stand 1 hour; then add the cream, rub through a strainer and freeze.

Strawberry Charlotte.—Put ¼ package gelatine to soak in ¼ cup cold water, and when softened stir into a cup of milk scalded in a double boiler with 2 table-spoons sugar. Stir until dissolved, then strain into a bowl set in a pan of cracked ice, stir until it begins to thicken, then stir in a quart of whipped cream, flavored with vanilla. Line a bowl thickly with ripe strawberries, sprinkled with lemon-juice. Turn in the charlotte, and set away to harden.

Strawberry Sponge.—1 quart berries, ¼ package gelatine, 1½ cups water, 1 cup sugar, juice of a lemon, whites of 4 eggs. Mash the berries and add half the sugar to them. Boil the remainder of the sugar and the cupful of water gently for 20 minutes. Rub the strawberries through a sieve. Add the gelatine to the boiling syrup, and take from the fire immediately; then add the berries and lemon. Place in a pan of ice-water and beat five minutes. Add the whites of eggs, and beat until the mixture begins to thicken. Pour into moulds and set away to stiffen. Serve with sugar and cream.

**Flowers for Decoration.**

Probably everyone will agree that there is no form of decoration that can add so much to the appearance of a house as a few bouquets of flowers placed in advantageous positions, and yet how very much depends upon the taste with which the bouquets are arranged. There is really very little beauty in a conglomeration of flowers, zinnias, asters, garden chrysanthemums, marigolds, sweet peas, and a dozen other kinds packed together in a tight little mass, with the "scarlet lightning" in close quarters with the purple monkshood, and a big head of golden glow crushing its neighbor, a long-stemmed pansy, into pleats. When you think of a room decorated with such bouquets, you think of a room that is very distracting and wholly unsatisfactory.

As a rule, one kind of flower at a time gives the best effect, and is most likely to be safe. When the apple-blossoms were all a-bloom last May, I visited at a house in which the drawing-room, all in cool green—carpet and walls, with silk madras curtains in green and amethyst and amber at the windows—was decorated by a great mass of apple-blossoms. The effect was indescribably lovely, and the memory of that room will always remain with me, along with that of another, a darker room, with dark, polished floor, oriental rugs, and masses of pale pink peonies in great cool-green jardinières. One can easily imagine such rooms brightened by masses of ox-eye daisies, or cone-flowers, or golden-glow, or big, fluffy garden asters, or even the wild purple and mauve ones. Even golden-rod would give a magnificent effect, or fiery crimson nasturtiums, with their green leaves. In the fall nothing could be more beautiful than branches of colored maple

leaves, or of barberry, with its scarlet berries. But mix these different kinds, even by twos, and the whole beauty of effect may be lost.

It cannot be said, however, that flowers can never be combined—only that they must be combined with discretion. White apple-blossoms "mix" very well with scarlet japonica; feathery rue, "baby's breath," in fact almost any feathery, fuzzy flower, especially of white, will "go with" almost any flower,—but do not make the mistake of putting even three kinds in one bouquet.

Green-stemmed, herbaceous flowers almost invariably look best in plain, clear glass holders, which reveal the full beauty of the stems and leaves, enhanced even by the lights and shadows lurking in the water. The size and shape of the holder must, of course, depend upon the character of the flowers to be placed in it: obviously short-stemmed flowers, such as sweet peas and roses, look best in low rose-bowls; long-stemmed flowers, such as lilies and hollyhocks, in tall vases or jars. Vases that are somewhat constricted at the mouth, often prove most satisfactory for certain flowers.

Make a few trials in flower-arrangement and floral decorative effects. Nothing teaches like trying. "Learn to do by doing." You will not be sorry for spending a little time so, for with a flower garden at your disposal, you may make your home a spot of beauty, with comparatively little expense, for the fleeting summer months.

**Three Followers.**

The wily old Hessian sat in his door when three young men passed eagerly by. "Are you following anyone, my sons?" he said.

"I follow after Pleasure," replied the eldest.

"And I after Riches," said the second. "Pleasure is only to be found with Riches."

"And you, my little one," he asked of the third.

"I follow after Duty," he said, modestly. And each went his way.

The aged Hessian in his journey came upon three men.

"My son," he said to the eldest, "methinks thou wert the youth who was following after Pleasure. Didst thou overtake her?"

"No, father. Pleasure is but a phantom that flies as one approaches."

"Thou didst not follow the right way, my son."

"How didst thou fare?" he asked of the second.

"Pleasure is not with Riches," he answered.

"And thou?" continued the Hessian, addressing the youngest.

"As I walked with Duty," he replied. "Pleasure walked ever by my side."

"It is always thus," replied the old man. "Pleasure pursued is not overtaken. Only her shadow is caught by him who pursues. She herself goes hand in hand with Duty, and they who make Duty their companion have also the championship of Pleasure."—Ex.

**Another Man with the Hoe**

By John Hutchins.

Through rows of half-grown corn he moves.

Erect, elate as one who loves His toil. Before his hoe and plow

Its coarser work has done and now Gently, almost as with caress,

The buried stalk, rude clods that press, He frees, or slays some cruel weed

That saps the hills' life in its greed. The sun, that makes the corn-joints crack

With growth, beats hotly on his back; Behold him lift his hat and stand

Dashing the sweat drops with his hand; He looks about him; acres wide

Of well-tilled fields provoke his pride. He looks above where, piled on high,

God's clouds, like stairways, mount the sky.

Or skim the curved horizon's rim, Like sails that in the haze hang dim.

Coquetting plain to win his ear, The catbird on the wall sings clear.

He listens, rapt with sight and sound And kin to every creature round.

Thus, slaked at fountains which God fills, Essence of bird-songs, breath of hills,

He thrills with gladness just to be And do his work and know he's free.

**Production of Modern Paper.**

The production of paper has become in modern days an immense industry, but while patents have been issued for the manufacture of paper from barley, oats, rice, Indian corn, peas, beans, alfalfa, ramie, pine needles, sugar-cane, refuse, ote, moss, seaweed, linens, the bark of trees, and even beets and potatoes, nothing appears equal to linen for such manufacture. The great bulk of the paper now made, is manufactured from the wood of trees, the point that is of greatest importance to the paper-makers being to choose vegetable fibers having the highest percentage of product in pulp. The maximum product, which is obtained from such woods as poplar, does not exceed sixty per cent. Most of the paper made to-day is inferior to the paper of old times, because it is so largely used for the purposes for which perishability is not objectionable, and cheapness is what is desired. Insufficient removal of the chemicals by washing is the cause of deterioration of most modern paper. Paper is now put to numberless uses, including its employment for wheels, rails, cannon, horseshoes, gun-polishers, asphalted tubes, and papier-mache substitutes for metal, stone and wood. Even hollow telegraph poles have been made of paper. The use of paper in Japan is very extensive, and on the Continent of Europe, barrels, bottles, thread, whole houses, and—in Norway—even a church holding one thousand persons, have been made of paper. The total quantity of paper made in the world during the current year would form a cube whose side would be more than thirty-one and seven-tenths miles.—Zion's Herald.

**The Cure for Worry.**

What is worry, anyway? It is just a host of restless imps and fear, which, taken singly, could be conquered with hardly an effort. It is their multiplicity, their persistency, that discourages. How may worry be cured?

First, by realizing the utter uselessness of worry. A dozen eternities spent in worry will not change a single fact. It is only by hard, faithful work that such things are accomplished, and no man can work well, with a clear head and a steady hand, if he will persist in worrying.

Second, by taking a larger view of life. Most of us imagine that the world is comprehended within our own limited horizon. That is not quite true. There are really some good people, and some good things, beyond the line of our vision.

Third, by not "crossing bridges" until we come to them. As a matter of fact, nine-tenths of our fears are never realized. "Sufficient unto the day is the evil thereof."

Fourth, not only by remembering that to-morrow has not yet arrived, but that yesterday is always past.

Fifth, by constantly recalling that this is God's world. It has not yet gone to the devil. It may at times seem as though it had, but the presence of so many strong, good people in it, and the constant progress that we are making, disprove it.—Rev. Chas. Stetzie.

**At Nightfall.**

A dim remembrance brings a dream  
Of days long past when hearts were young  
And Life and Love were one dear theme

From soul to soul in rapture sung  
And now, at nightfall, when the shade  
Of evening rests on vale and hill,  
My faded lips on thine are laid,

And low I whisper, "Sweetheart," still  
Amid the shadows, sweet young hands  
Reach out to grasp my own in prayer,  
My clasped hand thrills and understands

Thy withered ones are resting there,  
But still my plea is not to dream  
That youthful fair hand in mine I hold  
For now it's sweetest gain I deem

That hand in hand were growing old  
The twilight falls upon thy face,  
And veils each weary one of care,  
Across the years I look and trace

A wonder and a glory there,  
This side by side through fair and strife  
Mid bleak and stormy weather,  
The hearts that face the dawn of life

With a prayer the dark together

**"The Farmer's Advocate" Fashions.**



DESIGN BY MAY MANTON.  
6337 Misses' Blouse with Dutch Collar.  
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DESIGN BY MAY MANTON.  
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The above patterns will be sent at the low price of ten cents per pattern, that is, for each number. Give full name and address, with order, to the Fashion Department of The Farmer's Advocate, 1038 N. 1st St., St. Paul, Minn.

**A Dusty Decision.**

"There wa'n't any better housekeeper in Whiteville than Angelina Blake," remarked Abigail Jackson with a severe glance at her neighbor, Mrs. Johnson. "You c'd never lay your finger on a speck of dust in her house."

"I've heard say she was a wonderful good housekeeper," Mrs. Johnson answered. "I never knew her myself, you know. She died just about a month before we moved here. We moved here two years ago last April, an' she died in March. Hiram Blake was tellin' me about it the other day."

"Oh, he was, was he?" Abigail Jackson gave her neighbor a rather acid look.

"Yes," went on Mrs. Johnson, biting a thread and not heeding the look; "I'd been tellin' him about how my poor husband suffered with neuralgia before he died. He died the September after we moved here, you know. He had neuralgia somethin' awful. I think 'twas the cold east winds that summer. 'Twas awful rainy an' cold, you remember, a year ago last summer. Mr. Blake was complainin' about havin' a touch of neuralgia was how I came to tell him about it. Law! I can't seem to thread this needle. I guess I shall have to be gettin' spectacles pretty soon. I kind o' hate to come to it. Seems as if you're gettin' old when you have to wear spectacles."

"It's no sign of age, wearin' spectacles," retorted Mrs. Jackson with some asperity. "I've worn 'em ever since I was a girl."

"Makes a woman look older, somehow," returned Mrs. Johnson placidly.

"I guess," reverted Abigail Jackson, declining to continue this unprofitable line of thought, "your husband didn't suffer any more with neuralgia than Mr. Jackson did with rheumatism. He was all crippled up with it for a year 'n' a half before he died. He didn't do a stroke of work for more 'n a year. 'Twas pretty lucky for us he made his money early in life. I don't know what we'd done if he hadn't. When a man can't work an' has doctor's bills, an' hain't saved money, he's pretty bad off. But Ephraim worked hard all his younger days—he used to say that's how he got rheumatism fastened on him so bad, he guessed—an' he was pretty shrewd about investments, so we didn't have to worry none about money matters durin' his sickness. I was tellin' Mr. Blake about that the other day, an' saying how thankful I was I didn't have that to worry about durin' Ephraim's illness. He an' Ephraim were in business together, an' he knows I was left well off."

A triumphant glance from Abigail Jackson's steely eyes, unimpeded by the intervening spectacles, shot straight at the widow Johnson.

"There! I got it threaded at last!" announced that lady. "A needle's the most contrary thing! If a little tiny thread has such a time gettin' through the eye of a needle, I don't know how a rich man'll ever manage to. I guess the Bible don't mean that, though," she hastened to add, seeing some discomfort on the face of Ephraim Jackson's widow. "Parson Miller says the Bible eye of a needle's some sort of a little narrow gateway, just big enough for a man to squeeze through sideways. If rich men don't overeat an' get too fat I guess they'll be able to get through all right."

"Anyhow, I ain't worried about my Lemuel," she added with humorous wryness. "While he left me enough to be comfortable on, even if I don't get married again, he wa'n't what you'd call a rich man by any means. I guess you're the only woman in Whiteville, Mrs. Jackson, who can lay claim to the title of 'best housekeeper'."

Unable to extract a compliment out of this speech, Abigail Jackson was silent, and Mrs. Johnson continued: "I s'pose that's what a good many widowers think about when they come to marry a second time. 'Love an' good looks the first time, an' money the second!' I've heard say. It seems to me, though, as if Hiram Blake was different from some men. Seems as if he kep' kind of a younger in his thoughts than some. Besides, he's got money at the age of his own. He ain't used to marry no widow."

"Who said anything 'bout his marryin' a widow?" spoke up Angelina Blake. "What's the matter with Hiram?"

anything, will be good housekeepin'. He's a terrible particular man. He couldn't help bein' after livin' with Angelina Blake all those years. A house that's kept swept an' dusted, with a place for everything an' everything in its place, is what'll ketch him. I've noticed him more'n once when he's been here peekin' round sort of sly like to see if there was any dirt anywhere. An' if I do say it, who shouldn't, he's never seen any dirt yet."

"You do keep your house lookin' awfully nice, Mrs. Jackson," agreed Mrs. Johnson, admiringly. "I try to keep mine clean an' nice, too. It seems, though, as if you no sooner get your house cleaned up than it begins to get dirty again. An' I hate to spend all my time scrubbin'."

"Well, you can't expect to keep things clean without work. I know I have to work to keep things lookin' nice an' tidy. An' Angelina Blake had to, too. I've heard her say more'n once that it took a terrible lot of hard work, but she would have her house clean. I've heard her say that it didn't matter so much what you had to eat, or what you had to wear, but that 'twas a sin an' a shame for a woman not to keep her house clean."

"She wa'n't an overly good-lookin' woman, Mrs. Blake wa'n't," Mrs. Johnson said, with a touch of discontent in her tone. "I saw her picture down at her niece's one time, an' if she looked anything like her picture she was what I sh'd call pretty homely."

"Angelina Blake was a good woman," pronounced Abigail Jackson, glancing rather sourly at the plump figure and comely features of Martha Johnson. "An' beauty's only skin deep, anyway!"

"I know 'tain't," admitted Mrs. Johnson, "but I never saw a man yet that objected to it, other things bein' equal. Well, I've got my apron hemmed, an' now I must be goin'. I s'pose I'll see you at the sewin' circle Thursday?"

When Mrs. Johnson had gone, Abigail Jackson came back from the door and looked the sitting-room carpet over carefully. She finally stooped and picked up a bit of thread. "I don't believe I ever left any thread lyin' round on Martha Johnson's floors," she said, casting the offending cotton into the stove. Looking sharply at the carpet again she muttered: "Well, I s'pose I may as well do it first as last," and went and got the carpet-sweeper. After she had run it up and down the room, moving chairs and table from its path, she carefully dusted the furniture with a damp cloth. Then she seated herself by a window that overlooked Whiteville's main street, and began to knit industriously. Presently she glanced out and exclaimed: "There comes Hiram Blake now! I believe he's comin' here."

Rising hurriedly she gave the room another dusting with the damp cloth. No dust was there before she gave it this dusting, but it is well to make assurance doubly sure—especially when the widower of a "best housekeeper" comes a-courting.

When she let Hiram Blake in there was a smile of friendly greeting on her face that left no trace of the sourness she had shown her earlier caller.

"Glad to see you, Hiram," she said. "Take a seat an' sit down. Gettin' kind of warm out, ain't it?"

Hiram admitted that it was. Then his alert gaze went travelling from chair to table and from floor to ceiling, taking in, as Mrs. Jackson knew, every detail of the room. She sat with mind at ease, however, secure in the knowledge that nothing in the room was out of place, and that no speck of dust was anywhere visible.

When Hiram's gaze had travelled the room over carefully for the second time he sighed deeply, and Abigail Jackson's heart thrilled. What could have caused that sigh except the memory of the late Mrs. Blake? And what should have caused Hiram to think of her at that particular time except the sight of the immaculate cleanness of the room in which he was sitting—a room so suggestive of his own home in the days when it was kept swept and in order by the best housekeeper in Whiteville?

"He can look as much as he's a widower, but he won't see a speck of dust in my house!" she reflected, smiling. And then somewhat aston-

tationously she rubbed the table-top with her white cambric handkerchief.

"It's so hard to keep things clean," she said, letting the handkerchief lie there so it would be perfectly plain that it had not been soiled by contact with the table. "Sometimes I wonder if there ever was a towel as dirty as this," she added.

"Why," said Hiram, surprised, "I always thought Whiteville was a pretty clean place."

"Oh, well, perhaps it ain't the dirtiest town that ever was," said Mrs. Jackson, "but you know how disturbin' dirt is to a good housekeeper." A brilliant idea suddenly occurred to her, and she hastily got up. "What's that—a piece of thread?" she exclaimed, peering sharply down at the carpet. "No, I guess 'tain't, after all," she said. "Mrs. Johnson was in here sewin' a little while ago, an' she littered the room up some. I had to run the carpet-sweeper over the carpet after she left."

Hiram rose. "Well, I must be goin'," he said, and Mrs. Jackson, a little disappointed, went to the door with him. Her keen eyes saw him surreptitiously running his thumb over the hat-tree in the hall as he took his hat off the peg, and she viewed the act with perfect serenity, for had not the damp dust-cloth preceded Hiram's thumb over the same surface not a half hour before?

"He won't find a speck o' dust on his hand," she remarked confidently to herself as Hiram walked away, casting furtive glances down at that inquisitive portion of his anatomy. "I'm willin' to put my housekeepin' alongside Martha Johnson's any day," she declared to herself. "Hiram Blake's a mighty particular man, as anybody can see—and naturally would be, seem' what a fine housekeeper his wife was—but he may rub his thumbs over my furniture as much as he's a mind to, he won't find no dust on things. I'm a better housekeeper than Martha Johnson, if I do say it. I've seen dust on the back of the pictures in her parlor, an' that's more'n anyone can say of me."

Hiram was feeling lonesome this afternoon and much in need of companionship. He had been almost on the point of proposing to Mrs. Jackson under the combined influence of the cordial welcome she had given him and his knowledge of her very satisfactory financial condition. "He will next time, or pretty soon, anyway," the lady had told herself after he had gone. "He won't find a house anywhere in town cleaner and tidier than mine."

Hiram went straight from her door to Martha Johnson's. Martha gave him every whit as cordial a welcome as her rival had done. And somehow the undying youth in her dimples made her smile wondrously sweet to Hiram.

"Come right in, Mr. Blake; you look sort of tired. This spring weather kinder drags one out, don't it?" The fresh and cheery face of the widow did not indicate that the weather had "dragged" her out. But her assumption that it was the weather rather than the years that had slightly fagged Hiram was a delicate bit of flattery that the widower appreciated.

"Sit right down in the Morris chair," she said hospitably. "Here, let me drop the back down another notch. There, now you can lean back and take it easy. When I come in tired I always like to get in that chair. It rests me most as much as goin' to bed. I wonder if a little lemonade wouldn't taste good. I was just thinkin' about makin' some when you came. If you'll excuse me a minute I'll go an' make some."

Hiram sat up straight when she had gone and rubbed his palm over the arms of the chair. There was no dust on it. He took a neatly-folded handkerchief from his pocket and applied it vigorously to the arm of a chair near him. The handkerchief remained unsoiled. Then casting quick glances toward the door through which Martha had disappeared, he rose and rubbed the handkerchief over the top of the widow's work-table. If he gathered any dust the quantity was too small to be visible. Hiram sighed and started back toward the Morris chair. A bookcase caught his eye, and leaping toward it he rubbed the handkerchief along the top, and the look on his face changed.

He had barely got the handkerchief back into his pocket when Martha reappeared, bearing a tray with two glasses,

a glass pitcher full of lemonade and a plate of rich brown doughnuts.

"There are most all old books," she said, seeing Hiram in front of the bookcase. "Mr. Johnson was quite a reader, an' he used to buy a book every now an' then, but actually I don't believe I've bought one since he died. I don't seem to have much time for readin'."

"Is that lemonade sweet enough? I didn't make it so awful sweet, because some folks don't like it sweet, but here's some more sugar if you'd like it sweeter."

"I like mine pretty sweet," Hiram said, permitting the widow to put another heaping spoonful into his glass.

"I like mine sweet, too," she said, adding a spoonful to her own and putting some more in the pitcher. "I don't think I had very good luck with my doughnuts this week. They're most too brown."

"I like 'em brown," said Hiram, taking a huge bite out of one, and gulping down a big swallow of lemonade. He was sitting up straight in the Morris chair now and his look of weariness had left him.

"Have some more," she said, holding the pitcher toward him.

"Thank you, Mrs. Johnson, I believe I will," Hiram said, hastily drinking what was left in his glass and holding it toward her empty. "I don't know when I've had any that tasted so good."

"I think lemonade's refreshin'," answered the widow, modestly refusing the compliment to this particular lemonade in favor of the beverage in general—"specially when the weather begins to get warm," she added.

"I don't know just why 'tis, Mrs. Johnson," said Hiram, settling comfortably back in the Morris chair after his second doughnut and third glass of lemonade—"I don't know just why 'tis, but somehow your house seems more homelike than any house I go into."

"Well, Mr. Blake, I'm glad to hear you say that. I think it's quite a compliment, comin' from you. I don't believe anybody's a better judge of good housekeepin' than you are."

"Maybe not. I wasn't exactly thinkin' about what's called good housekeepin', though," said Hiram.

"Here, Mr. Blake, put that under your feet and then you can rest comfortable," interrupted the widow, pushing a foot-stool toward Hiram.

"I was thinkin' more about the feelin'-at-homeness of your house," resumed Hiram, stretching his legs out comfortably.

"A woman may be a good housekeeper an'—an' a mighty poor home-maker. For my part, I'd rather have things to use than to look at; an' when things get used they're apt to get dirty. I'm not so all-fired 'raid of a little dirt myself. I like to have things clean, of course, but not too clean. When they're kept too clean you get to feelin' that's all they are kept for—just to keep 'em clean!"

He rose and walked around the table.

"Now, Mrs. Johnson, I don't mean anything disrespectful to your housekeepin' when I say your house is homelike. Not a bit. You're a good housekeeper, an' your house always looks neat an' tidy. But if a chair or table happens to be an inch or two out of place it don't seem to worry you like it does some women; an' if a man should happen to bring a little mud into the house on his shoes I don't believe you'd have a fit over it. You'd sweep it up an' say nothin'. You'd try to make a man feel at home in his own house 'stead of makin' him feel like a stranger. An' I've been thinkin', Mrs. Johnson—Martha—that you're just the woman I'd like to have come an' keep house for me; or not 'keep house' so much as to make a home. An' if you're willin' to change your name again and become Mrs. Hiram Blake you'll be conforrin' a favor that'll be greatly appreciated."

On his way home, smiling and happy, Hiram drew the handkerchief from his pocket and looked lovingly at the dust mark on it.—[From Pictorial Review.]

Master—Say, Pat, why don't you and bein', the waitress, get married? She's a pretty girl.

Cochman—Faith an' I'll never marry anny girl who refuses to have no

### The Possibility of an Intelligence in the Plant.

Few more fascinating propositions than those which have been advanced in connection with the possibility of an intelligence in the plant come at present under the notice of the man of science, remarks that noted English student of botanical principles, S. Leonard Bastin. To most people, he admits, the suggestion may seem to be scarcely worthy of consideration—the point having been settled long ago, to their way of thinking. Yet, urges Mr. Bastin, when one comes to approach the matter unhampered by any prejudices, it must be admitted that, far from being settled, the question of plant intelligence has never, until very recently, been the object of any serious inquiry at all. It is now an established fact that plants can feel, in so far as the phenomenon of sensation is understood to be a response to external influence. This being so, there is nothing unreasonable should we go still further and seek for evidence of something approximating to a discerning power in the vegetable world. To quote Mr. Bastin, who writes in the London Monthly Review:

"It is always wise to keep before one the near relations of the great living kingdoms. As is well known, the exact line of demarcation between the two worlds has not been, and probably never will be, definitely fixed; in a sphere of life of which we should be quite unconscious were it not for our microscopes, plants and animals appear to blend imperceptibly together. Higher up the scale it is sufficiently obvious that the organisms have developed on very different lines, although one can never forget the extremely close connections at the start. To animals we freely grant a limited amount of intelligence, and it does not appear that there should be any vital objection to making a similar concession to plants, if due allowance be made for the differences of structure. It is the purpose in the present paper to gather together a few instances which seem to point to the presence of a limited intelligence in the vegetable kingdom; each one of these is either the outcome of personal observation, or else gathered from the record of an indisputable authority. In all cases they are selected as being examples which it is not easy to explain as direct response to any special stimuli, and cannot therefore be referred to as plant sensation.

"The interesting group of plants, almost world-wide in distribution, which have developed carnivorous habits, has always attracted a good deal of attention. Each one of the many species offers an infinity of fascinating problems, but for the present purpose it will be sufficient to confine our observations to the Sun Dew group—*Droseraceae*. Our indigenous Sun Dews are attractive little plants, found commonly in bog districts. The leaves of all the members of the family are densely covered with clubbed hairs, and a fly settling among the tentacles is immediately enclosed by these organs; meantime, a peptic fluid is exuded from the glands of the leaf."

An interesting experiment may be conducted with the Sun Dew. This experiment consists in placing a tiny pebble against the tentacles. These at once close in, it is true, but not the least attempt is made to put out the digestive liquid. How does the Sun Dew know the difference between the fly and the pebble? Still more remarkable were some investigations conducted a few years ago by an American lady—Mrs. Treat. She proved conclusively that the leaves of the American Sun Dew were actually conscious of the proximity of flies even when there was no direct contact. Pinning a live insect at a distance of half an inch from a healthy leaf, we are told that in about a couple of hours the organ had moved sufficiently near to enable it to secure the prey by means of its tentacles. A member of the same natural order as the Sun Dews—the celebrated Venus Fly Trap—is well known to be quite one of the strangest plants in the world. The species, a native of South Carolina, is sometimes grown in glass houses in England. The general form of its leaves is fairly familiar. Designed in two bristle-fringed lobes, both hinged together, the leaf, when fully expanded, bears a striking resemblance to a set spring trap. On the upper surface of each side of the leaf are arranged three

sensitive hairs. Should any object touch one of these, no matter how lightly, the lobes snap, they go together, the bristles interlock and the prey, if there be any, is a prisoner beyond any chance of escape. It is not surprising to find that such a highly-specialized plant will give us an incontrovertible instance in support of the theory of plant intelligence. The leaf of the plant will enclose anything which irritates its sensitive hairs. To induce the plant to accept a small piece of cinder, for instance, is a simple matter. But it does not take very long for the plant to find out—how, it is not easy to suggest—that its capture is inedible, and, acting upon this impression, it slowly opens its leaf and allows the substance to roll away. Now, try the same fly-trap with a leaf or even a morsel of raw beef. So tightly clenched are the two lobes that nothing short of actual force will separate them until after the interval of several days, when the plant has drained the fragment of the desired nitrogenous elements. Unless one admits the presence of some kind of discerning power on the part of the plant, it is not easy to explain its behavior.

At first sight the study of roots may not appear to be one of entrancing interest, and yet it is likely that these organs exhibit some of the most striking instances of intelligent action to be found in the vegetable kingdom. It was long a matter of speculation as to how growing plants are always able to direct themselves toward the dampest situations. The explanation of this is probably to be found in the fact that roots are inclined to take the line of least resistance. Thus, place a plant in a pot which is kept constantly standing in a saucer of water and it is surprising to find how soon the roots will appear through the hole at the bottom. We may, perhaps, take it that the roots have not grown downward thus quickly in order to get to the water so much as that the soil, softened by the capillary attraction of the water upward, has encouraged a speedy development in that direction. On the other hand, in the case of a calla plant, the pot of which was entirely immersed in water, the roots grew upward almost against the law of gravitation, so as to disport themselves freely in the water. In the last instance it seems to be only half an explanation to say that the roots grew upward, as they did in the greatest profusion, simply because it was possible that the line of least resistance lay in that direction. Other root phenomena are even more difficult of explanation. Take, for instance, the following typical example, so well described by Dr. Carpenter that one cannot do better than give his own words:

"In a little hollow on the top of the shell of an old oak (on the outer layers of which, however, the branches are still vegetating) the seed of a wild service tree was accidentally sown. It grew there for some time, supported, as it would appear, in the mold formed by the decay of the trunk on which it had sprouted; but this being insufficient, it has sent down a large bundle of roots to the ground within the shell of the oak. These roots have now increased so much in size that they do not subdivide until they reach the ground; they look like so many small trunks. In the soil, however, toward which they directed themselves there was a large stone, about a foot square, and had their direction remained unchanged they would have grown down upon this. But about half a yard from the ground they divide, part going to one side and part to the other, so that on reaching the ground they enclose the stone between them, and penetrate on the two sides of it."

Now here is a puzzle indeed. The growing root points were aware of the obstructing stone eighteen inches before they could have come into contact with it, and, acting upon this knowledge, they took steps to get over the difficulty. Eighty odd years ago the account of a young Scotch fir upon a wall sending down its roots many feet to the ground was treated with incredulity, but this is now known to be a not uncommon achievement. Such examples are not easy to explain if we discount the idea of root intelligence. Again, the aerial roots of the tropical lianes seem to possess a wonderful cunning. Cases have been recorded in which these plants,



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growing under artificial conditions, have sent out their organs to a tank twenty-five feet beneath, evidently with the knowledge that they would find water at the end of their journey. Again:

"The opening and shutting of the floral envelopes is largely dependent upon the action of the light. In various species the degree of illumination operates in a different manner. With some flowers it is only the failing light toward evening which causes them to shut up, while in others the cloudiness of the sky during the daytime, which may herald rain, exerts a similar influence upon the blossoms, and thus the delicate essential organs are protected from the damaging moisture. As a rule, the blossoms which have acquired the power of closing up at the threatening downpour are those which are quite, or nearly, erect in their bearing. On the other hand, in a general way, the blooms which cannot gather their petals together are pendulous in their habit. A remarkable change in the pose of a flower under artificial conditions is that of the Gloxinia, a case which has been the subject of a good deal of comment from time to time, although it appears that few people realize the important bearing which this instance has upon the subject of plant intelligence. As is well known, the wild ancestor of the fine florist's variety is an insignificant South American species, with small drooping blooms, the corolla of which is open throughout the whole life of the flower. The aim of the gardener in connection with the Gloxinia has been to enlarge the bloom and also to cause these to be erect in their bearing. His efforts have been completely crowned with success, and we now have varieties with huge flowers borne in a perpendicular fashion—the whole plant forming a strange comparison with the early type. The point upon which, in the present instance, one would wish to enlarge is the fact that this has to a great extent been made possible owing to the culture of generations of Gloxinias under glass; it appears to be doubtful whether such a radical change in the bearing of the flower could have been brought about in the open, even in a tropical climate. It must be remembered that ever since the introduction of this species into our greenhouses—now many years ago—the plants have never known what it is to experience rain, and finding out that the principal reason for this hanging of their flowers has gone, have been willing models in the hands of the florist. Much the same kind of thing is taking place among the South African Streptocarpi, the members of which genus are rapidly becoming much more erect in their bearing as a result of their cultivation under glass. There seems to be something more than a mere adaptation to environment in these changes under artificial surroundings; the plants appear to have become aware of the fact that as far as they are concerned it will never rain any more, and that the former precautions against falling moisture are no longer necessary."

It is very much to the interest of some plants to display their blossoms at night, in that they are dependent upon the offices of insects which fly after dusk for the fertilization of their organs. In most cases of this kind the flowers are white or of a very light color and show up in the dark quite clearly. Here we see that the failing light has exactly the reverse effect which was noticeable in the examples of day-blooming species. In the so-called champion of Great Britain there is a drooping of the pretty flowers all through the day, but they are displayed to advantage at the approach of evening. In some of the cacti the flowers are never open at all except in the hours of darkness—a typical instance opening its blossoms at about ten o'clock. Another typical nocturnal plant is the white tobacco, a species so commonly grown in gardens, on account of its fragrant blossoms. Within the last few years, hybrids have been raised between this and some of the colored nicotianas, and it is very strange that most of the forms possessing colored blossoms open their flowers during the daytime, although their past ancestors were night-blooming species. One may say that the plants seem to know that colors do not show up during the hours of darkness. A very interesting fact is very doubtful whether any of the black Mithras in existence in the world

fertilizes nicotiana—ever visit the plants in England, as it is certain that their probosces would not be sufficiently long to reach the end of the tube. Still, this does not alter the significance of the action on the part of the hybrids mentioned above. In the whole question of the opening and shutting of flowers there seems to be something evidenced which is akin to an intelligence. All students are aware of a number of instances in which plants open their flowers and emit perfume at certain times, and on examination it is found that this is just during the hours when a particular insect—often the only one which can assist the fertilization of the organs—is abroad.

The whole subject of the relation between plants and insects is one which is full of mysteries. It is not always easy to see just how these relations have been established, even though one admits that they must have been developed side by side. In hundreds of cases, plants have specially adapted their floral organs for the reception of one kind of insect, often so arranging the processes that others are excluded. We quote again:

"Even more remarkable are those instances in which a definite compact seems to have been arrived at between the plant and the insect, the former tolerating and at times even making some provision for the latter. The case of a species of fern is a typical one. This plant provides little holes down the sides of its rhizomes for the accommodation of small colonies of ants; the exact service which these insects render to their host is not very clear. The following instance of a Central American acacia is quite romantic in its way, but it is vouched for by good authorities. This tree grows in districts where leaf-eater ants abound, and where the ravages of these insects are so dreadful that whole areas of country are at times denuded of foliage in a few hours. The acacia has, however, hit upon a unique way of protecting itself against the assaults of these enemies. At the end of some of its leaves it produces small, yellowish, sausage-shaped masses, known as food bodies. Now, these seem to be prepared especially for the benefit of certain black ants which eat the material greedily, and on this account it is no matter for surprise that these insects (which are very warlike in habit) should make their homes in the acacia, boring out holes in the thorns of the tree to live in. It is not very difficult to see how this arrangement works out. At the approach of an army of leaf-cutting ants, the hordes of black ants emerge, fired with the enthusiasm which the defence of a home is bound to inspire, with the result that the attacking enemy is repulsed, and the tree escapes unscathed. Explain it how one will, it is impossible to deny that it is very clever of the acacia to hire soldiers to fight its battles in the manner described above.

"When plants find themselves in extraordinary positions they often do things which seem to be something more than just cases of cause and effect. There really appears to be such a thing as vegetable foresight, and by way of illustration reference may be made to the manner in which plants in dry situations strive to come to maturity as soon as possible. Specimens growing on walls are most instructive in this connection. It is always noticeable that plants in such positions run into flower and produce seed much in advance of their fellows living under more normal conditions. By so doing they have made certain the reproduction of their kind long before the hot summer has arrived, at which time any active growth on a wall becomes an impossibility. It is willingly conceded that shortage of water discourages a luxuriance of growth and tends to induce an early maturity, but to anyone who has watched the habits of plants under these circumstances there seems to be something more than this—something which enables the plants to grasp the fact that their life can only be a very short one, and that it is their duty at the earliest possible time to flower and produce seed ere they perish. "Generally speaking, plants are most desirous to obtain as perfect an illumination as is possible to their foliage. Of course, light is so necessary to bring about the formation of perfect green tissue that it is not surprising to find that a sufficient stimulus to cause vegetation to move their organs to the position from which the illumination is

coming. But there are parts of the world in which plants find that the direct rays of the sun, where this orb is nearly vertical, as in Australia, are more than they can stand. The blue-gum trees, for instance, find that the solar heat is too great for their leaves, and accordingly adopt an ingenious way out of the difficulty. As young plants growing under shelter, the eucalypti develop their leaves in lateral fashion, fully exposing their upper surfaces skyward. Later on, however, as the plants grow into trees and rise above any screening shade, the blue-gums turn their leaves edgeway fashion, so that no broad expanse is exposed to the scorching sun. Some plants direct certain organs away from the light, as is seen in the case of the vine, where the tendrils always seek dark corners. The value of this tendency is very apparent, for it must be seen at once these organs, whose sole object is to obtain a hold somewhere, would be much more likely to do so in some cranny, than if they took their chance by growing out into the open. This habit is exceedingly interesting, when we remember that the tendrils are modified shoots, parts of the plant which certainly do not shun the light. Indeed, these tendrils seem to be working against their inherent tendency.

The instances which have been detailed above might be multiplied almost indefinitely. They have been selected out of an immense mass of evidence which is at the disposal of any student who will take the trouble to watch the members of the great vegetable kingdom. To say that plants think, as has been suggested by an enthusiast, is probably carrying the matter too far; the word used in its accepted sense scarcely conveys a right impression of the mysterious power. Rather would one refer to the phenomenon as a kind of consciousness of being, which gives to each plant an individuality of its own. It is likely, and indeed highly probable, that it is impossible for the human mind to grasp just how much a plant does not know, but in the face of proved fact the existence of some kind of discriminating power in the vegetable kingdom will scarcely be denied.—[Current Literature.

**The Children.**

Oh! what would the world be to us  
If the children were no more?  
We should dread the desert behind us  
Worse than the dark before.

What the leaves are to the forest,  
With light and air for food,  
Keen their sweet and tender juices  
Have been hardened into wood.

That to the world are children,  
Through them it feels the glow  
Of a brighter and sunnier climate  
Than reaches the trunks below.

Come to me, O ye children!  
"And whisper in my ear  
What the birds and the winds are singing  
In your sunny atmosphere."

For what are all our contrivings,  
And the wisdom of our books,  
When compared with your carresses,  
And the gladness of your looks?

We are better than all the ballads  
That ever were sung or said,  
For we are living poems,  
And all the rest are dead.  
—Longfellow.

**A Delicate Hint.**

Sandy and his lass had been sitting to-  
gether about half an hour in silence.  
"Maggie," he said at length, "wasna  
I here on the Sawbath night?"  
"Aye, Sandy, I daur say you were."  
"An' wasna I here on Monday night?"  
"Aye, so ye were."  
"An' I was here on Tuesday night, an'  
Wednesday night, an' Thursday night, an'  
Friday night?"  
"Aye, I'm thinkin' that's so."  
"An' this is Saturday night, an' I'm  
here again?"  
"Well, what for, no? I'm sure ye're  
welcome."  
Sandy (desperately): "Maggie, woman!  
I can begin to smell a rat!"

**Where No Land Lies.**

Where no land lies,  
Far out under the cloudy skies,—  
Alone, adrift,—  
A gleam of blue in a quiet rift,  
The monotonous flow  
Of waves, which gather, and comb, and  
go  
On forever.

Where no land lies,  
Far off, a lonely sea gull cries,  
And clouds come down  
On my hair all flowing, and cool, and  
brown;  
And in my face  
The slanting rain-drops drive apace,  
Ever and ever.

Where no land lies,  
And only the screaming sea gull dies,  
Alone, all day,  
The dull sea waste is my chosen way;  
In wind and rain,  
I dream mine olden dreams again,  
Ever a part  
Of the wilding sea's lone, passionate  
heart;  
In rain and wind,  
An idle ecstasy I find,  
Where only the lonely sea gull cries,  
Where no land lies.

—Helen M. Merrill.

**"The Midges Dance  
Aboon the Burn."**

The midges dance aboon the burn,  
The dews begin to fall;  
The pairtricks down the rushy hoim  
Set up their evening call.  
Now loud and clear the blackbird's sang  
Rings through the briery shaw,  
While, fitting gay, the swallows play  
Around the castle wa'.

Beneath the golden gloamin' sky  
The mavis mends her lay;  
The redbreast pours his sweetest strains  
To charm the lingering day;  
While weary yeldrins seem to wait  
Their little nestlings torn,  
The merry wren, frae den to den,  
Gaes jinking through the thorn.

The roses fauld their silken leaves,  
The foxglove shuts its bell;  
The honeysuckle and the birk  
Spread fragrance through the dell,  
Let others crowd the giddy court  
Of mirth and revelry,  
The simple joys that nature yields  
Are dearer far to me.

—Robert Tannahill.

**PICTORIAL ANCESTRY.**

An Englishman, fond of boasting of his  
ancestry, took a coin from his pocket,  
and, pointing to the head engraved on it,  
said, "My great-great-grandfather was  
made a lord by the king whose picture  
you see on this shilling."  
"What a coincidence!" said his Yankee  
companion, who at once produced another  
coin. "My great-great-grandfather was  
made an angel by the Indian whose pic-  
ture you see on this cent."

**GOSSIP.**

**OFFICIAL HOLSTEIN-FRIESIAN  
TESTS.**

Reports of Canadian official tests of  
Holstein-Friesians for May, 1909.  
Natoye De Kol 4th (10978), at 5 years  
9 months 8 days of age, 20.73 lbs. butter-  
fat, equivalent to 24.21 lbs. butter;  
520.5 lbs. milk. Owned by J. W. Stewart,  
Lyn, Ont.  
Daisy S. of Lyn (2725), at 9 years 11  
months 9 days of age, 18.08 lbs. butter-  
fat, equivalent to 21.09 lbs. butter; 494.8  
lbs. milk. Owned by J. W. Stewart.  
Korndyke Pietertje De Kol 2nd (10977),  
at 7 years 1 month 22 days of age,  
17.55 lbs. butter-fat, equivalent to 20.47  
lbs. butter; 550.0 lbs. milk. Owned by  
J. W. Stewart.  
Netherland Crony (3028), at 9 years 30  
days of age, 16.83 lbs. butter-fat, equiva-  
lent to 19.64 lbs. butter; 512.3 lbs. milk,  
owned by W. S. Schell, Woodstock, Ont.  
Ebbe Abbekerk (2994), at 10 years 5  
months 12 days of age, 15.02 lbs. butter-  
fat, equivalent to 17.53 lbs. butter; 573.0  
lbs. milk. Owned by A. E. Smith & Son,  
Millgrove, Ont.  
Daisy's Florence De Kol (4204), at 7

years 3 months 17 days of age, 14.23  
lbs. butter-fat, equivalent to 16.60 lbs.  
butter; 419.3 lbs. milk. Owned by J. W.  
Stewart.  
Bessie Covert 3rd's Pansy 2nd (5799),  
at 9 years 4 months 17 days of age, 13.77  
lbs. butter-fat, equivalent to 16.07 lbs. but-  
ter; 424.6 lbs. milk. Owned by W. S.  
Schell.  
Favorit, 10th's Beauty (5622), at 4  
years 11 months 16 days of age, 15.31  
lbs. butter-fat, equivalent to 17.87 lbs.  
butter; 511.2 lbs. milk. Owned by A.  
E. Smith & Son, Millgrove, Ont.  
Cassie De Kol (6379), at 4 years 9  
days of age, 14.65 lbs. butter-fat, equiva-  
lent to 17.10 lbs. butter; 386.4 lbs. milk.  
Owned by J. W. Stewart.  
Lady Zorra Netherland (7507), at 3  
years 7 days of age, 14.38 lbs. butter-  
fat, equivalent to 16.78 lbs. butter; 480.9  
lbs. milk. Owned by Wm. E. Thomson,  
Woodstock, Ont.  
Korndyke Pietertje De Kol 3rd (10979),  
at 3 years 1 month 15 days of age, 12.58  
lbs. butter-fat, equivalent to 14.68 lbs.  
butter; 344.7 lbs. milk. Owned by J.  
W. Stewart.  
Laura De Kol (8148), at 2 years 11  
months of age, 11.26 lbs. butter-fat,  
equivalent to 13.13 lbs. butter; 350.0 lbs.  
milk. Owned by Dr. L. de L. Harwood,  
Vandred, Que.  
Queen Cora Vale Burke (8323), at 2  
years 22 days of age, 9.78 lbs. butter-  
fat, equivalent to 11.41 lbs. butter; 311.7

lbs. milk. Owned by Dr. L. de L. Har-  
wood.  
Rosalind Hacker 2nd (7782), at 2 years  
9 months of age, 9.51 lbs. butter-fat,  
equivalent to 11.10 lbs. butter; 304. lbs.  
milk. Owned by Wm. E. Thomson.  
Calamity Grace Annie (9053), at 1 year  
11 months 22 days of age, 9.11 lbs. but-  
ter-fat, equivalent to 10.63 lbs. butter;  
274.3 lbs. milk. Owned by W. S. Schell.  
Violet Verbelle (8381), at 1 year 11  
months 27 days of age, 8.88 lbs. butter-  
fat, equivalent to 10.36 lbs. butter; 276.5  
lbs. milk. Owned by J. M. Mallory,  
Bloomfield, Ont.—G. W. Clemons, Secre-  
tary.  
**ABERDEEN-ANGUS SELL, WELL.**  
At a joint sale of Aberdeen-Angus cat-  
tle from three herds held at Holbrook,  
Iowa, June 7th, good prices prevailed,  
the two-year-old heifer, Brookside Black-  
bird 8th, selling for \$1,000; the seven-  
year-old cow, Envito, for \$750; the six-  
year-old, Erona D., for \$915; five other  
females for \$300 to \$600, and two bulls  
for \$500 and \$525.  
At Creston, Iowa, June 8th, S. R.  
Pierce sold 94 head for an average of  
\$218.50. The highest, \$1,015, was real-  
ized for the six-year-old cow, Blackcap of  
Clover Lawn, and 13 others sold for  
prices ranging from \$300 to \$675, more  
than half of these selling for \$500 and  
over.

Are you pestered with POTATO BUGS? If the old remedies  
won't work, try

**VANCO BRAND  
Arsenate of Lead**

IT WON'T BURN. IT STICKS WELL.  
IT SPRAYS EASY. IT KILLS SURE.

PRICES: (100 lb. kegs - - - - - 11c. per lb.)  
50 " " - - - - - 11 1/4c. " ) Net cash f.o.b.  
25 " " - - - - - 12c. " ) Toronto.  
12 1/2 " " - - - - - 13c. " )

Use two or three pounds to forty imperial gallons water.

MADE IN CANADA ONLY BY

**CHEMICAL LABORATORIES, LIMITED**

Manufacturing Chemists

148-158 Van Horne St.

TORONTO, ONT.

**THE GENUINE TOLTON  
PEA HARVESTER**

With New Patent Side-delivery Self-buncher at Work

Patented 97, 03 and '08.



**HARVESTING  
PEAS**

"This is pleasant and  
profitable. I must tell my  
neighbors to buy a Tolton  
Pea Harvester and be happy,  
too."

Harvesting from 10 to 12  
acres per day in the most  
economical and complete  
manner. Harvesters to suit  
all kinds of mowers. A  
wrench is all that is required  
to attach it to any mower.  
Every machine warranted.  
Our motto: "Not how  
cheap, but how good." Give  
your orders to any of our  
local agents, or send them  
direct to:

**Tolton Bros., Ltd., Dept. F., Guelph, Ont.**

# The Golden Dog

(Le Chien D'Or.)

A Canadian Historical Romance.

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[Serial Rights Secured by the Wm. Weld Co., Ltd., London, Ont.]

## CHAPTER XX.—Continued.

"No, I believed her; so true a prophet as my aunt surely deserved one firm believer!"

Pierre felt the electric thrill run through him which a man feels at the moment he discovers a woman believes in him. "Your presence here to-day, Amelie! you cannot think how sweet it is," said he.

Her hand trembled upon his arm. She thought nothing could be sweeter than such words from Pierre Philibert. With a charming indirectness, however, which did not escape him, she replied, "Le Gardeur is very proud of you to-day, Pierre."

He laid his fingers upon her hand. It was a delicate little hand, but with the strength of an angel's it had moulded his destiny, and led him to the honorable position he had attained. He was profoundly conscious at this moment of what he owed to this girl's silent influence. He contented himself, however, with saying, "I will so strive that one day Amelie de Repentigny shall not shame to say she, too, is proud of me."

She did not reply for a moment. A tremor agitated her low, sweet voice. "I am proud of you now, Pierre—more proud than words can tell—see you so honored, and proudest to think you deserve it all."

It touched him almost to tears. "Thanks, Amelie; when you are proud of me, I shall begin to feel pride of myself. Your opinion is the one thing in life I have most cared for—your approbation is my best reward."

Her eyes were eloquent with unspoken words, but she thought, "If that were all!" Pierre Philibert had long received the silent reward of her good opinion and approbation.

The Bourgeois at this moment came up to salute Amelie and the Lady de Tilly.

"The Bourgeois Philibert has the most perfect manner of any gentleman in New France," was the remark of the Lady de Tilly to Amelie, as he left them again to receive other guests. "They say he can be rough and imperious sometimes; to those he dislikes; but, to his friends and strangers, and especially to ladies, no breath of spring can be more gentle and balmy." Amelie assented with a mental reservation in the depths of her dark eyes, and in the dimple that flashed upon her cheeks, as she suppressed the utterance of a pleasant fancy in reply to her aunt.

Pierre conducted the ladies to the great drawing-room, which was already filled with company, who overwhelmed Amelie and her aunt with the vivacity of their greeting.

In a fine, shady grove, at a short distance from the house, a row of tables was set for the entertainment of several hundreds of the hardy dependents of the Bourgeois; for, while feasting the rich, the Bourgeois would not forget his poorer friends, and perhaps his most exquisite satisfaction was in the unrestrained enjoyment of his hospitality by the crowd of happy, hungry fellows and their families, who, under the direction of his chief factor, filled the tables from end to end, and made the park resound with songs and merriment, fellows of immitable gaiety, with appetites of gargantuan and a capacity for good liquors that reminded one of the tubs of the Danubians. The tables groaned beneath mountains of good things, and in the center of each, like Mont Blanc, rising from the lower Alps, stood a magnificent Easter pie, the only one of which was a masterpiece of the art of Maitre Guillot's kitchen.

## KEEP IT ON HAND



If you do this, and use as advised, you will be rewarded with a clear, pure, unspotted skin, free from tan, freckles, mothpatches and discolorations, as

### Princess Complexion Purifier

will do all this and more! It cures pimples, blackheads and other skin affections. Price \$4.50, delivered.

Superfluous Hair, Moles, Warts, etc., permanently removed by our reliable and antiseptic method of Electrolysis. Satisfaction assured. Get booklet "F." Phone M. 83L. Established 1892.

HISCOTT DERMATOLOGICAL INSTITUTE, Toronto, Ont., 61 College St.

PLEASE MENTION THIS PAPER.



## EVERY TEN-CENT PACKAGE OF Wilson's Fly Pads

Will kill more flies than 300 sheets of sticky paper. 4

# FREE! Positive Cure for Urine Weakness



SOME children wet the bed and are spanked by mothers in hope of effecting a cure. Bed-wetting is not carelessness—there is a constitutional cause. Even grown-ups are troubled with this peculiar weakness. Mothers have consulted Physicians in search of a cure for their children, but all in vain. Don't spank the child, it is not to blame, and spanking does no good. I, Mrs. Summers, have studied this weakness, made researches, and finally discovered a positive, permanent cure. I want every mother who has children affected with bedwetting to write me today for my free home treatment, with full instructions. It won't cost you one cent—send no money—just your name and address. And you need not feel under any obligation, either. My treatment also cures adults affected with urine trouble by day or night. Remember, it costs you nothing, and is a positive cure, without trouble, danger, publicity or loss of work. Will you write me today? Don't wait—the final result of neglect is disastrous. Just address me: 3

MRS. M. SUMMERS, Box W. 82L. Windsor, Ont.

## POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

**BUY 95% FERTILE EGGS**—That will produce winter layers. Ancona eggs, \$6 for 100; fifteen for \$1. Single-comb White Leghorn eggs, \$4 for 100, fifteen for \$1. Special price on larger quantities. Free circulars. Edward C. Apps, Box 224, Brantford, Ont.

**EGGS FOR HATCHING**—Barré and White Rocks, White and Silver Wyandottes, Black and Buff Orpingtons, Brown and White Leghorns, Black and Spangled Hamburgs, Houdans, Black Javas, Dorkings, Single and Rose Combed R. I. Reds. These birds won over 300 1st prizes at nine shows. \$1 per fifteen eggs. F. W. Krouse, Guelph, Ont.

**S. C. WHITE LEGHORNS** of prizewinning strains. Eggs priced for remainder of season, 75c for 15, hatch guaranteed. Geo. D. Fletcher, Binkham, Ont., Erin Station.

## WANTS & FOR SALE

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock.

**TERMS:** Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

**FOR SALE:** Choice twenty-acre fruit farm in Niagara District. Five acres planted, chiefly grapes. Good buildings. Spring water. Telephone. Every social and business convenience. Box A, Farmer's Advocate, London, Ont.

**FARM** for sale near the east shore of beautiful Lake Simcoe. A very desirable location. 258 acres. Two sets of buildings; suitable for two farms. Write for full particulars to: C. J. McRae, Beaverton, Ont.

**WANTED:** by experienced headman, good feeder and litter for show or sale. Single. Well recommended. J. Robson, 146 Carleton St., Ottawa.

**WANTED:** A headman who can fit Shorthorns for show. Send references to: W. H. Gibson, Hawthorn Farm, Beaverton, Ont.

**WANTED:** a tradesman has this pertinent advertisement in his state.

**WANTED:** a man made of dust.

**WANTED:** a man made of dust.

**WANTED:** a man made of dust.

## THREE SAFE INVESTMENTS

**No. 1.** A first Preferred Stock in a large manufacturing company—guaranteed 7 per cent. This is a highly profitable business. Interest is payable half-yearly at 7 per cent. per annum. There is also a bonus of stock which will increase the profit 50 per cent.

**No. 2.** Stock in a well-established, good-paying wholesale business in Toronto, dealing with all kinds of Farm and Dairy Products, earning from 10 to 25 per cent. yearly. In this stock you are entitled to receive in dividends the full amount of profits earned by the company.

**No. 3.** Trust Mortgage Bonds to pay 7 per cent. Dividends payable half-yearly. Dividend No. 7 will be payable August 15th next. Investigate these three high-class investments. Write or call for further information.

**National Securities Corporation (LIMITED), Confederation Life Bldg., Toronto, Ont.**

## THE SPICE OF LIFE.

A colored woman of generous proportions, was on the witness stand in the Superior Court before Judge Weir, and she made such a good witness for the plaintiff that the attorney for the defence planned to throw "cold water" on what she said by finding fault with her character.

"Let me see, you have been arrested, haven't you?" the attorney asked in cross-examination.

"Now, look, cheek," said the witness, getting angry. "Do you think I'm going to tell you my private business? I guess not."

"I have the right to know, and you must tell me," the lawyer persisted, and Judge Weir noticed the witness that she would have to answer.

"I've married, but I haven't been married," she said, for once, in a fit of temper.

"What is the name of the attorney who brought suit against you?" asked the lawyer.

"His name is John J. Weir," she said, and the lawyer smiled.

"That is a very interesting name," said the lawyer, and he looked at the witness with a smile.

"It is his business," she said, and the lawyer smiled.

"That is a very interesting name," said the lawyer, and he looked at the witness with a smile.

head cook of the Bourgeois, who was rather put-out, however, when Dame Rochelle decided to bestow all the Easter pies upon the hungry Voyageurs, woodmen and workmen, and banished them from the menu of the more patrician tables set for the guests of the mansion.

"Yet, after all," exclaimed Maitre Guillot, as he thrust his head out of the kitchen door to listen to the song, "the gay fellows were singing with all their lungs in honor of his Easter pie." After all, the fine gentlemen and ladies would not have paid my noble pies such honor as that? And what is more, the pies would not have been eaten up to the last crumb!" Maitre Guillot's face beamed like a harvest moon, as he chimed in with the well-known ditty in praise of the great pie of Rouen.

"C'est dans la ville de Rouen,  
Ils ont fait un pate si grand;  
Ils ont fait un pate si grand,  
Qu'ils ont trouve un homme de dans!"

Maitre Guillot would fain have been nearer, to share in the shouting and clapping of hands which followed the saying of grace by the good Cure of St. Foye, and to see how vigorously knives were handled, and how chins wagged in the delightful task of levelling down mountains of meat, while Gascon wine and Norman cider flowed from ever-replenished flagons.

The Bourgeois and his son, with many of his chief guests, honored for a time the merry feast out of doors, and were almost inundated by the flowing cups drunk to the health and happiness of the Bourgeois and of Pierre Philibert.

Maitre Guillot Gobet returned to his kitchen, where he stirred up his cooks and scullions on all sides, to make up for the loss of his Easter pies on the grand tables in the hall. He capered among them like a marionette, directing here, scolding there, laughing, joking, or, with uplifted hands and stamping feet, despairing of his underlines' cooking a dinner fit for the fête of Pierre Philibert.

Maitre Guillot was a little fat, red-nosed fellow, with twinkling black eyes, and a mouth irascible as that of a cake-baker of Lema. His heart was of the right paste, however, and full as a butter-pot of the sweet sauce of good nature, which he was ready to pour over the heads of all his fellows who quietly submitted to his dictation. But woe to man or maid servant who delayed or disputed his royal orders! An Indian typhoon instantly blew. At such a time even Dame Rochelle would gather her petticoats round her and hurry out of the storm, which always subsided quickly, in proportion to the violence of its rage.

Maitre Guillot knew what he was about, however. He did not use, he said, to wipe his nose with a handkerchief, and on that day he was going to cook a dinner fit for the Pope after Lent, or even for the Reverend Father de Borey himself, who was the truest gourmet and the best trencherman in New France.

Maitre Guillot honored his master, but in his secret soul he did not think his taste quite worthy of his cook. But he worshipped Father de Borey, and glorified in the infallible judgment and correct taste of cookery possessed by the jolly Recollet. The single approbation of Father de Borey was worth more than the praise of a world full of ordinary eating mortals, who smacked their lips and said things were good, but who knew no more than one of the Cent Swiss, why things were good, or could appreciate the talents of an artiste of the cordon bleu.

Maitre Guillot's Easter pie had been a splendid success. "It was worthy," he said, "to be placed as a crown on top of the new Cathedral of St. Marie, and receive the consecration of the Bishop."

That the composition of it should be forgotten, Maitre Guillot had, with the abundance of a demon in

## FREE TO ASTHMA SUFFERERS.

We want every sufferer from Asthma to write us to-day for a free trial of our wonderful New Method for curing Asthma. We especially desire those cases of long standing which have tried all the various kinds of inhalers, douches and patent smokes without number and without relief. We know we can cure them. We want to and are willing to prove it absolutely free of cost. Many thousands have accepted this opportunity and are now cured. There is no reason why anyone, old or young, rich or poor, should continue to suffer from Asthma after reading this marvellous offer.

FRONTIER ASTHMA CO.,  
Room 29 W., Niagara and Hudson Streets,  
BUFFALO, N. Y.

## Queen's University and College KINGSTON ONTARIO.

ARTS  
EDUCATION  
THEOLOGY  
MEDICINE

SCIENCE (Including Engineering)

Students registering for the first time before October 21st, 1909, may complete the Arts course without attendance

For Calendars, write the Registrar,  
GEO. Y. CHOWN, B.A.  
Kingston, Ontario.

## Cowan's "Perfection" Cocoa

Let the children drink  
all they want. Health-  
ful, nutritious, deli-  
cious.

Absolutely pure. That  
rich chocolate flavor.  
Very economical.

The Cowan Co. Limited,  
Toronto.

## BICKMORE'S GALL CURE

The standard reliable  
remedy for Galls, Scratch-  
es, Cracks, Wire Cuts and  
all similar sores on ani-  
mals. Sold by dealers  
everywhere. Money re-  
funded if it fails. Sample and Bickmore's new  
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toning the Litany, ravished the ear  
of Jules Painchaud, his future son-  
in-law, as he taught him the secrets  
of its confection.

With his white cap set rakishly on  
one side of his head, and arms akim-  
bo, Maitre Guillot gave Jules the  
famous recipe:

"Inside of circular walls of pastry  
an inch thick, and so rich as easily  
to be pulled down, and roomy enough  
within for the Court of King Pepin,  
lay first a thick stratum of mince-  
ment of two savory hams of West-  
phalia, and if you cannot get them,  
of two hams of our habitans."

"Of our habitans!" ejaculated  
Jules, with an air of consternation.  
"Precisely! don't interrupt me!"  
Maitre Guillot grew red about the  
gills in an instant. Jules was sil-  
enced. "I have said it!" cried he;  
"two hams of our habitans! what  
have you to say against it—stock  
fish, eh?"

"Oh, nothing, sir," replied Jules,  
with humility, "only I thought—"  
Poor Jules would have consented to  
eat his thought, rather than fall out  
with the father of his Susette.

"You thought!" Maitre Guil-  
lot's face was a study for Hogarth,  
who alone could have painted the al-  
to tone of voice as it proceeded  
from his round O of a mouth. "Sus-  
sette shall remain upon my hands an  
old maid for the term of her natural  
life if you dispute the confection of  
Easter pie!"

"Now listen, Jules," continued he,  
at once mollified by the contrite,  
submissive air of his future son-in-  
law: "Upon the foundation of the  
mince-ment of two hams of West-  
phalia—or, if you cannot get them,  
of two hams of our habitans—place  
scientifically the nicely-cut pieces of  
a fat turkey, leaving his head to  
stick out of the upper crust, in evi-  
dence that Master Dindon lies buried  
there! Add two fat capons, two  
plump partridges, two pigeons, and  
the back and thighs of a brace of  
juicy hares. Fill up the whole with  
beaten eggs, and the rich contents  
will resemble, as a poet might say,  
'fossils of the rock in golden yolks  
embedded and enjellied!' Season as  
you would a saint. Cover with a  
slab of pastry. Bake it as you  
would cook an angel, and not singe  
a feather. Then let it cool, and eat  
it! And then, Jules, as the Rever-  
end Father de Berey always says  
after grace over an Easter pie,  
'Dominus vobiscum!'"

### CHAPTER XXI.

Sic Itur ad Astra.

The old hall of Belmont had been  
decorated for many a feast since the  
times of its founder, the Intendant  
Talon, but it had never contained a  
nobler company of fair women and  
brave men, the pick and choice of  
their race, than to-day met round  
the hospitable and splendid table of  
the Bourgeois Philibert, in honor of  
the fete of his gallant son.

Dinner was duly and decorously de-  
spatched. The social fashion of New  
France was not for the ladies to  
withdraw when the wine followed the  
feast, but to remain seated with the  
gentlemen, purifying the conversa-  
tion, and by their presence restrain-  
ing the coarseness which was the al-  
most universal vice of the age.

A troop of nimble servitors carried  
off the carved dishes and fragments  
of the splendid patisseries of Maitre  
Guillot, in such a state of demoli-  
tion as satisfied the critical eye of  
the chief cook that the efforts of his  
genius had been very successful. He  
inspected the dishes through his  
spectacles. He knew, by what was  
left, the ability of the guests to dis-  
criminate what they had eaten and to  
do justice to his skill. He considered  
himself a sort of pervading divinity,  
whose culinary ideas passing with his  
cookery into the bodies of the guests  
enabled them, on retiring from the  
feast, to carry away as part of them-  
selves some of the fine essence of  
Maitre Gobet himself.

At the head of his table, peeling  
oranges and slicing pineapples for

the ladies in his vicinity, sat the  
Bourgeois himself, laughing, jesting,  
and telling anecdotes with a genial-  
ity that was contagious. "The  
gods are merry sometimes," says  
Homer, "and their laughter shakes  
Olympus!" was the classical re-  
mark of Father de Berey, at the  
other end of the table. Jupiter did  
not laugh with less loss of dignity  
than the Bourgeois.

Few of the guests did not remem-  
ber to the end of their lives the ma-  
jestic and happy countenance of the  
Bourgeois on this memorable day.

At his right hand sat Amelie de  
Repentigny, and the Count de la Ga-  
lissoniere. The Governor, charmed  
with the beauty and agreeableness of  
the young chatelaine, had led her in  
to dinner, and devoted himself to  
her and the Lady de Tilly with the  
perfection of gallantry of a gentleman  
of the politest court in Europe. On his  
left sat the radiant, dark-eyed Hor-  
tense de Beauharnais. With a gay as-  
sumption of independence Hortense  
had taken the arm of La Corne St.  
Luc, and declared she would eat no  
dinner unless he would be her caval-  
ier, and sit beside her! The gall-  
ant old soldier surrendered at discre-  
tion. He laughingly consented to be  
her captive, he said, for he had no  
power, and no desire but to obey.  
Hortense was proud of her conquest.  
She seated herself by his side with  
an air of triumph and mock gravity,  
tapping him with her fan whenever  
she detected his eye roving round the  
table, compassionating, she affirmed,  
her rivals, who had failed where she  
had won in securing the youngest,  
the handsomest, and most gallant of  
all the gentlemen at Belmont.

"Not so fast, Hortense!" ex-  
claimed the gay Chevalier; "you  
have captured me by mistake! The  
tall Swede—he is your man! The  
other ladies all know that, and are  
anxious to get me out of your toils,  
so that you may be free to ensnare  
the philosopher!"

"But you don't wish to get away  
from me! I am your garland, Che-  
valier, and you shall wear me to-  
day. As for the tall Swede, he has  
no idea of a fair flower of our sex,  
except to wear it in his buttonhole—  
this way!" added she, pulling a rose  
out of a vase, and archly adorning  
the Chevalier's vest with it.

"All pretence and jealousy, made-  
moiselle. The tall Swede knows how  
to take down your pride and bring  
you to a proper sense of your false  
conceit of the beauty and wit of the  
ladies of New France."

Hortense gave two or three tosses  
of defiance to express her emphatic  
dissent from his opinions.

"I wish Herr Kaln would lend me  
his philosophic scales, to weigh your  
sex like lambs in market," continued  
La Corne St. Luc; "but I fear I am  
too old, Hortense, to measure wo-  
men except by the fathom, which is  
the measure of a man."

"And the measure of a man is the  
measure of an angel too scriptum est,  
Chevalier!" replied she. Hortense  
had ten merry meanings in her eye,  
and looked as if bidding him select  
which he chose. "The learned  
Swede's philosophy is lost upon me,"  
continued she; "he can neither  
weigh by sample nor measure by  
fathom the girls of New France!"  
She tapped him on the arm. "Listen  
to me, Chevalier," said she, "you  
are neglecting me already for sake  
of Cecile Tourangeau!" La Corne  
was exchanging some gay badinage  
with a graceful, pretty young lady  
on the other side of the table, whose  
snowy forehead, if you examined it  
closely, was marked with a red scar,  
in figure of a cross, which, although  
powdered, and partially concealed by  
a frizz of her thick blonde hair, was  
sufficiently distinct to those who  
looked for it; and many did so, as  
they whispered to each other the  
story of how she got it.

Le Gardien de Repentigny sat by  
Cecile, talking in a very sociable  
manner, which was also commented  
on. His conversation seemed to be  
very attractive to the young lady,

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Aunt Mary met her little nieces in the  
park and seized the opportunity to gather  
the latest news from Marjory's home.  
And she got it. "And how is your  
papa, dear?" she inquired, finally. "Oh,  
papa is critically ill!" "He is? Why,  
what is the matter?" "I don't know.  
Not much, I guess. But he criticises  
me, and he criticises ma, and he criticises  
the cook and most everything. He is  
very critically ill. Ma says so."

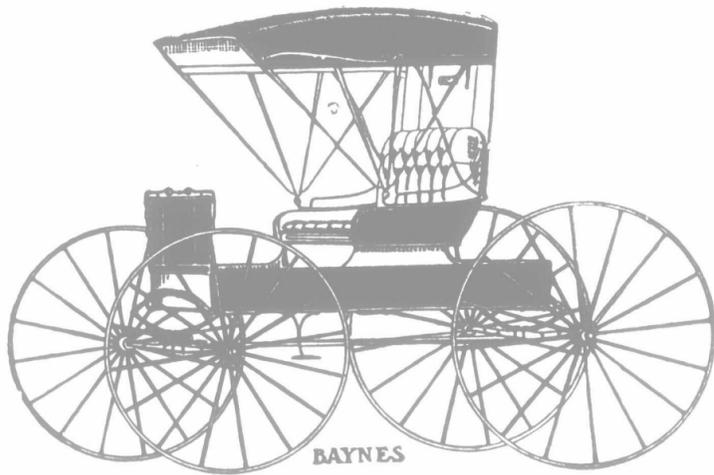
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who was visibly delighted with the attentions of her handsome gallant.

At this moment a burst of instruments from the musicians, who occupied a gallery at the end of the hall, announced a vocal response to the toast of the King's health, proposed by the Bourgeois. "Prepare yourself for the chorus, Chevalier," exclaimed Hortense. "Father de Bery is going to lead the royal anthem!"

"Vive le Roi!" replied La Corne. "No finer voice ever sang Mass, or chanted 'God Save the King!' I like to hear the royal anthem from the lips of a churchman, rolling it out ore rotundo, like one of the Psalms of David. Our first duty is to love God—our next to honor the King! and New France will never fail in either!" Loyalty was ingrained in every fibre of La Corne St. Luc.

"Never, Chevalier. Law and Gospel rule together, or fall together! But we must rise," replied Hortense, springing up.

The whole company rose simultaneously. The rich, mellow voice of the Rev. Father de Bery, round and full as the organ of Ste. Marie, commenced the royal anthem, composed by Lulli, in honor of Louis Quatorze, upon an occasion of his visit to the famous Convent of St. Cyr, in company with Madame de Maintenon.

The song composed by Madame Brinon was afterwards translated into English, and words and music became, by a singular transposition, the national hymn of the English nation.

"God Save the King!" is no longer heard in France. It was buried with the people's loyalty.

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fathoms deep under the ruins of the monarchy. But it flourishes still with pristine vigor in New France, that olive branch grafted on the stately tree of the British Empire. The broad chest and flexible lips of Father de Bery rang out the grand old song in tones that filled the stately old hall.

"Grand Dieu! Sauvez le Roi!  
"Grand Dieu! Sauvez le Roi!  
Sauvez le Roi!  
Que toujours glorieux,  
Louis Victorieux,  
Voye ses ennemis  
Toujours soumis!"

The company all joined in the chorus, the gentlemen raising their cups, the ladies waving their handkerchiefs, and male and female blending in a storm of applause that made the old walls ring with joy. Songs and speeches followed in quick succession, cutting as with a golden blade the hours of the dessert into quinzaines of varied pleasures.

The custom of the times had reduced speechmaking after dinner to a minimum. The ladies, as Father de Bery wittily remarked, preferred private confession to public preaching; and long speeches, without interlets for reply, were the eighth mortal sin which no lady would forgive.

The Bourgeois, however, felt it incumbent upon himself to express his deep thanks for the honor done his house on this auspicious occasion. And he remarked that the doors of Belmont, so long closed by reason of the absence of Pierre, would hereafter be ever open to welcome all his friends. He had that day made a gift of Belmont, with all its belongings, to Pierre, and he hoped—the Bourgeois smiled as he said this, but he would not look in a quarter where his words struck home—he hoped that some one of Quebec's fair daughters would assist Pierre in the menage of his home, and enable him to do honor to his housekeeping.

Immense was the applause that followed the short, pithy speech of the Bourgeois. The ladies blushed and praised, the gentlemen cheered and enjoyed in anticipation the renewal of the old hospitalities of Belmont.

"The skies are raining plum cakes!" exclaimed the Chevalier La Corne to his lively companion. "Joy's golden drops are only distilled in the alembic of woman's heart! What think you, Hortense? Which of Quebec's fair daughters will be willing to share Belmont with Pierre?"

"Oh, any of them would!" replied she. "But why did the Bourgeois restrict his choice to the ladies of Quebec, when he knew I came from the Three Rivers?"

"Oh, he was afraid of you, Hortense; you would make Belmont too good for this world! What say you, Father de Bery? Do you ever walk on the cape?"

The friar, in a merry mood, had been edging close to Hortense. "I love, of all things, to air my gray gown on the cape of a breezy afternoon," replied the jovial Recollet, "when the fashionables are all out, and every lady is putting her best foot foremost. It is then I feel sure that Horace is the next best thing to the Homilies."

"Teretisque suras laudo, et integer ego!"

The Chevalier La Corne pinched the shrugging shoulder of Hortense as he remarked, "Don't confess to Father de Bery that you promenaded on the cape! But I hope Pierre Philibert will soon make his choice! We are impatient to visit him, and give old Provencal the butler a run every day through those dark crypts of his, where he entombed the choicest vintages of sunny France."

The Chevalier said this waggishly, for the benefit of old Provencal, who stood behind his chair, looking half alarmed in the threatened raid upon his well-filled cellars.

"But if Pierre should not commit himself," replied Hortense, "what

will become of him? and especially, what will become of us?"

"We will drink his wine, all the same, good fellow that he is! But Pierre had as lief commit suicide as not commit matrimony; and who would not? Look here, Pierre Philibert," continued the old soldier, addressing him with good-humored freedom. "Matrimony is clearly your duty, Pierre; but I need not tell you so; it is written on your face, plain as the way between Peronne and St. Quentin—a good, honest way as ever was trod by shoe leather, and as old as Chinon in Touraine! Try it soon, my boy. Quebec is a sack full of pearls!" Hortense pulled him mischievously by the coat, so he caught her hand and held it fast in his, while he proceeded: "You put your hand in the sack and take out the first that offers. It will be worth a Jew's ransom! If you are lucky to find the fairest, trust me it will be the identical pearl of great price for which the merchant went, and sold all that he had and bought it. Is not that Gospel, Father de Bery? I think I have heard something like that preached from the pulpit of the Recollets?"

"Matter of brimborion, Chevalier! not to be questioned by laymen! Words of wisdom for my poor brothers of St. Francis, who, after renouncing the world, like to know that they have renounced something worth having! But not to preach a sermon on your parable, Chevalier, I will promise Colonel Philibert that when he has found the pearl of great price"—Father de Bery, who knew a world of secrets, glanced archly at Amelie as he said this—"the bells of our monastery shall ring out such a merry peal as they have not rung since fat Brother Le Gros broke his wind, and short Brother Bref stretched himself out half a yard pulling the bell ropes on the wedding of the Dauphin."

Great merriment followed the speech of Father de Bery. Hortense rallied the Chevalier, a good old widower, upon himself not travelling the plain way between Peronne and St. Quentin, and jestingly offered herself to travel with him, like a couple of gypsies carrying their budget of happiness pick-a-back through the world.

"Better than that!" La Corne exclaimed. Hortense was worthy to ride on the baggage-wagons in his next campaign! Would she go? She gave him her hand. "I expect nothing else!" said she. "I am a soldier's daughter, and expect to live a soldier's wife, and die a soldier's widow. But a truce to jest. It is harder to be witty than wise," continued she. "What is the matter with cousin Le Gardeur?" Her eyes were fixed upon him as he read a note just handed to him by a servant. He crushed it in his hand with a flash of anger, and made a motion as if about to tear it, but did not. He placed it in his bosom. But the hilarity of his countenance was gone.

There was another person at the table whose quick eye, drawn by sisterly affection, saw Le Gardeur's movement before even Hortense. Amelie was impatient to leave her seat and go beside him, but she could not at the moment leave the lively circle around her. She at once conjectured that the note was from Angeliqne des Meloises. After drinking deeply two or three times, Le Gardeur arose, and with a faint excuse that did not impose on his partner, left the table. Amelie rose quickly, also, excusing herself to the Bourgeois, and joined her brother in the park, where the cool night air blew fresh and inviting for a walk.

Pretty Cecile Tourangeau had caught a glimpse of the handwriting as she sat by the side of Le Gardeur, and guessed correctly whence it had come, and why her partner so suddenly left the table.

She was out of humor; the red mark upon her forehead grew redder, as she pouted in visible discontent.

But the great world moves on, carrying alternate storms and sunshine upon its surface. The company rose from the table—some to the ballroom, some to the park and conservatories. Cecile's was a happy disposition, easily consoled for her sorrows. Every trace of her displeasure was banished and almost forgotten from the moment the gay, handsome Jumonville de Villiers invited her out to the grand balcony, where, he said, the rarest pastime was going on.

And rare pastime it was! A group of laughing but half-serious girls were gathered round Doctor Gauthier, urging him to tell their fortunes by consulting the stars, which to-night shone out with unusual brilliancy.

At that period, as at the present, and in every age of the world, the female sex, like the Jews of old, asks signs, while the Greeks—that is, the men—seek wisdom.

The time never was, and never will be, when a woman will cease to be curious—when her imagination will not forecast the decrees of fate in regard to the culminating event of her life and her whole nature—marriage. It was in vain Doctor Gauthier protested his inability to read the stars without his celestial eye-glasses.

The ladies would not accept his excuses; he knew the heavens by heart, they said, and could read the stars of destiny as easily as the Bishop his breviary.

In truth, the worthy doctor was not only a believer but an adept in astrology. He had favored his friends with not a few horoscopes and nativities, when pressed to do so. His good-nature was of the substance of butter; anyone that liked could spread it over their bread. Many good men are eaten up in that way by greedy friends.

Hortense de Beauharnais urged the Doctor so merrily and so perseveringly, promising to marry him herself if the stars said so, that he laughingly gave way, but declared he would tell Hortense's fortune first, which deserved to be good enough to make her fulfil her promise just made.

She was resigned, she said, and would accept any fate, from the rank of a queen to a cell among the old maids of St. Cyr! The girls of Quebec hung all their hopes on the stars, bright and particular ones, especially. They were too loving to live single, and too proud to live poor. But she was one who would not wait for ships to land that never came, and plums to drop into her mouth that never ripened. Hortense would be ruled by the stars, and wise Doctor Gauthier should to-night declare her fate.

They all laughed at this free talk of Hortense. Not a few of the ladies shrugged their shoulders and looked askance at each other, but many present wished they had courage to speak like her to Doctor Gauthier.

"Well, I see there is nothing else for it but to submit to my ruling star, and that is you, Hortense!" cried the Doctor; "so please stand up before me while I take an inventory of your looks as a preliminary to telling your fortune."

Hortense placed herself instantly before him. "It is one of the privileges of our dry study," remarked he, as he looked admiringly on the tall, charming figure and frank countenance of the girl before him.

"The querent," said he gravely, "is tall, straight, slender, arms long, hands and feet of the smallest, hair just short of blackness; piercing, roving eyes, dark as night and full of fire, sight quick, and temperament alive with energy, wit, and sense."

"Oh, tell my fortune, not my character! I shall shame of energy, wit, and sense, if I hear such flattery, Doctor!" exclaimed she, shaking herself like a young eagle preparing to fly.

"We shall see what comes of it, Hortense!" replied he gravely, as with his gold-headed cane he slowly quartered the heavens like an ancient augur, and noted the planets in

**"I HAVE LIVED UNDER THAT OLD SLATE ROOF MORE THAN FIFTY YEARS WITHOUT SPENDING ONE PENNY FOR REPAIRS AND IT IS STILL IN PERFECT CONDITION"**



There are hundreds of instances in this country where Slate Roofs have endured for fifty to one hundred years without costing the owners one cent for painting, repairs or other expense. No other kind of roofing can show such a record for extreme durability and absolute freedom from expense and "roofing trouble" as slate.

**Sea Green and Purple Slate**  
is the ideal roofing material for any building, new or old. Once laid, your Slate Roof is on for all time, longer than you will live and will never cost you one cent for painting, repairs or anything else.

A roof of any other material must be replaced in a few years at best and must be painted, re-coated or repaired every year or so as long as it does last.

**Sea Green and Purple Slate Makes a Perfect Roof**  
It is solid rock and cannot wear out any more than the rocks in your fields. It cannot rust, warp or decay. Water cannot get through it or fire burn it. It is unaffected by heat or cold, reduces your insurance rate and affords pure, clean cistern water.

**Use Sea Green and Purple Slate**  
and end your roofing troubles forever. Write us today giving name of your local roofer and we will mail you our FREE book "ROOFS."

**The American Sea Green Slate Co.,** Box 3 GRANVILLE, N. Y.



**UNION Horse Exchange**  
STOCK - YARDS  
WEST TORONTO, CANADA.

The Greatest Wholesale and Retail Horse Commission Market.

Auction sales of Horses, Carriages, Harness, etc., every Monday and Wednesday. Horses and harness on hand for private sale every day.

The largest, best equipped and most sanitary stables in Canada. Half-mile of railway loading chutes at stable door. Quarter-mile open track for showing horses. Northwest trade a specialty. **HERBERT SMITH, Manager.** (Late Grand's Repository).

**NEW CLYDESDALE IMPORTATION.**



My new importation of 24 Clydesdale stallions is now in my stables. I invite inspection and comparison. I think I have the best lot for size, style, character, quality and action ever imported. 27 Clyde stallions and 8 Hackney stallions to select from. Prices right, and terms to suit.

**T. H. HASSARD, MARKHAM, ONT.**  
POST OFFICE, PHONE AND STATION.

**Farmers and Cattlemen, Read This!**

When you cannot sell your export cattle at satisfactory prices at home, and wish to ship them to the Old Country markets, write or wire for steamer space, market and shipping information to **Donald Munro, Live-stock Forwarding Agent and Commission Salesman, 43 St. Sacrament St., Montreal.**

Load your cattle carefully, and bill them to me. I provide the necessary feed, insurance, etc., pay freight and all other expenses from shipping point, and give liberal cash advances on consignments. Cattle are loaded on steamer under my personal supervision, and placed in charge of capable attendants for the ocean voyage. I represent the most reliable salesmen at all the different British markets. BUSINESS ESTABLISHED 1890. REFERENCES: THE MOLSONS BANK, MONTREAL.

**WILLOWDALE SHORTHORNS**

I have for sale some very fine young stock bulls and heifers ready to breed. Descendants of Joy of Morning, Broad Scotch and other noted sires. Also **Chester White Swine** and **Imported Clydesdale Horses.**

**J. H. M. PARKER, LENNOXVILLE, QUE.**



SOME SHOW PROPOSITIONS IN BOTH MALE AND FEMALE

**SHORTHORNS**

as well as a number of the useful sort of both sexes. Prices right. Large lot to select from. Up-to-date in breeding, etc. Catalogue.

**JOHN GLANCY, H. Cargill & Son, Cargill, Ont.**  
Manager.

**SHORTHORNS**

Calves for sale by our grand quartette of breeding and show bulls: Nonpareil Archer, Imp., Proud Gift, Imp., Marigold Sailor, Nonpareil Eclipse. Females, imported and from imported stock, in calf to these bulls. An unsurpassed lot of yearling heifers.

**Belmar Parc.** John Douglas, Manager. **PETER WHITE, Pembroke, Ont.**

**SALEM SHORTHORNS**

A few young bulls and choice, at tempting prices.

**J. A. WATT, SALEM, ONT. ELORA STATION, G. T. R. AND C. P. R.** Bell telephone.

**SHORTHORN BULLS**

Herd-heading quality and breeding. Also good ones at farmers' prices. Females for sale. Write, or come and see. Farm adjoins town.

**H. SMITH, EXETER, ONTARIO.**



## BRONCHITIS

Bronchitis is generally the result of a cold caused by exposure to wet and inclement weather, and is a very dangerous inflammatory affection of the bronchial tubes.

The Symptoms are tightness across the chest, sharp pains and a difficulty in breathing, and a secretion of thick phlegm, at first white, but later of a greenish or yellowish color. Neglected Bronchitis is one of the most general causes of Consumption.

Cure it at once by the use of



Mrs. D. D. Miller, Allandale, Ont., writes: "My husband got a bottle of Dr. Wood's Norway Pine Syrup for my little girl who had Bronchitis. She wheezed so badly you could hear her from one room to the other, but it was not long until we could see the effect your medicine had on her. That was last winter when we lived in Toronto.

"She had a bad cold this winter, but instead of getting another bottle of Dr. Wood's Norway Pine Syrup, I tried a home made receipt which I got from a neighbor but found that her cold lasted about twice as long. My husband highly praises 'Dr. Wood's,' and says he will see that a bottle of it is always kept in the house."

The price of Dr. Wood's Norway Pine Syrup is 25 cents per bottle. It is put up in a yellow wrapper, three pine trees the trade mark, so, be sure and accept none of the many substitutes of the original "Norway Pine Syrup."



**THE IDEAL  
Green Feed  
Silo**

will more than double the returns from your dairy. Not an experiment, but a time-proven fact; many of them have been in constant use for years. Built in all sizes, and shipped complete. Write for special Silo Catalogue "C."

**CANADIAN DAIRY SUPPLY CO., LTD.  
MONTREAL. QUEBEC.**

## HEREFORDS!

3 Bulls, 15 Months.  
10 Bull Calves, 6 to 8 Months.

For up-to-date beef type, breeding and quality, you can't beat them, and my prices are right, too.

"Ingleside Farm" H. D. Smith, Hamilton, Ont.

## Aberdeen-Angus Cattle

For Sale: Cows, Heifers, Bulls.

Good strains at reasonable prices. Apply to:  
Andrew Dinsmore, Manager,  
"Grape Grange" Farm, Clarksburg, Ont.

For sale: The right sort, some of them by Klondyke, imp. Drumbo station.  
**WALTER HALL,**  
Washington, Ontario.

## Scotch Shorthorns

Have yet for sale, two extra good bulls, imported, just ready for service; also one good roan Canadian-bred bull, grandson to Patton Chancellor, imp.; also a grand lot of heifers. Write or call on

**H. J. Davis,**  
Woodstock, Ont.  
Long-distance Bell phone. C. P. R. & G. E. R.

**Green Grove Shorthorns and Yorkshires**  
A few young bulls and sows, ready for service to offer. **Geo. D. Fletcher,** Binkham P. O., Ont., Erin Shipping Station, C. P. R.

PLEASE MENTION THIS PAPER

their houses. The doctor was quite serious, and even Hortense, catching his looks, stood very silent as he studied the celestial aspects.

"Carrying through ether in perpetual round  
Decreases and resolutions of the Gods."

"The Lord of the ascendant," said he, "is with the Lord of the seventh in the tenth house. The querent, therefore, shall marry the man made for her, but not the man of her youthful hope and her first love.

"The stars are true," continued he, speaking to himself, rather than to her. "Jupiter in the seventh house denotes rank and dignity by marriage, and Mars in sextile foretells successful wars. It is wonderful, Hortense! The blood of Beauharnais shall sit on thrones more than one; it shall rule France, Italy and Flanders, but not New France, for Saturn in quintile looks darkly upon the twins who rule America."

"Come, Jumonville," exclaimed Hortense, "congratulate Claude on the greatness awaiting the house of Beauharnais, and condole with me that I am to see none of it myself! I do not care for kings and queens in the third generation, but I do care for happy fortune in the present for those I know and love! Come, Jumonville, have your fortune told now, to keep me in countenance. If the Doctor hits the truth for you, I shall believe in him for myself."

"That is a good idea, Hortense," replied Jumonville; "I long ago hung my hat on the stars—let the Doctor try if he can find it."

The Doctor, in great good humor, surveyed the dark, handsome face and lithe, athletic figure of Jumonville de Villiers. He again raised his cane with the gravity of a Roman pontifex, marking off his temple in the heavens. Suddenly he stopped. He repeated more carefully his survey, and then turned his earnest eyes upon the young soldier.

"You see ill-fortune for me, Doctor!" exclaimed Jumonville, with bright, unflinching eyes, as he would look on danger of any kind.

"The Hyleg, or giver of life, is afflicted by Mars in the eighth house, and Saturn is in evil aspect in the ascendant!" said the Doctor slowly.

"That sounds warlike, and means fighting, I suppose, Doctor. It is a brave fortune for a soldier. Go on!" Jumonville was in earnest now.

"The pars fortuna," continued the Doctor, gazing upward, "rejoices in a benign aspect with Venus. Fame, true love, and immortality will be yours, Jumonville de Villiers; but you will die young under the flag of your country and for sake of your King! You will not marry, but all the maids and matrons of New France will lament your fate with tears, and from your death shall spring up the salvation of your native land—how, I see not; but decretum est, Jumonville, ask me no more!"

A thrill like a stream of electricity passed through the company. Their mirth was extinguished, for none could wholly free their minds from the superstition of their age. The good Doctor sat down, and wiped his moistened eye-glasses. He would tell no more to night, he said. He had really gone too far, making jest of earnest and earnest of jest, and begged pardon of Jumonville for complying with his humor.

(To be continued.)

Thos. A. Graham, of the firm of Graham Bros., Clarendon, Ont., started for Scotland on June 11th, via Montreal, Allan Line "Canada," and will return about the middle of August with a consignment of show material, Clydesdales and Hackneys.

The training of colts cannot be commenced too early. Accustom them to the harness, teach them to lead, to stand, to have their feet and head examined, and to be tractable.

## GOSSIP.

A good horse is about the only product of the farm that the owner is allowed to put his own price on. For other commodities the buyer or dealer generally fixes the price.

The imported Clydesdale mare, Love-Knot, brown, seven years old, and her three-year-old daughter, Miss Knot, bay, by Imp. Cairngaan, are advertised for sale in this paper by Thos. A. McCarthy, Barrie, Ont.

Gen. Chas. W. Wood, of Worcester, Mass., was elected president of the Holstein Association of America, at the annual meeting held at Syracuse, N. Y., on June 3rd, succeeding Hon. O. U. Kellogg, who, after three successive terms, declined further service. Frederick L. Houghton, Brattleboro, Vt., was re-elected secretary and editor, and Malcolm H. Gardner, Delavan, Wis., superintendent of Advanced Registry. Members present at the meeting who answered to roll call numbered 215.

The death is reported of the noted Holstein bull, Paul Beets De Kol, which occurred on May 15th, at the age of 14 years. It is claimed that at his death he stood at the head of all A. R. O. sires, living or dead. He has 93 A. R. O. daughters in the Advanced Register whose average record is 19.76 lbs. butter in 7 days. Seventeen of these were made by two-year-old heifers, with first calf, and eighteen of them by three-year-old heifers.

Israel Groff, Elmira, Ont., writes: "My Shorthorns are doing fine, and have abundance of good pasture. I have still one choice young Lady Fanny bull for sale that has been in service for several months, and is a good worker, and sure, and will make a good herd-header. This is one of the most noted families of Shorthorns on record. Also several young heifers, and a few prizewinning Berkshires, both hears and sows; prices within reach of everybody. Write, or come and see them."

A train load of 341 buffaloes from the Pablo herd in Montana were landed at Wainwright, Alberta, on June 13th, to be transferred to Buffalo Park, at the latter place. The train of 23 cars of buffaloes excited great attention en route. They constitute a very large part of the few hundred bison remaining to represent the millions that a few years ago roamed the Western plains. So well was the transfer of 500 miles managed, that only two fatalities occurred. At Lamont, an excited bull buffalo gored a mate in the corral, death being almost instantaneous. The only losses on the road were a young cow, which, in anger, choked herself to death, and a yearling that was exhausted when shipped, and was trampled to death by the others in the car. When unloaded in the new park at Wainwright, they threw up their heels in the joy of freedom once more, and started for the hills.

## SUCCESSFUL HOLSTEIN SALE.

At the twelfth semi-annual breeders' sale of Holstein cattle, held at Syracuse, N. Y., 215 animals were sold at an average of \$310 each, the highest record of recent years. Bloomingdale Hengerveld Vagge, a two-year-old heifer, topped the sale at \$1,800. Woodcrest Maid, another two-year-old heifer, sold for \$1,200. There were three cows with records greater than 30 lbs. consigned by Mr. Mitchell, viz. Ermagelsche 2nd A., \$1,380; Clinton Hartog De Kol, \$1,300; Ida De Kol Pauline, \$1,110. Mr. Wing R. Smith's herd bull, Primo Segis Kornidkyk, was the second highest priced animal in the sale, and was purchased by W. E. Kellogs, for \$1,500.

Isabelle Hengerveld De Kol, Ph. sold for \$900. Hazel Orphe'a De Kol, went to Quentin McAdam, for \$880. Woodcrest Netherland Lassie De Kol, was purchased by H. A. May, for \$850. Hengerveld Beets, sold for \$775. Hengerveld Hengerveld and Judge Beets, sold for \$750. Hengerveld, sold for \$700.

## Lump Jaw



The first remedy to cure Lump Jaw was

### Fleming's Lump Jaw Cure

and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser.

Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy.

**FLEMING BROS., Chemists,**  
75 Church St., Toronto, Ontario

## Shorthorns, Berkshires, Cotswolds.

Four yearling bulls, cows with calf at foot, heifers and young calves. A number of young Berkshires ready to ship, and a nice lot of lambs coming on for fall trade.

**Chas. E. Bonnycastle, Campbellford, Ont.**  
POST OFFICE AND STATION.

## SHORTHORNS!

A few cows and heifers with calves at foot by Good Morning, imp. No bull to offer of breeding age. Office both stations.

**SCOTT BROS., HIGHGATE, ONT.**  
M. C. Ry P. M. Ry

## Glengow Shorthorns!

Benmore = 70470 = Red. Calved Jan. 25th, 1907. Sire Ben Lomond (imp.) = 45160 = Dam Danish Beauty (imp.) = 48740 = Benmore is a twin, but will be guaranteed, and will be exchanged for a female of approved pedigree Royal Clan at head of herd, and do not require another. Apply to:

**WM. SMITH, COLUMBUS P. O., ONT.**  
1854—Maple Lodge Stock Farm—1909

Shorthorn bulls and heifers of extra quality and breeding, and from best milking strains.

Leicester's first quality for sale. Can furnish show flocks.

**A. W. SMITH, Maple Lodge P. O., Ontario.**  
Lucan Crossing Sta., G. T. R., one mile.

Speaking about dogs leads me to say that we own one that is afflicted with absent-mindedness. He's a dog of good habits, and generally makes it a point to be home by 5 o'clock every morning, but once in a while he seems to forget himself and shows up about noon. Is there any cure for this absent-mindedness?

## SHE COULD NOT HOLD A TEACUP

But Dodd's Kidney Pills Cured Mrs. James H. White.

They took away her backache, cured her urinary trouble and made her a well woman.

Preville, Gaspé Co., Que., June 21st. (Special)—After suffering for four years from ill, which many a woman knows, and being treated by a doctor who failed to give her relief, Mrs. James H. White, a farmer's wife living near here, is again a well woman. Dodd's Kidney Pills cured her.

"My trouble started from a strain," Mrs. White states. "I had a pain always across my back and a steady pain in the back of my neck, and I had urinary trouble that caused me a great deal of annoyance.

"For four years I suffered in this way, and the doctor I consulted did not do me any lasting good. In the morning I was dizzy, and I finally got so nervous I could not hold a cup.

"Then I started to use Dodd's Kidney Pills, and I got relief right from the start. Three boxes cured me completely. Today I am a well woman."

Mrs. White's troubles were Kidney troubles. So are the troubles of nine out of ten of the suffering women of Canada today. That is why Dodd's Kidney Pills always cure them.

**QUESTIONS AND ANSWERS.**  
Veterinary.

**URINARY TROUBLE.**

I worked a horse very hard one cold, misty day. Since then, when at work, he urinates very often. When driving to town he will sometimes stop to urinate on the road, and when he does not do this, he urinates freely, and without difficulty, as soon as he gets into the stable. He eats well and looks well, but tires easily.

L. L.

Ans.—This is irritability of the urinary organs. Give him 1½ ozs. of the tincture of hyoscyamus, in a pint of cold water, as a drench, three times daily until the irritation ceases.

V.

**HORSE LACKS STAMINA.**

Seven-year-old horse eats well, looks well, and when idle appears keen and has plenty of life, but when put to work tires easily, breaks out in a cold sweat, hangs his head, steps high with all feet, and staggers along. If put in the stable and fed he will eat well, and will commence to work all right again, but will soon again act as described. He has been this way for two years.

W. G.

Ans.—The horse's constitution appears to be broken down. This might result from overwork or overfeeding, or both, when young. As he has been this way so long, it is doubtful if treatment will be effectual. All that can be done is to give him tonics. Take equal parts of pulverized sulphate of iron, gentian, ginger, nux vomica and bicarbonate of soda; mix, and give him a tablespoonful three times daily in damp food, or in half pint cold water, as a drench.

V.

**Miscellaneous.**

**LIGHTNING-ROD AGENCIES.**

Will you kindly inform me, through the columns of your valuable paper, the names of the different lightning-rod firms in Ontario, as I am thinking of taking out the agency for one firm, and I would like to know the different firms, so I could correspond with them to that effect.

C. J. P.

Ans.—It would be invidious to answer this question. The various firms manufacturing and selling lightning rods would doubtless find it to their advantage to advertise for agents.

**COLOR OF ORPINGTON EGGS.**

What is the standard color of Buff Orpington eggs? Some of my hens are laying light-colored eggs and some brown. Are light-colored eggs an indication of impure breeding?

READER.

Sask.

Ans.—The color of Buff Orpington eggs should be brown. It is, however, no indication that the birds are not pure-bred if eggs laid vary to a light color, as this is a characteristic of all breeds laying plain brown-colored eggs. If care is taken in selecting the eggs for hatching purposes, the difficulty of light-colored eggs appearing will be largely overcome.

A. W. FOLEY.

**PERMANENCY OF ALFALFA STAND.**

When a field of alfalfa gets properly established, is there such a thing as its "running out"? If not, how many years does it last before it would have to be re-seeded?

G. G. MONCRIEFF.

Ans.—While alfalfa is very persistent, and some stands have held the ground for a great many years (hundreds of years in some few instances, according to report), still it must not be expected to remain forever, even on ideal soil, and on the average field, ten or fifteen years is probably about the limit of its profitable duration; often it does not last this long. Much depends upon the soil, and other conditions. Hard clay hillsides are the best. On such soil it is not always easy to secure a catch, but once established, if sown on a perfectly-clean seedbed, it will often produce luxuriantly for twenty years, and longer. We have seen scores, yes, hundreds, of pieces of alfalfa sown on varying soil, and almost always the experience has been that the alfalfa would sooner or later succumb on the low-lying, and also upon the high, loamy portions, but on the hard clay hillsides it would seem to defy the years. This

is presuming that the soil is well drained, free of grass, abundantly supplied with lime (artificial applications of lime are beneficial to alfalfa on almost any soil), and that the stand is not pastured close at any time, particularly in the fall. Grass is the arch-enemy of alfalfa, and it gets in its deadly work soonest on the mellowest soils. Disking the field after removal of a crop, together with liming, will do much to enable the alfalfa to thrive and keep down the grass.

**WEED FOR IDENTIFICATION.**

The enclosed weed is growing thickly through a hayfield of second year's growth. It was not noticed last year. What is it? How should it be treated? LAMBTON COUNTY SUBSCRIBER.

Ans.—The specimen does not show the flower, but the hard, pitted and wrinkled seeds growing in threes or fours, close to the stem, and the narrow, very rough leaves indicate that the weed is *Lithospermum arvense*. This is a common weed in European grain fields, and is known as groomwell, bastard alkanet, stoneseed, and wheat-thief. It is an annual, with small, whitish or yellowish flowers, and erect, wiry, rough stems. You doubtless introduced it with the grass seed last year, and these plants are the crop from last year's stock. We have seen fields summer-fallowed to eradicate it where it had become very thick. Will not the early mowing of the hay catch the most of the seed before it matures?

J. D.

**GOSSIP.**

That Percheron horses are popular in the Western States is evidenced by the report of the auction sale held June 3rd by the importer, W. L. De Clow, at Cedar Rapids, Iowa, when 30 mares sold for an average of \$797.83, and 5 stallions for an average of \$792. The highest price for a stallion was \$1,500, and for a mare \$1,100, four other mares selling for \$1,000 each.

A successful British co-operative farming experiment is the Coin St. Aldwyn's Co-operative Farming Society, which has been in existence for fourteen years. The society farms 250 acres, and last year's profit was £177, against £375 in 1907. Lower prices for sheep were responsible for the decrease. The dividend was 5 per cent., and a bonus of 5 per cent. For the fourteen years of the society's existence, the dividend and bonus has averaged 7½ per cent. per annum—an excellent return.

**AYRSHIRE CHAMPIONS.**

Rivalry and competition are often needed to bring out the best results in many things in life, so in the development of the Ayrshire as a dairy cow, the desire to get to the top has been the means of bringing out a succession of three-year-old champions that are a credit to the breed, and show what the owners can do when they set about it.

This, too, is another illustration of the value of the Advanced Registry system adopted by the Ayrshire Breeders' Association in making official tests of individual Ayrshires for milk and butter-fat. Each new record that eclipses the last is an incentive to some breeder who thinks he has a good cow to try her, and see what she can be made to give at the pail, and step by step the highest yield of an Ayrshire cow is advanced.

The string of three-year-old American champions that have made advancing records since the Advanced Registry was started, is as follows:

Belle's Cherry 15263, with a record of 8,871 lbs. of milk and 361 lbs. of fat in a year.

Eugenie Douglas 17152, with a record of 9,587 lbs. of milk and 405.27 lbs. of fat in a year.

Sweet Josie 19833, with a record of 10,193 lbs. of milk and 405.27 lbs. of fat in a year.

Madonna Lass 3rd 21850, with a record of 10,167 lbs. of milk and 430.28 lbs. of fat in a year.

Jennie of Sand Hill 19490, with a record of 10,160 lbs. of milk and 437.14 lbs. of fat in a year.

Curfew Bell 21255, with a record of 11,181 lbs. of milk and 592.99 lbs. of fat in a year.—C. M. Winslow, Secretary.

The Greatest Summer Event in Canadian Shorthorn  
Circles will be the

**James I. Davidson Sale**

AT BALSAM, ONT., ON THE 1ST DAY OF JULY, '09

The herd has lately been gotten together by James I. Davidson, Jr., with the purpose of having as good **SCOTCH SHORTHORNS** as have been imported and bred at Sittyton Grove in the past.

His health having given way, it is feared permanently, the cattle will be sold without reserve, and the hopes and ambitions of a great lover, a gifted judge, and a natural breeder of good Shorthorns will be turned over to the public.

There are Cruickshank Village Girls, Lavenders, Missies, Matchlesses, Mysies, Golden Drops, Wimples, Rachels, Brawith Buds, and representatives of the earlier importations of Scotch Shorthorns.

There are breeding cows of grand scale and character. There are heifers ready for the show ring as they go in the field.

There are bulls of the breeding and quality to fit them for use in any herd, and there is not a medium bull in the sale. There are calves of both sexes in the prime condition for the show ring, and it will be a good idea for intending exhibitors to see them sold. No better lot has been sold for years.

**THERE ARE 45 LOTS—36 FEMALES AND 9 BULLS.**

Cheap rates on all railways for Dominion Day.

You can send your mail bids to George P. Bellows, Auctioneer.

Write for catalogue to:

**Robert Miller, Stouffville, Ontario.**

Say where you saw this advertisement.

**Shorthorns and Shropshires SHORTHORN BULLS PRICED**

Herd headed by Imp. Queen's Counsellor = 64218 = (96594). For sale: Three young bulls; also cows and heifers bred to Queen's Counsellor.  
The Shropshires are yearling rams and ewes, bred from imported Buttar ram.  
**H. L. STEAD, Wilton Grove, Ont.**  
London, G. T. R., 6 miles; Westminster, P. M. R., 1 mile. Long-distance phone.

Red, two years old, from a good imported cow, price \$100.  
Roan, thirteen months old, extra good, short-legged calf from one of my best cows, \$100.  
Red and White, thirteen months old, out of Lady Madge, by Langford Eclipse, price \$75.  
**JOHN MILLER, BROUGHAM, ONTARIO.**  
CLAREMONT STATION, C. P. R.

**7 Imported Scotch Shorthorn Bulls 7**

Six imported bull calves from 9 to 14 months old, 3 reds and 3 roans. They are of such noted families as Clara, Jilt, Roan Lady, Butterfly, Claret and Broadhooks. One imp. bull 2 years old, red; a most valuable sire. One bull 11 months old, roan, from imp. sire and dam; promising for a show bull. Two bulls 12 months old, from imp. sire and dam; suitable for pure-bred or grade herd. Also females all ages. Write for catalogue. Prices reasonable. Farm ¼ mile from Burlington Junction station, G. T. R.

**FRED. BARNETT, MANAGER.**

**J. F. MITCHELL, BURLINGTON, ONT.**

**Shorthorn Cows and Heifers.**

I have Village Maids, Village Blossoms, English Ladies, Lancasters and Wimples for sale. Four with calves at foot, and one yearling heifer fit for any show-ring. One mile east of St. Mary's.

**HUGH THOMSON, Box 556, ST. MARY'S, ONT.**

**Clover Dell Shorthorns**

Having disposed of my recent offering of bulls, also several females, I have still young of both sexes for sale. Dual Purpose a specialty. **L. A. WAKELY, BOLTON, ONT.** Bolton station on C. P. R. within ½ mile of farm.

**During the Busy Season** If you need a Shorthorn bull we will ship one on approval, and if you are not suited you may ship him back. Write us for terms and conditions. Just two ready for service. Both Cruickshank Lavenders.

**MAPLE SHADE FARM.** STATIONS: } MYRTLE, C. P. R.  
} BROOKLIN, G. T. R.  
Logg-distance telephone. **JOHN DRYDEN & SON, BROOKLIN, ONT.**

**Scotch Shorthorns** Canada's greatest living sire, Milledred's Royal, heads my herd. For sale are young bulls and heifers, show stuff and Toronto winners, out of Stamford, Lady Ythan, Claret, Emeline, Matchless and Belona dams. A visit will be appreciated. **GEO. GIER, Grand Valley P. O., Ont. Waldemer Sta., C. P. R.**

**JOHN GARDHOUSE & SONS** Always have for sale a number of first-class Shorthorns, Shires and Lincolns, of both sexes. Drop us a line, or better, come and see for yourself. **HIGHFIELD P. O., ONTARIO.** Weston Sta., G. T. R. & C. P. R. Long-distance phone in house.

**WHY NOT BUY A HIGH-CLASS SCOTCH SHORTHORN COW, Or a Heifer, Or a Bull, Or a Few Shropshire Ewes, Or a Few Cotswold Ewes, NOW, While You Can Buy Them Low?**

I can offer you something in any of them that will make a start second to none. Write for what you want. **ROBERT MILLER, STOUFFVILLE, ONT.**

**SPRING VALLEY SHORTHORNS**

One 14 months' old imported bull, bred by A. M. Gordon. Good enough to head any herd. Five Canadian-bred bulls from 12 to 16 months. Will be priced very reasonable, as we do not want to run them over.

**KYLE BROS., AYR, ONT.**

**Greengill Shorthorns!**

Our present offering consists of 10 young bulls, from 8 to 20 months. All nice reds and roans. A number of them from imp. sire and dam. Prices right.

**R. Mitchell & Sons, Nelson P. O., Ont.** Burlington Jct. Sta.

**VALLEY HOME SHORTHORNS AND BERKSHIRES**

For sale: 6 grand young bulls from ten to eighteen months old, young cows with calves at foot, and ten one and two-year-old heifers. All our own breeding. Some are very choice show animals. Also young sows, and a fine boar 12 months old. **S. J. PEARSON, SON & CO., MEADOWVALE P. O. AND STATION, C. P. R.**

**PERFECT**

## Steel Tanks You Can Bank On

THIS GALVANIZED STEEL STOCK TANK is intended for watering stock, especially where water is supplied from a windmill. It is supported with angle iron frame work, dotted lines represent boards to protect the tank from stock, the frame work is sent out punched so that anyone can nail boards to it. This makes a very satisfactory tank for this purpose, and one that is self-supporting. Send for our Special DIRECT FROM MANUFACTURER proposition and Catalogue. Address Dept. T.

**The Steel Trough and Machine Co., Limited**  
TWEED, CANADA

**Geo. Amos & Son,**  
MOFFAT, ONTARIO.

For sale: Several good young heifers, some of them show heifers, and all of the very best Scotch breeding. Correspondence solicited and inspection invited.

**Moffat Station, 11 Miles East of City of Guelph, on C. P. R.**

**SHORTHORNS**  
Nine bulls from 8 to 20 months old, reds and roans; 10 yearling heifers and a few cows. Will sell very cheap to make room in stables.

**CLYDESDALES**  
One pair of bay mares and one dark brown, heavy draft and two spring colts.

**JAMES McARTHUR, Gables, Ontario.**

We are offering **5 Good Young Bulls** at very reasonable prices in order to clear, also 2 VERY CHOICE JUNIOR YEARLINGS IN SHOW CONDITION. We can sell some extra well bred cows and heifers (bred or with calves at foot) at prices which should interest intending purchasers. Our farms are quite close to Burlington Jct., G. T. R. Long-distance telephone.

**W. G. Pettit & Sons, Freeman, Ontario.**

**Shorthorn Cattle**  
AND LINCOLN SHEEP.

Females of all ages for sale of the thick-fleshed, low-down kind that have been raised naturally, neither stuffed nor starved. Twenty-five Lincoln ewes, bred to our best imported stud ram, also a few choice yearling rams. Prices very reasonable for quick sale.

**J. T. GIBSON, DENFIELD, ONT.**

**A. Edward Meyer,**  
P. O. Box 378, Guelph, Ontario,  
Breeds SCOTCH SHORTHORNS Exclusively

Twelve of the most noted Scotch tribes have representatives in my herd. Herd bulls: *Scottish Hero* (imp.) = 55042 = (90065) 295765 A. H. B.; *Gloster King* = 68708 = 283804 A. H. B. Young stock for sale. Long-distance phone in house.

## Brampton Jerseys

Canada's premier herd. Dairy quality. Bulls all ages for sale, from best dairy and show cows in Canada, and by best sires. Our herd is 175 strong.

**B. H. BULL & SON, BRAMPTON, ONT.**

**Stoneycroft Ayrshires**

Choice young bulls and heifers of the very best breeding, combining show and dairy quality.

**Large Improved Yorkshire Pigs** from imported sires and dams, now ready to ship.

**Stoneycroft Stock Farm, Ste. Anne de Bellevue, Que.**

**AYRSHIRES AND YORKSHIRES!**

Kindly send in your orders at once for imported stock. We can cable orders and have them shipped in May. Calves from imp. dams or from home-bred Record of Merit dams. Females any age. A few young pigs.

**ALEX. HUME & CO., MENIE, ONTARIO.**  
HOARD'S STATION, G. T. R. Phone in residence. EYA DE MENIE

**Just Landed with 50 Head CHOICE AYRSHIRES**

Including 12 bulls fit for service, a few August calving cows and two-year-old heifers; cows with records, up to 70 lbs. per day. I have a choice lot of two-year-olds, yearlings and heifer calves. Anything in the lot for sale. Correspondence solicited. Phone, etc.

**R. R. NESS, HOWICK, QUE.**

**Ayrshires**

Two young bulls, 12 months and 15 months old, of true dairy type.

Very fashionable. **N. DYMENT, CLAPPISON'S CORNERS, ONTARIO.**

**Ayrshires from a Prizewinning Herd**—Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to **WM. STEWART & SON, Menie P.O., Ont.**

**WOODBINE STOCK FARM**

Offers a few fine young Holstein bulls and bull calves, sired by Sir Mechthilde Posch. Sire's dam holds world's largest two-day public test record, dam Lanthe Jewel Mechthilde, 27.65 lbs. butter in 7 days; average test, 4.46 per cent. fat; out of dams with superior breeding and quality.

Shipping stations—Paris, G. T. R.; Agr. C. P. R. **A. KENNEDY, Agr. Ont.**

**SPRINGBROOK AYRSHIRES**

are large producers of milk, testing high in butter-fat. Young stock for sale. Orders booked for calves of 1909, male and female. Prices right. Write or call on **W. F. STEPHEN, Box 163, Huntingdon, Que.**

**Glenwood Stock Farm** Holsteins and Yorkshires. Holsteins all sold out. Have a few young Yorkshire sows, about 2 months old, for sale cheap. True to type and first-class. Bred from imported stock. **Thos. B. Carlaw & Son, Warkworth P.O., Ont.** Campbellford Station.

PLEASE MENTION THIS PAPER.

**Imperial Holsteins!**

For sale: Bull calves sired by Tidy Abbekirk Mercedes Posch, whose seven nearest dams have records within a fraction of 27 pounds, out of show cows with high official records. A most desirable lot of coming herd-headers. **W. H. SIMMONS, New Durham P. O., Ont., Oxford County**

**Holsteins at Ridgedale Farm**—Eight bull calves on hand for sale, up to eight months old, which I offer at low prices to quick buyers. Write for description and prices, or come and see them. **R. W. WALKER, Utica P.O., Ont.** Shipping stations: Myrtle, C. P. R., and Port Perry, G. T. R., Ontario Co.

**GOSSIP.**

In a shipment of Clydesdales from Glasgow recently were consignments to A. M. Lusk, Alberta; J. M. Bruce, Saskatchewan, and John Anderson, of Omemece, Ont., the last named having seven head.

That good polo ponies are in demand in England was evidenced at a recent successful sale at Tattersall's, London, when five ponies owned by Sir James Dale were sold for 1,355 gs. The highest prices were 500 gs. for La Souris and 350 gs. for My Honey.

The executors of the late Sir Philip Muntz have sold the famous Dunsmore estate in Warwickshire, England, at auction for £30,000. The mansion stands in the midst of 491 acres, which include the stud farm for Shire horses. The land has been highly cultivated for the last 30 years, and was everywhere noted for its stud of Shires and flock of Shropshire sheep.

The little town of Seney, in Georgia, has declared war on automobiles. At a meeting of the Town Council recently, an ordinance was adopted prohibiting the use of automobiles within the city limits, and the town marshal was authorized to arrest anyone passing through Seney with such "engines of destruction." This is said to be the first town on record to declare against the automobile in toto.

Official records of 148 Holstein-Friesian cows have been accepted by the American Holstein Association, from May 14th to May 15th, 1909. This herd of 148 animals, of which nearly 60 per cent. were heifers with first or second calves, produced in seven consecutive days 60,212.8 lbs. of milk, containing 2,188,885 lbs. of butter-fat, thus showing an average of 3.64 per cent. fat. The average production for each animal was 406.8 lbs. of milk, containing 14.79 lbs. of butter-fat; equivalent to 58.1 lbs. or 28 quarts of milk per day, and 17.4 lbs. of the best commercial butter per week.

The Smithfield Show of 1799 (the first of the series) was held in Mr. Wotton's livery stable, 20 gs. being paid by the society for the use of it from Friday to Tuesday, inclusive. The doors of the yard were to be opened on the Friday morning "as early as any cattle are expected to come," and the public was admitted at one shilling a head. There were two classes for cattle, one of beasts fatted with cake and the other without, and two for wethers, one fatted with cake and one without. At the 1908 show of the same society there were over 24,000 people present on one day, the entries totalled 959, and there were represented 12 breeds of cattle, 19 breeds of sheep and 7 of swine.

**BAR OUT TUBERCULAR CATTLE.**

The Oklahoma Board of Agriculture has issued a proclamation, barring tubercular cattle from entrance to that State. Except in the case of cattle for slaughter, or for feeding or grazing within the State whose final destination is outside it, it is compulsory that a health certificate from State or Federal authorities be issued for every animal entering the State. The certificate must state that the cattle are free from all contagious disease. Exceptions to these regulations are when cattle are shipped into slaughter pens in the State, where the regular inspection is enforced, and cattle moved in for feeding and grazing, and whose final destination is outside Oklahoma.

A Presbyterian minister of a Western State recalls with delight how a loyal little girl in his Sunday school proved to a playmate that her minister was a better preacher than the minister of the church which the small playmate attended. It had become well known in the community that the Presbyterian preacher believed in short sermons, while the preference of his ministerial neighbor seemed to be just the opposite. And by this point the little Presbyterian clinched her final argument. "Everybody knows that your preacher preaches fifty minutes and puts the people all to sleep, and our preacher can do the same thing just as well in ten minutes."

**QUESTIONS AND ANSWERS. Veterinary.**

**ABSCESS ON KNEE.**

Calf, two months old, has for four weeks had a lump on one knee. It began by swelling, then broke and ran matter. The swelling is still present and the calf very lame; so lame that it will not use the leg at all. H. R. K.

Ans.—This was an abscess caused by a bruise. The persistent lameness and soreness indicates inflammation of the joint. A cure is doubtful. If any pus be still contained the swelling should be lanced and the cavity flushed out twice daily with a five-per-cent. solution of carbolic acid in water. Apply hot linseed-meal poultices for a week or two, and if this treatment does not cause an improvement it would be wise to destroy the calf. V.

**HYPERTROPHY OF THE HEART**

Pregnant cow became ill; would lie most of the time, and respirations became labored and short. The skin under jaw became puffy, and the brisket swelled greatly. She aborted. She licked a great deal of salt and drank large quantities of water. She died. A post-mortem revealed all organs healthy but the heart, which was four times the normal size, and there was a fibrous formation surrounding it and the arteries. H. J. S.

Ans.—Your cow had hypertrophy (enlargement) of the heart. Nothing could have been done to save her, and the condition could only have been suspected. The swellings mentioned were due to faulty circulation. V.

**LAME MARE.**

Eighteen-year-old mare went lame after skidding logs the first week in April. My veterinarian said she was lame in hip joint, and told me to rub with strong liniment. I have done this, but she has not improved very much. J. F. C.

Ans.—Hip-joint lameness is very slow to recover. It requires long rest. You cannot expect much improvement in two months. The joint is so deep seated it is hard to get an action from applications. It would be well to apply blisters. Take 2 drams each of biniodide of mercury and cantharides, and mix with 2 ozs. vaseline. Clip the hair off the joint, tie mare so that she cannot bite the parts, rub well with the blister once daily for two days; on the third day apply sweet oil. Turn loose now, and oil every day. As soon as the scale comes off, tie up and blister again, and after this blister every four weeks as long as necessary. She can run on pasture except during the two days that she is tied up each time. V.

**HEMORRHAGE FOLLOWING CASTRATION.**

Two Clydesdale colts and a blood colt were castrated, and the cords severed with an emasculator. The heavy colts did all right, but about an hour after the operation the blood colt began to bleed, and bled until the cord was secured and ligatured. Why did this colt bleed and the others not? A. J. K.

Ans.—The question you ask is very hard to answer. We know that any operation, however carefully performed, is liable to be followed by untoward results, and we cannot tell why. This may be said to be particularly true in castration. The operator is often blamed when he should not be. The emasculator is considered by practitioners the safest and best instrument to use, but no manner of operation will insure satisfactory results in all cases. It is not uncommon for bleeding to follow the old method, when clams were used. It may be there was either a disease or a congenital weakness of the coats of the artery in your colt and it ruptured. It was fortunate that the operator was able to reach the cord and ligature it. V.

**Miscellaneous.**

**A RUNAWAY.**

If a man's team runs away on the road, and he does all in his power to stop them, is he responsible for any damage they do? A SUBSCRIBER.

Ontario.

Ans.—He may be, and probably is. We cannot answer more definitely without a fuller statement of the case.

## YOUR DANGER BEGINS WHEN YOUR BACK ACHES.

It is the First and the Sure Sign of Kidney Disease.

### Doan's Kidney Pills

Cure the aching back by curing the aching kidneys beneath—for it is really the kidneys aching and not the back.

They act directly on the kidneys and make them strong and healthy, thereby causing pure blood to circulate throughout the whole system.

Mrs. Frank Foss, Woodside, N.B., writes:—"I was a great sufferer with backache for over a year, and could get nothing to relieve me until I took two boxes of Doan's Kidney Pills and now I do not feel any pain whatever, and can eat and sleep well; something I could not do before."

Doan's Kidney Pills are 50 cents per box or 3 boxes for \$1.25 at all dealers or mailed direct on receipt of price by The Doan Kidney Pill Co., Toronto, Ont.

# WOOL

HIGH PRICES. ✱ ✱ ✱ WRITE US.

## E. T. CARTER & CO.,

84 FRONT ST., E., TORONTO, CANADA

### FAIRVIEW HERD HOLSTEINS

The greatest A. R. O. herd of in northern New York. Headed by Pontiac Korndyke, the greatest sire of the breed, having five daughters whose seven-day records average 29 3/4 pounds each, and over 4.3% fat. Assisted by Rag Apple Korndyke, a son of Pontiac Korndyke, out of Pontiac Rag Apple, 31.62 pounds butter in 7 days, and 126.56 pounds in 30 days, at 4 years old. Cows and heifers in calf to the above two bulls for sale, also young bulls sired by them out of large-record cows. Write, or come and inspect our herd. E. H. DOLLAR, Heuvelton, St. Lawrence Co., N. Y., near Prescott, Ont.

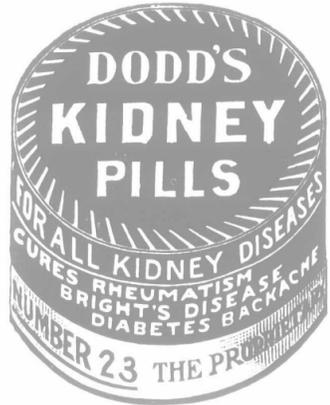
**MAPLE GLEN** For sale: Only 1 bull, 11 months old, left; dam is sister to a 26-lb. tested cow. Any female in herd for sale, 7 with records 20 1/2 to 26 1/2 lb. official tests. An 8-yr.-old G. D. of Paul Beets De Kol, in calf to Oakland Sir Maida—her record 21.88 as a 5-yr.-old. Price \$400, or will dispose of herd en bloc, a great foundation privilege. G. A. Gilroy, Glen Buell, Ont. Long-distance phone connects with Brockville.

**Sunny Hill Farm** No more Holsteins for sale at present. Eggs from choice White Rocks and Buff Orpingtons, one dollar per setting. DAVID RIFE & SONS, Hespeler Ontario. Waterloo County, C. P. R. and G. T. R.

Johnnie Payne tells of an American tourist, hailing from the West, who was out sight-seeing in London. They took him aboard the old battleship Victory, which was Lord Nelson's flagship in several of his most famous naval triumphs. An English sailor escorted the American over the vessel, and coming to a raised brass tablet on the deck, he said, as he reverently removed his hat:

"Here, sir, is the spot where Lord Nelson fell."

"Oh, is it?" replied the American bravely. "Well, that ain't nothin'. I nearly tripped on the blame thing myself."



### QUESTIONS AND ANSWERS. Miscellaneous.

#### PERVIOUS URACHUS.

Have colt three weeks old, drops a little at navel, but not any swelled at joints; quite smart; have been using carbolic acid, reduced with water, but around navel keeps raw. W. H.

Ans.—See answer to M. W., page 1008, this issue.

#### LIME WATER FOR HEAVES.

Have seen lime water recommended for heavy horse with cough. Please give directions for its use. YOUNG FARMER.

Ans.—Lime water is prepared by slaking lumps of fresh lime by throwing a little water over them, placing the slaked lime in a barrel or other vessel, adding water, stirring the mixture well, then allowing it to settle, and using the clear water on top, which is lime water. All the hay and oats fed to a heavy horse should be damped by sprinkling with lime water.

#### WEAK FETLOCKS.

My driving mare foaled on May 24th. The foal is very weak on her front feet, especially on the fetlock joints. Would it be advisable to put a supporter on them, or is there any liniment that will strengthen them? G. M. S.

Ans.—The fetlocks may gain strength and improve with time, but if it is a bad case they may be helped by bandaging with thick felt, reaching from the hoof to the knee, wide enough to overlap a little on the leg, and a piece of green hickory or elm placed the full length between felt and straps, in front and on each side. Wrap the leg with batting, and then apply the support. The support should be removed a few minutes twice daily to allow the limb to cool off. If improvement is not effected in this way, blistering in the fall will be necessary and probably effective.

#### FALL PASTURE FOR COWS.

Would like to sow a piece of rape to come in for cow pasture in fall when grass gets scarce. What is the proper time to sow, and should it be sown broadcast or in drills? If in drills, how far apart? How much seed per acre? FARMER.

Ans.—Rape makes a very suitable fall pasture for young cattle, but is not suitable for milking cows, as it will taint the flavor of the milk. It is best sown from June 15th to July 1st, in drills 24 to 26 inches apart, at the rate of two pounds per acre, and cultivated with the horse hoe. On good, clean ground it does well sown broadcast, at the rate of four or five pounds per acre. There is less waste with drills, as the animals walk between the rows and trample less of the crop. In experiments extending over several years at Guelph, very good results have been given by sowing in the spring for fall pasture for cattle: Oats, 51 lbs.; Early Amber sugar cane, 30 lbs., and common red clover seed, 7 lbs. It is probable that rye sown this month or next, 2 bushels per acre, would make a fairly good fall pasture.

#### CROP AND MEADOW-SEEDING FOR MUCK LAND.

Have a piece of low meadow, muck surface, with clay subsoil; has been in pasture for a few years, but needs breaking up. As it cannot be plowed until, probably June 15 or 20:

1. Would like to know if Hungarian millet would be a profitable seed to sow for this year?
2. Would it be wise to sow millet two years in succession?
3. If seeded down again, what grasses should I sow, that would yield the most feed? W. D. Lanark Co., Ont.

Ans.—1. It probably would, although one must take a chance of wet weather interfering with the securing of the crop.

2. It is seldom wise to sow the same crop on a field two years in succession. If one has hogs, sheep, or cattle, other than milking cows, rape should be an excellent crop to grow, instead of a second crop of millet. The rape might be pastured, or fed green.

3. If intended for hay, probably six pounds timothy and four pounds alsike clover would make as good a seeding as anything. If for permanent pasture, try red-top five pounds, Kentucky blue grass five pounds, timothy three pounds, alsike four pounds.

## COOPER'S FLUID

A SHEEP DIP  
A CATTLE WASH  
A DISINFECTANT

Absolutely indispensable on farm and ranch. Highly concentrated—non-poisonous. Mixes with cold water—suitable for all animals—won't stain wool or hair.

Positive cure for Scab, Foot Rot, Mange, Ticks, Lice, Ringworm, Sores etc.

The best disinfectant for Stables, Stock Pens, Hen Houses etc.

## COOPER'S THE KING OF SHEEP DIPS USED BY THE KING.

Cooper's Powder Dip has been the king of them all for 65 years. His Majesty's famous Southdowns are dipped regularly in Cooper's. In Spain, by Royal Decree, every man raising Merino Wool must dip his sheep in Cooper's Powder Dip.

Write for copies of books "Sheep Scab" and "Diseases of Sheep." Sent free if you tell us the paper in which you saw this advertisement and how many sheep you have.

For sale by druggists and dealers generally or direct from  
**WM. COOPER & NEPHEWS, TORONTO.**

### MR. A. I. HICKMAN,

Court Lodge, Egerton, Kent, England,

**EXPORTER OF PEDIGREE LIVE STOCK** Of all descriptions. During the summer months the export of show and stud flocks of sheep will be a specialty. Who can do better for you than the man who lives on the spot? Mr. Hickman will be at the Bell Hotel, Gloucester, during the week of the Royal Show, and will be pleased to meet all foreign and colonial visitors there.

### Centre and Hillview Holsteins

For sale: 5 choice bulls fit for service now, from dams of extra good backing. Their sires are Brookbank, Butter Baron and Bonheur Statesman. Their dams and sires' dams and grandams average over 24 lbs. butter testing over 4 per cent. in 7 days. P. D. EDE, Oxford Centre P. O., Woodstock Sta. Ont. Long-distance phone, Burgessville.

## Holsteins

### FOR SALE; COWS AND HEIFERS

All ages. Also bull and heifer calves, including daughter and granddaughters of Pietertje Hengerveld Count De Kol, whose TWO famous daughters made over 32 lbs. butter each in 7 days, and sire of the "world's champion milking cow," De Kol Creamelle, which gave 119 lbs. in one day, over 10,000 lbs. in 100 days. Also for sale daughters of De Kol's 2nd Mutual Paul, sire of Maid Mutual De Kol, which gave over 31 lbs. butter in 7 days, also granddaughters of Hengerveld De Kol. Other leading breeds represented. Putnam station, near Ingersoll.

H. E. GEORGE,

CRAMPTON, ONTARIO.

### HOMEWOOD HOLSTEINS

For Sale: Only thrifty bull calves from 4% R. O. M. cows; some will make great herd headers and show animals. Write for prices and description. Station on the place.

M. L. & M. H. HALEY, Springford, Ont.

### BURNLEY POINT HOLSTEINS!

3 thrifty bull calves for sale, 8 months old. They are choice ones. Also 1 three-year-old bull. WM. BATTY, CLARKSON, ONTARIO

### LAKEVIEW HOLSTEINS

We have for sale 4 young bulls ready for service, 2 of them by Brightest Canary, whose several nearest dams average 25 lbs., and whose B. F. test shows 4%; the other 2 equally as well bred. We have also for sale a few pure-bred females and a number of heavy-milking Holstein grades. LAKEVIEW FARM, BRONTE, ONTARIO. Write us for particulars. W. D. Brecken, Manager. Long-distance phone

### The Maples Holstein Herd!

RECORD-OF-MERIT COWS.

Headed by Lord Wayne Mechthilde Calamity. Nothing for sale at present but choice bull calves from Record of Merit dams; also a few good cows at reasonable prices.

WALBURN RIVERS, Foiden's Corners, Ont.

### MAPLE HILL HOLSTEIN - FRIESIANS

Special offering: Am now offering for first time my stock bull, Sir Mercedes Teake (1489), champion bull at Toronto and London, 1908. Can no longer use him to advantage, as I have twelve of his daughters in my herd.

G. W. CLEMONS, ST. GEORGE, ONT.

### Holsteins

Record of Merit stock. One bull 13 months old. A number of bull calves, also a few young cows and heifers for sale. THOS. HARTLEY, DOWNSVIEW, ONT.

## HERE AGAIN!

With high-class HOLSTEINS for sale of all ages, except bulls for service. CHEESE is HIGH. Why not invest AT ONCE? We sell at BARGAIN prices. Write or call, we're always home. Railway connections good.

E. & F. MALLORY, Frankford, Ont.



### CATTLE and SHEEP LABELS

F. G. James, Bowmanville, Ont.

Buy now of the Champion Cattle Stock Flock of America, 1906. Flock headers, ranch rams, ewes of different ages. All of first-class quality, and prices reasonable. Write, or call on J. C. ROSS Box 61, Jarvis, Ont.

### SOUTHDOWN AND COLLIES.

Orders now solicited for especially-fitted sheep. Your choice of early lambs from imported and prizewinning Canadian-bred ewes, and by the sire of the Grand Champion wether at Chicago, 1907. Twenty shearlings, the choice of last year's lamb crop, also for sale. Long-distance Telephone. ROBT. McEWEN, Byron, Ont. Ry. Stn., London, Ont.

### Fairview Shropshires

We now offer Excellent ewes, choice rams. And the best lots of lambs ever offered. All sired by our famous Chicago and St. Louis Grand champion rams, His Best and B. Sirdar. J. & D. J. Campbell, Fairview Farm, Woodville, Ont.

### IMPORTED HORNED DORSETS

I have for sale a few of both sexes, the got of last year's champion all round the circuit, Imp. Komulus 2nd. Canada's banner flock of Dorsets.

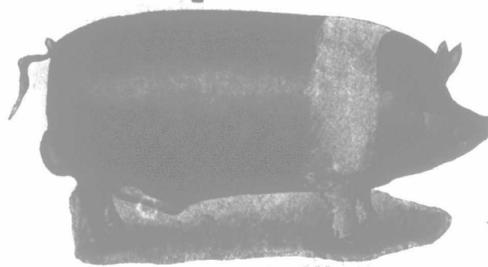
JAS. ROBERTSON & SONS, Milton P.O. and Sta., C.P.R. and G.T.R.

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs.—Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Buena Vista Farm, Harriston, Ont.

### Maple Villa Oxfords, Yorkshires

The demand for Oxford Down sheep and Yorkshires has been the best I ever had. I have still for sale shearing ewes and ewe lambs, and young sows sale in pig. These will certainly give satisfaction. J. A. CERSWELL, BONDHEAD P. O., ONTARIO, Simcoe County.

# Hampshire Swine



Of the most popular show and breeding type. The breed that won over all three years in succession, including Canada and United States. We offer for sale now fifty pigs, both sexes, from 6 weeks to 3 months old, and will make good ones for fall breeding; also a few choice sows safe in pig. Call on or address:

**A. O'NEIL & SON,**  
Birr, Ont.

**Willowdale Berkshires!**  
Won the leading honors at Toronto last fall. For sale are both sexes and all ages, from imp. stock on both sides. Show things a specialty. Everything guaranteed as represented. J. J. WILSON, MILTON, ONT., P. O. AND STATION, C. P. R. AND G. T. R.

**SUNNYMOUNT BERKSHIRES**  
Highest standard of type and quality. For sale: Sows of all ages, and 4 yearling boars. A grand, good lot. Also younger ones. Pairs not akin. JOHN McLEOD, C.P.R. & G.T.R. Milton P.O., Ont.

**OHIO IMPROVED CHESTER WHITES.**—Largest strains. Oldest-established registered herd in Canada. Young sows in farrow. Choice pigs 4 weeks to 6 months old. Pairs furnished not akin. Express charges prepaid. Pedigrees and safe delivery guaranteed. E. D. GEORGE Putnam, Ont.

**DUROC-JERSEY SWINE**  
Imported and home-bred. Sows ready to breed. Boars fit for service, and younger ones either sex. Also Embden geese. MAC CAMPBELL & SONS, HARWICH, ONT.

**MONKLAND YORKSHIRES**  
are the easily-fed, quick-maturing kind. The sort the farmers want.  
All ages for sale. 100 sows bred now.  
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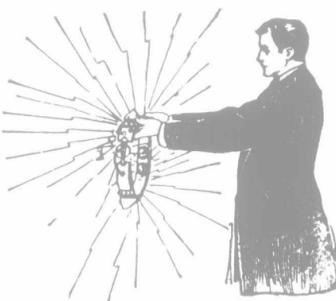
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## WEAK MEN, LOOK!

Take This Belt for What It Is Worth—Wear It Until You Are Cured—Then Pay Me My Price.

I have learned to put a lot of confidence in men, especially men who are weak, sickly and delicate, who have tried everything to restore their vitality and failed, who have lost faith in themselves and humanity in general, because they have been led to try so many remedies which were no more use than as much water. These are the men I want to wear my Belt, and I will wait for my pay until they are cured. All I ask is that they give me reasonable security while the Belt is in their possession and use. If it don't cure you it costs you nothing. Is there anything more fair?  
Every man should understand that physical power, large muscles, strength and endurance come from animal electricity. My treatment will pump every part of the body full of that and perfection will result.  
It not only restores vigor and increases nerve power, but it cures Rheumatism, Pains in the Back and Kidneys, Indigestion and Constipation, and all troubles which result from weakness of any vital organ.



Dear Sir, The trouble for which I purchased your Belt has entirely disappeared. It was only after a great deal of hesitancy and enquiry from your patients that I bought one of your Belts, but I am now glad that I did. My back is perfectly well, and I never was so strong or felt as well as I do now.  
Yours truly, GEORGE A. STARK, Owen Sound, Ont.

Dear Sir, I have worn your Belt for four weeks, and am well pleased with it. It has done me a great deal of good. My back don't bother me so much, and I have had no losses the last fortnight. Wishing you success with your Belt, I remain, Yours truly, JAMES FOWLER, Joggins Mines, N.S.

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### QUESTIONS AND ANSWERS. Miscellaneous.

#### CEMENT FLOORS AND POSTS.

How many barrels of cement will it take to cement a stable floor 36 x 56, and how much gravel? Would it be advisable to put in cement posts for stalls, and is there any firm that makes moulds for making the posts?  
W. H.

Ans.—There are a great many ways of laying cement stable floors. The thickness of floor and strength of mixture depend upon the nature of the material available, firmness and dryness of the earth foundation, etc. Some stable floors on firm bottoms give good satisfaction when laid only three inches thick with a single layer, composed of one part Portland cement to five of gravel. A barrel of cement will suffice for 80 square feet of such floor, which would mean that a stable 36 x 56 feet would take a little over 25 barrels of cement, the amount of gravel being, approximately, 23 loads, of one cubic yard each. Many stockmen claim that to guard against dampness, and to insure greater strength, a foundation of well-runned cinders, broken stone, field stone or coarse gravel should be laid in the bottom, under the platform where the animals are to stand, with, say, a three-inch coat of concrete, mixed nine or ten to one, on top of the prepared foundation, and then a finishing coat of one and a half or two inches thick, mixed one to three. For a horse-stable floor, such finishing coat should by all means be applied, and it is probably better for the gutters and platforms of almost any stable, as it makes a better wearing surface. Whatever kind of floor is to be laid, it is an easy matter to calculate the quantity of material required if one remembers that a barrel of cement contains four cubic feet, and in calculating amount of cement and gravel, allows 20 per cent. extra to cover waste and compression due to ramming.

**YEARLING CATTLE SUCKING COWS—BUCKWHEAT OR MILLET.**  
1. Would like to know of some device to prevent yearling cattle from sucking cows?  
2. Which is the more profitable to sow, buckwheat or millet? Have five acres well drained, black ash and hemlock soil. What varieties of buckwheat or millet would you recommend? What time should it be sowed?  
M. W.  
Ans.—1. Put a halter on each beast that is addicted to the habit, having driven nails through the leather nose-band with the points sticking outward, so that when the animal goes to suck the nails will prick the cow and cause her to refuse to stand. Be careful to drive the nails through the sides as well as the top of the band.  
2. It depends on the use that may be made of the crop. Where one has stock to which the millet may be advantageously fed, either green or cured as hay, millet should prove the more profitable. Buckwheat is of especial value for smothering weeds. Silver Bull has proven one of the best varieties of buckwheat in the plots at the Ontario Agricultural College, yielding 19.8 bushels as the average of grain per acre for eleven years. The variety known as "Rye" buckwheat, grown at the College for a few years now, produced 32.7 bushels in 1908 of grain weighing 53 pounds per bushel. This variety is grown extensively in Nova Scotia, and is sometimes called Sand, Notched or Rough buckwheat. Prof. Zavitz reports as one difficulty of growing this variety in Ontario, that it ripens very unevenly, more so than other varieties. June is the month in which to sow it. Japanese Pande millet occupied the highest place at the College in yield of both green crop and hay in 1908, and in the average of five years. This variety should be distinguished from the Japanese Barnyard Grass, with which it is often confused even by seedsmen. Japanese Pande has a smooth, shiny, dark reddish-brown seed. In the average of five years' tests on the experimental plots, this variety yielded at the rate of 20 tons per acre of cured hay. Testing the date of sowing, resulted in the greatest yield from sowing Japanese Pande on June 14. Hungarian grass sown on June 14 at Guelph when sown on June 14 at Guelph.

July. Any of the millets may, however, be sown almost any time during early summer.

#### SCHOOL FENCING.

Have the trustees of a school section to fence and maintain all the fence around the school ground?  
EAST LUTHER, Ontario.

Ans.—Yes.

#### WOULD HYDRAULIC RAM WORK

I have a spring 300 feet from barn, 15 feet of a rise to barn, fall from spring three feet to where ram would work. There would be water running to fill a 2-in. h pipe all winter. Could I take water up to barn?  
W. H.

Ans.—Yes; without difficulty. An 18-inch fall would answer, if necessary, though three feet is better, and will deliver much more water to the barn.

#### COLLECTING FOR SERVICE.

A bred his cow to B's bull, a registered Holstein, and a good one. B's price was \$1.00 per calf. About five months later A sold his cow at public auction, making the auctioneer and public understand she was due to calve in June. The bidding then was brisk, and he realized double the price he would have got had she not been bred. After the sale B asked A for \$1.00 for service, which he refused to pay, by saying, "You can't prove she is in calf."  
1. Cannot B collect from A, whether in calf or not?  
2. Or has B to bother himself to trace the cow to find out? SUBSCRIBER, Ontario.

Ans.—1. No.  
2. He ought to take that, or some other way, of making sure eventually that he is entitled to payment. An action for the recovery of same now would be premature.

#### FATHER AND SONS FARMING.

A man has two sons who work with him on a farm. Each has a voice in the management of same, the father saying that he is not and does not wish to be responsible for everything. He has talked that way for the past five or six years.

1. Does this constitute a partnership?  
2. If one of the boys wishes his share, can he secure it by law?  
3. Can he demand an agreement that will give him his share (present value) at the father's death, his resigning the management to his other son, or in case he sells out?  
4. Would the other children (minors) be entitled to shares, they not having helped to earn?  
Q. O. R., Ontario.

Ans.—1. No.  
2. No.  
3. No.  
4. In the event of their father dying without a will they would be entitled to shares in his estate. If, however, he should die leaving a will, it would govern the distribution of the property.

#### TROUBLE IN FEET OF CHICKS.

On 16th May last I had a hen hatch 12 Leghorn chickens. I confined the hen in a box on the lawn, giving the chickens a run of about 6 x 4 feet. I fed them on hard-boiled eggs, soaked bread in milk, etc., and small wheat. When about one week old I noticed five of them with all their claws drawn up, and they are walking and dipping around on their stumps. Don't appear to have any use of their claws. They are otherwise very healthy. What is the cause? Can anything be done so that they may have the use of their feet?  
M. O. W.

Ans.—In this case I think the chickens have been kept on the same too limited space for too long a period. Doubtless they were much on wooden floor of the box in which the hen mother was kept. The remedy is obvious. Both hen and chickens want greater range, where they can obtain grass, insect life, etc., etc. The feeding was correct, as long as too much was not given at a time. When the weather permits the chicks cannot get down to a grass run any too soon. They require, of course, to be kept warm at night. I tried raising chickens some years ago on the board floor of a hay-loft, and although there was straw and chaff on the floor the great majority of the chicks went off their feet.  
A. G. G.

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FARM BULLETIN.



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fect, viz.: To build a center chimney, with short pipe and few turns, and provision at the bottom for cleaning out the soot. From time to time the pipe may be hammered a little, causing any soot that does accumulate to drop down, when it may be removed. WM. H. DAY.

**STEEL AND CONCRETE SILOS.**

1. Do you know of any farmers who have steel silos? Are they a success? Will ensilage eat or rust steel? Would 14-gauge steel be heavy enough for a silo 30 feet high and 12 or 14 feet in diameter? What is the best paint for painting the inside of a silo?

2. Is it necessary to reinforce (with steel) a concrete silo, or wall?  
Lennox Co., Ont. H. L.

Ans.—1. For information on steel silos, we can only refer our inquirer to the article on page 955 of "The Farmer's Advocate" of June 10th, 1909, and to the editorial on page 985, issue June 17th. If interested, address the firm which has been advertising steel silos in "The Farmer's Advocate" of late.

2. No; but in the effort to economize, by reducing the thickness of concrete-silo walls, reinforcement has been resorted to. A six-inch wall, reinforced with steel wire, is stronger than a much thicker one without reinforcement. Just how thick a cement wall is necessary for a silo of given capacity is a question we have not yet seen settled in a practical way. In Perth County, Ont., many have been built only six inches thick from bottom to top.

**QUESTIONS OF DRAFT.**

1. What is the extra draft of a wagon on a hard road for, say, 500 lbs., or 1,000 lbs. I remember seeing a bulletin on the subject once, but do not remember when published.

2. How much advantage does one, two or three inches on a whiffletree, give a horse? What is the rule for such calculation?

3. How much advantage does a horse get by letting the whiffletree drop back two, four or six inches (not so as to touch the wagon or cultivator at any point.)? MECHANIC.

Ans.—1. This question is ambiguously expressed. Seemingly, the desire is to know what increased draft would be occasioned by an increase in the weight of the load. On this point, the conclusions of General Morin, who carried on a series of experiments under the French Government, would seem to apply. His first deduction was that "traction is directly proportional to the load and inversely proportional to the diameter of the wheel." His fourth principle was, "upon a macadam or paved road, the traction increases with the speed above a velocity of 2.25 miles an hour." However, upon soft roads of earth or sand, he found the traction independent of the velocity.

2. Evidently, doubletree, and not whiffletree, is meant. When all the bolt holes are in a straight line, the percentage of advantage given a horse by an extra inch or two on the end of a doubletree or evener, depends upon the length of the doubletree or evener, i. e., the distance between the holes where the whiffletrees or doubletrees (as the case may be) are attached. The draft of each horse, or pair, is in inverse proportion to the relative length of the arm. In other words, the draft of his arm of the evener, will equal the draft of the other horse (or pair, as the case may be), multiplied by the length of his (or their) arm. If it is desired that the off horse of a team shall do 60 per cent. of the work, then the clovis-pin of the off horse must be set in until the two ends of the evener are in inverse ratio, or as 40 to 60. This means that his arm of the evener will be just two-thirds as long as that of the high horse, or two-fifths of the total effective length of the evener, as finally adjusted. Suppose the evener were 48 inches long to begin with. Half of this would be 24 inches, which would be the length of the long end. The short end should be just two-thirds of this, or 16 inches. The sum of 24 and 16 is 40, of which 16 constitutes the fraction of 25.

3. Where the holes for the whiffletrees are in an exact line with the hole on the draft-pin, the draft will be equal. Whether one horse is behind or not. With an ordinary doubletree, where the

clevis-holes are behind the draft-pin, the horse which is ahead has an advantage, because his leverage is lengthened, while his mate's is shortened. With a four-foot evener, where the holes for the clevises are four inches behind the draft-pin, the horse which is ahead may have an advantage greater than 25 per cent., if the angle formed is as much as 20 degrees. Even in an equalizer where the three holes are only one inch out of line, an angle of 20 degrees for the evener with the line of draft, may give the head horse nearly as much advantage as would result by setting the clevis of the other horse in one inch.

Where the holes for the clevis-pins are in front of the draft-pin, the horse ahead has to pull correspondingly more, instead of less.

**LEAKING TEAT.**

A young cow has small hole in teat, about an inch from bottom. As this teat is very inconvenient and disagreeable to milk, can you please advise me, through your valuable paper, if there is any way to permanently sear over this hole? E. M.

Ans.—Nothing can be safely done while the cow is milking, but when she is dry, by scarifying the edges of the extra opening with a lance, or a sharp knife, and dressing with carbolized oil, the new growth, or healing process, will probably close the hole.

**CHAIN TIES OR STANCHIONS?**

I have under consideration the erection of a new cow stable, and am in doubt whether to fix the latest pattern of stanchions, or the usual sliding chain, as used in the majority of old stables. I have consulted several neighbors on the matter, men who have tried both methods, and get rather varied opinions on the matter. The majority of them seem to think the stanchions are all right in every respect, except that they do not always make for the best comfort of the cow, one of the objections being that the cow has some difficulty in rising, as it cannot lunge forward when in the act of rising, when fastened to the stanchions, as against the comparatively easy way of rising when fastened by the chain.

Now, I should like to know if you could tell me whether this is so; also any other disadvantage or advantage of the stanchion over the older chain way of fastening? J. O.

Ans.—We think you have stated the case pretty fully and fairly. Swinging stanchions are used with complete satisfaction by thousands of dairymen. They are convenient, and help to keep the cows clean, while allowing considerable freedom. The writer confesses, however, that he is somewhat of a crank on the question of animal comfort, and is not yet convinced that the stanchion is quite so comfortable as the chain tie, hence, if building a stable, would probably choose the old-fashioned method. However, every man to his choice.

**SCHOOL FENCE.**

The public-school lot, or grounds, lies set into my farm, with its front on a street allowance.

There is needed to be built a new fence around it. The old fence, which was built some years ago, was put there by the school section, it being a picket fence. Since then, a rail fence was put on the back and one end, leaving the old picket fence along one end and the front, which is on the street allowance. Now the trustees ask me where my share of the fence is, saying that they are willing to build the front along the street and where the rail fence now is, which is one end and the back, intimating that they think my share is, or ought to be, the other end.

1. Have I any right to maintain, build, or keep in repair, any part of a public-school fence?

2. Can the trustees force me, by law, to build a share of the new fence?

3. If I can be, and am forced to build a share of the fence, can I be compelled to put up the same style of fence, built in the same way as the one built by the trustees on the other three sides? Ontario.

Ans.—1. No.

2. No.

3. Such fence as is on the street.

necessary, or the regulations of the Education Department require for the enclosure of the school premises, must be erected and maintained by the Board of Trustees, at the expense of the School Section.

**RIVERSIDE FENCING.**

Y and L's farms are divided by the river running between them; each has a deed to high-water mark. The land on Y's side is low and flat, and any fence that would be erected there, would be carried away every spring by the ice and freshet, and sometimes by summer floods. The land on L's side rises abruptly, with a rod from the water, and a fence there will stay. What is the legal aspect of the case? Should Y be at half the expense of building the fence on L's side of the river to keep his own cattle out and L's in? Is this not a fair proposition between man and man? If not, what other plan would you suggest? Ontario.

Ans.—Your suggestion seems reasonable, but Y cannot be legally compelled to fall in with it. It is a case where neither party is obliged, by law, to do boundary-line fencing. Either one desiring protection must arrange for it, either by agreement with his neighbor, or independently.

**PURCHASE OF CATTLE.**

A farmer has a number of cattle for sale. Drover No. 1 comes along and buys said cattle, to go away in two months' time, and pays farmer one dollar on bargain. Drover No. 2 comes along in the meantime and offers the farmer more money for the same cattle. Can drover No. 1 do anything on the farmer if he sells the same cattle to drover No. 2? Ontario.

**READER AND FRIEND.**

Ans.—Yes; the sum paid down has bound the bargain.

**DESTROYING ANTS.**

Will you kindly let me know some sure way of getting rid of little black ants? F. C. F.

Ans.—If the nest can be found, and it is out of doors in the ground, the ants may be destroyed by pouring bisulphide of carbon into the hill. An ounce will suffice for a large nest. Just before dusk, when the ants are all at home, the bisulphide should be poured into the openings, or, if they are closed, into holes made by a slender stick. After pouring in the liquid, the openings should be closed by rubbing with the foot so as to prevent the escape of gas. This will penetrate through and through the openings, destroying all animal life with which it comes in contact. Bear in mind that the vapor of carbon bisulphide is very inflammable, for which reason the liquid should not be used or handled near any light or fire. Instead of using bisulphide, some pour lye or boiling hot water into the nest—but the carbon bisulphide treatment is probably more thorough.

If the ants come into the house from unknown sources, a sponge, moistened and sprinkled with sugar, may be placed in their haunts. As the sponge fills with ants, it should be dropped into hot water, and the process repeated.

**GOSSIP.**

At the Flynn Farm Company's sale of Shorthorns at Des Moines, Iowa, on June 16th, eight bulls sold for an average of \$375, fifty-two females averaged \$233 and sixty head sold averaged \$252. The bull, Good Lad, a son of Choice Goods, brought \$1,450, and City Marshall sold for \$625. The highest price for a female was \$695, three others selling at \$500 to \$650.

The dispersion sale on July 1st, of the high-class Shorthorn herd of James I. Davidson, Balsam, Ont., should attract a large attendance of breeders, as half fare railway rates will be available owing to the holiday and the probability is that good bargains may be secured, as all must be sold, owing to the broken health of the owner. The sale will afford a rare opportunity to secure richly-bred animals, which will make good foundation stock for a herd or a family.

**REGISTRY OF IN-BRED STOCK.**

Are animals as closely, or incestuously, in-bred as the progeny of the daughter by her sire, or of the dam by her son, eligible to registration in the herd or studbooks for pure-bred stock? J. B. S.

Ans.—There is no rule in any of the records against the registration of animals so bred. If the sire and dam are recorded, the produce is eligible, however close the in-breeding.

**SOOT IN CHIMNEY.**

We have a furnace in our house, and burn wood, and are troubled with soot accumulating in the pipes and catching fire often. The pipes are 7 inches in diameter, 40 feet long, and three elbows. The flue is 6 1/2 x 9, inside, and 12 feet high, and 5 feet above highest point of house. No trees or other buildings are near. Can you suggest any way to prevent soot accumulating? Is flue large enough for pipe?

Ans.—I notice that the chimney in this case is in an outside wall. For a wood furnace the chimney is too cold, and the flue too small. The pipe is rather small, the length great and the number of elbows large, the whole combination giving a slow draft, so that the smoke is cooled too much and the soot deposited. I have consulted a practical furnace man, and he says that, through actual experience he has discovered, there is practical only one sure way to remedy the ef-

# Buy An Implement

## Just As You'd Buy A Horse

Look at it as carefully; examine it as thoroughly; consider the seller's reputation for fair dealing; and **then** think twice—and thrice. How it looks where it stands is no warranty for its work in the field. Investigate. There is, however, another way: look for the Cockshutt name on it. Then you **know** you're safe.

### Beaver Sulky Plow

Distinctly the easy-riding, light-draft, riding plow. Extra-large land-wheel and cushion-spring device makes it run smoothly on rough and bumpy land—keeps bottom cutting evenly by minimizing jolts and shocks. Stands hard work. I-beam of extra-heavy high-carbon steel; ample lift clearance; new lever with spring-lift; automatic adjuster for depth (7 to 9 inches) and width. Readily handled by a 'grown boy—saves labor-cost as well as horseflesh. Two horses enough on most soils.

### Beaver Gang Plow

With three horses and this plow an unskilled hand—a boy even—can beat an expert plowman using ordinary plows, and save a couple of dollars a day outlay at that! No neck-weight; new straightener corrects crooked furrows by a touch of a lever. Extra-sized land-wheel axle-arm makes both bottoms cut evenly at any depth, even on rough and ridgy ground. Adjustable frame sets width from 18 to 22 inches; fine adjustment ratchet lever fixes depth from 4 to 7 inches. The ideal gang for heavy clay soils. Write for details.



Beaver Gang Plow

### The Cockshutt Line

Includes, besides the two plows described here, more than 120 styles of modern plows, ranging from light garden types to 12-furrow engine gangs; and also comprises seeders, cultivators, and other up-to-date farm helps.



Beaver Sulky Plow

**COCKSHUTT PLOW CO. LIMITED**

**BRANTFORD**

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He Knows  
**"The Tie That Binds"**  
He knows that the lock on

## STANDARD

### WOVEN WIRE FENCE

is not driven down on the wires at the point of crossing, but is driven at an angle and, therefore, cannot injure the fence.

This is only one of the strong points of the "Standard" Wire Fence. Our book tells them all. Write for free copy. Also sample lock.

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Sunshine grates have maximum strength

Sunshine Furnace has four triangular grate bars, each having three distinct sides. In the single-piece and two-piece grate no such-like provision is made for expansion or contraction, and a waste of coal always follows a shaking.

On the left- and right-hand sides are cotter pins, which when loosened permit the grates to slide out. These four grate bars are made of heavy cast iron, and are finished up with bulldog teeth. The teeth will grind up the toughest clinker; and

## SUNSHINE furnace

because the grates are made in sections, not only can nothing but dust and ashes pass through, but after each shaking a different side can be presented to the fire. Also, with the Sunshine grate there is no back-breaking movements attached to the shaking. By gently rocking the lever, first on the left and then on the right, the ashes are released on both sides, and fall through into the pan.

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Subscribe for "The Farmer's Advocate and Home Magazine." \$1.50 per Year in Advance.

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# PEASE "ECONOMY" FURNACE

## NO DUST

Manufactured by Pease Foundry Co., Ltd., Toronto, Winnipeg

# Fifty Dollars Spent for My Shingles

## ADDS \$500 TO THE VALUE OF ANY HOUSE OR BARN

**A**NY building good enough to be roofed right is too good by far to be roofed with wooden shingles. No building worth carrying fire insurance on deserves any roof less good than "Oshawa" Galvanized Steel Shingles. Simply because—

"Oshawa" Shingles, of 28-gauge semi-hardened sheet steel, make the only roof that absolutely and actually will be a good roof for a hundred years. If any "Oshawa"-shingled roof shows the least sign of leaking in twenty-five years, this company will replace that roof with a new roof, free. That's the kind of a written guarantee you get when you buy "Oshawa" Shingles—and there's \$250,000 back of the guarantee.



Thousands of "Oshawa"-shingled roofs cover farm buildings, residences, public edifices, churches, all over Canada.

They make a roof handsome enough for any building whatever—and it is the most practical of roofs—for the simple reason that an "Oshawa"-shingled roof can NOT leak.

It can't leak, because, to start with, it is made of extra-heavy, extra-tough steel, special galvanized. The galvanizing makes these shingles wholly proof against rust—and rust is the only enemy steel has when it's used for roofing. That Pedlar-process galvanizing makes it needless to paint an "Oshawa"-shingled roof. Long years of weather-wear won't show on these shingles. That one item of paint saved—of the need for painting entirely done away with—saves you the cost of an "Oshawa" shingled roof in the first few years it's on any of your buildings. And just remember—it will be a good roof for a hundred years.



Such a roof is not only rain-proof, snow-proof and fire-proof, but it is wind proof. It makes any building it covers warmer in winter and cooler in summer—because—

The Pedlar four-way-lock—every shingle locked to adjoining shingles under-



*G. A. Pedlar*

neath, on all four sides—makes an "Oshawa"-shingled roof practically one solid sheet of steel, without a crevice or a crack.

That keeps out the slightest suspicion of moisture—it keeps out the winter winds and keeps in the warmth—and in summer it wards off the sun's rays—won't let them get through.

### "OSHAWA" GALVANIZED STEEL SHINGLES

A new roof for nothing if they leak by 1934.

And "Oshawa"-shingled roofs are fire-proof—as a matter of course. How could you set fire to a roof of solid sheet steel? The fire-insurance people will make lower rates on a building protected by "Oshawa" Galvanized Steel Shingles. That saving alone will pay for the roof within ten years.

Some think a corrugated iron roof is fire-proof and about as good as an "Oshawa"-shingled roof. That isn't so. We make corrugated iron roofing—and it's all right, for its kind. Nobody makes any better. But corrugated iron isn't the roof for a farm building—nor for any building that is meant to stand a long while. It is a good enough roof for structures that are meant to last only a few years—but only "Oshawa"

Shingles are sure to last a hundred years, and are good for a century.

Another thing about these shingles— They make a building lightning-proof—insulate it far better than any lightning-rod system ever could. Last year lightning destroyed over half a million dollars' worth of farm property. Not a cent of that loss could have happened if the buildings that were struck had been roofed right, which means roofed with "Oshawa" Galvanized Steel Shingles.

Maybe you think the first cost of these shingles is so high as to outweigh all the savings they make and all the merits they have? Would it surprise you to know that you can "Oshawa"-shingle any roof for \$4.50 a square? A "square" means 100 square feet—an area 10 by 10 feet.)



Just about the price of Art cedar or cypress shingles—and they'll be rotted to dust before even the first ten years of the Pedlar guarantee have passed. An "Oshawa"-shingled roof will outlast ten wood-shingled roofs—and be a better roof every minute of the time, in every way a roof ought to be good.

Anybody can put on these shingles—a hammer and a tinner's shears are all the tools necessary. It is impossible to get them on wrong—you'll see why when you send for a sample shingle and a book about "Roofing Right." Suppose you send for the book and the sample to-day—now. Ask for "Roofing Right" Booklet No. 16. It will pay you to get at the real facts about the right roof.

Pedlar products include every kind of sheet-metal building materials—to many items to even mention here. You can have a catalogue—estimate—prices—advice—just for the asking. We'd like especially to interest you in our Art Steel Ceilings and Side Walls—they are a revelation to many people. More than 2,000 designs. May we send you booklet and pictures of some of them?



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WE WANT AGENTS IN SOME SECTIONS. WRITE FOR DETAILS. MENTION THIS PAPER.

122C.