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AND HOME MAGAZINE

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

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VOL. XLIV.

LONDON, ONTARIO, FEBRUARY 11, 1909.

No. 855

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BELL PIANOS
BUILT TO LAST
A LIFETIME

USED AND PRIZED BY
MUSICAL PEOPLE
THROUGHOUT THE LAND.

BELL ORGANS
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PEOPLE WHO WANT THE BEST
BUY "BELL" CATALOGUE
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SENT FREE ON REQUEST.

The Bell Piano
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GUELPH, - ONTARIO.

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FOR SALE.**

The fine farm known as "Brookholme" Stock Farm is now offered for sale. This farm comprises two hundred and fifty-six acres of excellent land, and is particularly adapted for a dairy farm, being well watered by never-failing springs. Water is forced to the stables and house by hydraulic ram. Large orchards. First-class buildings. Good house, with bathroom, hot and cold water running in kitchen; telephone, etc. Farm is within seven miles of Hamilton, on first-class stone road. Brantford and Hamilton electric cars stop at the corner of the farm. This farm has been run as a dairy farm by the owner, and has not been rented for more than thirty years. Full particulars on applying to the owner:

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Corn That Will Grow

Buy your seed corn on the cob, and avoid uncertainty. Hand selected, Canadian-grown seed corn—all leading varieties. Your money refunded if you are not satisfied. Send for prospect to:

J. C. Duke, Ruthven, Essex Co., Ont.

STUMP PULLERS
30 DAYS' FREE TRIAL
Grubber Co., Dept. L23, LaCrescent, Minnesota

FENCE TALK No. 5

Page Fences have "high-carbon" horizontal 9-gauge wire.

High-carbon wire is harder, tougher, and far stronger—from a third to a half as strong again—stands 2,400 lbs. strain-test.

Page Fences, because of this extra strength, have ample spring in reserve to hold a long panel tight and sagless with fewer posts by a third.

Page Fence uprights are fastened to horizontals by a positive lock, clinched so tightly as to make a solid joint that cannot work loose nor slip—even under the severest strain. But the intersecting wires are not injured.

These are the reasons why Page Fences cost less and wear best, because they need a third less posts and a third less labor to erect, and yet make a tighter, sightlier, sag-proof and more enduring fencing. Go by the book—it tells all about every style of Page Fences and shows how to prove fence-value before you buy. Ask for it (it's free) from Page Wire Fence Co., Ltd., Walkerville, Toronto, Montreal, St. John, Vancouver, Victoria.

Other fences have only "hard drawn" wire.

Hard drawn wire is softer, is weaker—stands but 1,800 lbs. strain-test.

Other fences thus lack springiness, need three posts to Page Fence's two and then sag and give.

Other fences half-fasten the crossing wires together with a mere twist of wire that will slip. Some use locks that dent and weaken the wire.

"PAGE FENCES WEAR BEST"



ROOFING

Nothing under the sun has to stand such severe tests as a roofing. Therefore, you should look for quality and permanency first.

It is easy to buy ordinary materials and make roofing that looks as good as PAROID, but it takes many years of roofing experience to learn how to make the kind of felt, saturation and coating—a complete roofing—that will last as long as PAROID under all climatic conditions.

PAROID is backed by our paper manufacturing experience of 92 years.

You run no risks with PAROID ROOFING because it has stood the test of time. PAROID is proof against water, cold, heat and wind, and it also resists fire. Ask the man near you who has used PAROID for his opinion of it, or the dealer who has been selling it for years to satisfied customers.

PAROID ROOFING

Write for free plan book "Practical Farm Buildings," and sample of PAROID ROOFING. PAROID is sold by dealers everywhere. Branch Office: F. W. BIRD & SON, Dept. 111 Hamilton, Ont. Winnipeg, Man. If you require only a temporary roofing ask about NEPONSET RED ROPE ROOFING

Roof Proof

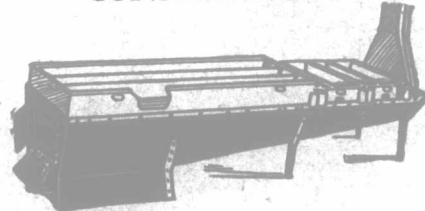
Twenty-five years on the roofs. That's the "Eastlake" record. And that's the kind of proof you want for your roof, isn't it?

"Eastlake" Steel Shingles

side-lock, all nail heads covered, make a roof that is rain, snow, fire, lightning and rust-proof—and are guaranteed to outwear any other metal shingles made. Write for booklet.

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CHAMPION EVAPORATOR CONSTRUCTION.



The corrugated pan of a Champion Evaporator placed directly over the hottest part of the fire is its shallow boiling heater. Small interchangeable finishing pans in the rear of the arch connected by our portable siphons. The arrangement is such that the first sap entering the regulator is the first syrup made. Easy to clean and operate. A boy of fourteen years of age can handle our largest outfit. Send for descriptive catalogue.

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Don't build a homemade barn frame. Get one of Gilmore's readymade, guaranteed, correct plank frames, delivered at your station, freight paid, for less money than you can have it framed on your own farm. Have also the best frame for skating rinks and lumber sheds. Complete drawings and instructions at a small cost. Write for particulars.

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Depth of planting and dropping distance accurately gauged. No waste of either expensive seed or valuable ground. Strong, durable, simple; the ideal machine for practical potato planting. For catalogue and price address: A. J. Platt, Sterling, Ill.

The Sign of Quality

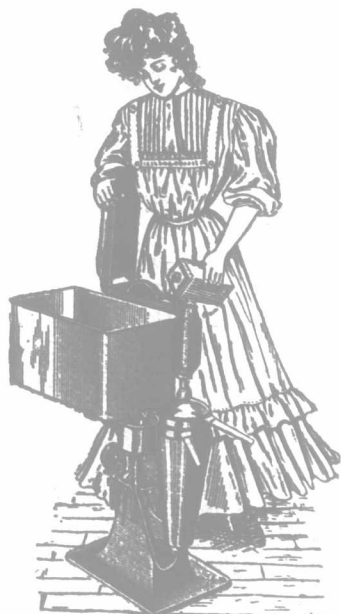


29 Yrs

The Sign of Satisfaction

QUALITY has made the Sharples Separator Works the largest factory of its kind in the world. Quality has made the sale of Tubular cream separators greater than that of any other separator. Quality will be found in every part of Tubular separators and will place Tubular cream separators still farther in the lead.

We wish every Dairyman who reads this could come to our factory and see for himself the difference between Tubular separators and other separators, thousands of which come to us every year in exchange. We would like to demonstrate to every dairyman the many points of superiority in Tubular separators, a few of which we mention below:



Tubular gears run in a mist of oil. A spoonful of oil, once or twice a week, is all it needs.



The Suspended Tubular bowl makes Tubulars the lightest running cream separators.

- Perfection in skimming,**
- Extreme simplicity of construction,**
- Remarkable ease of cleaning,**
- Most convenient oiling arrangement,**
- Low, convenient milk supply tank,**
- Freedom from complicated bowl parts,**
- And twenty other especially desirable features.**

Our free catalog No. 193 will tell you all about it. Ask for it.

The Sharples Separator Company,

Toronto, Canada. Winnipeg, Canada.

Why This MOWER Beats Any Other ON EARTH



WHETHER you think of buying a mower now or might buy one ten years from now, we want to tell you how good a mower we've got for you. The Dain Vertical Lift Mower is the smoothest working, lightest running, easiest pulling machine on the market. You can thoroughly understand it at once and see its vast advantages of build. The high drive wheels, for instance, insure lightest possible draft and enormously increased traction. The cutting apparatus, carried on the wheels, by means of an adjustable coil spring, uses every bit of power, reduces useless friction and lessens pull for the team.

The long pitman gives a smooth, strong, unerring stroke. The gearing is all on the left wheel where it offsets the weight of the cutting bar, altogether doing away with side draft. Many other desirable, exclusive features help make the

DAIN Vertical Lift MOWER

easiest to run, surest in results, most perfect in construction, most durable, altogether most satisfactory and so simple a boy can handle it easily.

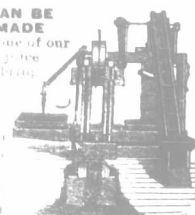
Built with utmost care, entirely of selected materials, withstands hardest wear and tear and sticks right to business all the time. The name "DAIN" on a Mower or any other hay tool is your guarantee of highest excellence. It is backed up by the perfected result of a quarter century's successful experience. Ask your dealer about this Dain Vertical Lift Mower, or write us for interesting descriptive booklet.

Dain Manufacturing Co.
Preston, Ont.

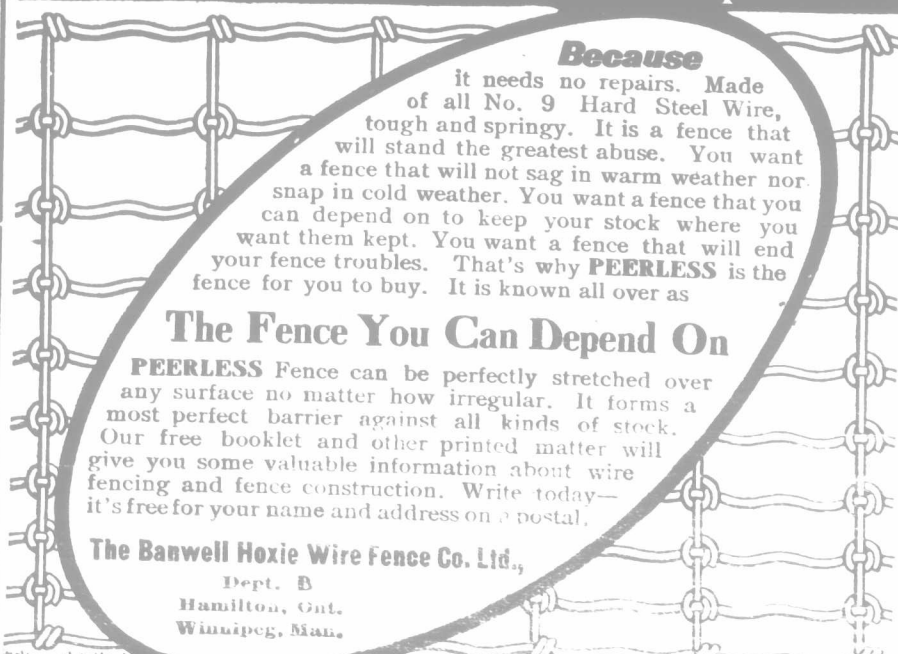
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HYDRAULIC POWER PRESSES

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The Fence that saves Expense



Because it needs no repairs. Made of all No. 9 Hard Steel Wire, tough and springy. It is a fence that will stand the greatest abuse. You want a fence that will not sag in warm weather nor snap in cold weather. You want a fence that you can depend on to keep your stock where you want them kept. You want a fence that will end your fence troubles. That's why **PEERLESS** is the fence for you to buy. It is known all over as

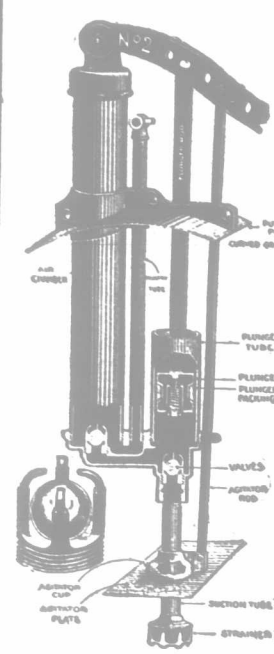
The Fence You Can Depend On

PEERLESS Fence can be perfectly stretched over any surface no matter how irregular. It forms a most perfect barrier against all kinds of stock. Our free booklet and other printed matter will give you some valuable information about wire fencing and fence construction. Write today—it's free for your name and address on a postal.

The Banwell Hoxie Wire Fence Co. Ltd.,
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Hamilton, Ont.
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Than Stock Weather

From a Trial You Will Learn That



Spramotor Results

are the best argument why you should use it. A single demonstration will do more to convince you in favor of a Spramotor than a book full of arguments.

We will send you the Spramotor, and you will have time to prove it out.

It's guaranteed for a year.

In all sizes, for vineyard, orchard, weed destruction, potatoes, painting, and whitewashing.

Treatise on crop diseases free.

Say what you want it for.

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This ad. will not appear in this paper again. If interested, write now.

FERRY'S SEEDS

Ferry's are best because every year the retailer gets a new supply, freshly tested and put up. You run no risk of poorly kept or rancid stocks. We take the pains; you get the results. Buy of the best equipped and most expert seed growers in America. It is to our advantage to satisfy you. We will. For sale everywhere. Our 1909 Seed Annual free. Write to

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

Every Safe Lock Shingle is made to meet the rigid requirements of the British Government for Admiralty and other Public Service



to proper size for Safe Lock Shingles.
—The only shingle with galvanized edges.

—The only shingle sold with a positive protective guaranty against lightning, backed up by a free insurance policy signed and sealed by the manufacturers, the Metal Shingle & Siding Company, a \$200,000.00 Canadian corporation.

Every Canadian farmer who expects to put up a new barn or house or to re-roof old buildings is directly interested in this extraordinary free offer.

Think of it! A straight-out lightning insurance policy free from conditions of any kind. It is the most liberal roofing offer ever made to Canadian farmers.

Insurance records show that one-half the fire losses on barns in Canada result from lightning. The property loss in these cases amounts to many thousands of dollars every year.

THE British Government requires all galvanized steel roofing for Admiralty or other public work to be of specific grade and to be capable of withstanding a certain acid test.

The acids used for this purpose are strong enough to burn the skin off a man's hand, and yet the galvanizing must be heavy enough to withstand their action for a definite period.

Exposure to wind, rain and snow for a quarter of a century is much less destructive than this acid test.

Yet every Safe Lock shingle is guaranteed to meet the Government requirement in this and all other respects.

No wonder that those who have used Safe Lock Shingles declare that they will last as long as the buildings they protect.

Safe Lock Shingles are the only shingles that actually lock on all four sides so that they cannot pull apart. Shingles which do not lock on four sides are not Safe Lock Shingles.

Again: Safe Lock Shingles are the only shingles that completely protect the roofing nails from weather.

—The only shingles that have three thicknesses of steel along the upper edge of lock, thereby doubling the strength along the line of greatest strain.

—The only shingle galvanized after the sheets have been accurately cut

Safe Lock Shingles have been on the market for more than ten years, and in all that time no building covered with them has ever been harmed by lightning.

This proves to us that Safe Lock roofing is a positive guaranty against lightning.

Anyway, we are willing to show our faith in Safe Lock Shingles and will protect you from lightning without one cent additional cost to you, directly or indirectly.

Safe Lock Shingles are sold at the same price as shingles known to be inferior in quality of steel, galvanizing and construction.

Safe Lock Shingles lock positively and securely on all four sides. They cannot be blown off, nor can they be pulled apart through the warping of the sheeting, or in any other way.

And remember this—
No other shingle is a Safe Lock Shingle.

Safe Lock Shingles can be found in every part of the Dominion of Canada where they have been subject to storms of all degrees of severity.

No building covered with Safe Lock Shingles has ever been unroofed.

We want you to know what some of the users of Safe Lock Shingles say of them.

R. T. McLAUGHLIN, Fair View Farm, Alba, Ont.—“The ‘Safe Lock’ makes your shingles absolutely wind and water proof. They are the best shingles on the market to-day.”

F. B. DOUD, Branchton, Ont.—“The Galvanized Steel roof is apparently as good as when put on in 1898. The ‘Safe Lock’ Shingles make a lasting, storm-tight roof, and give clean cistern water. “I am satisfied that I put on a good roof.”

W. J. McPHERSON, Berryton, Ont.—“The ‘Safe Lock’ Shingles that I purchased from you ten years ago have given splendid satisfaction. The roof has never leaked a drop, and they seem to be just as good as the day they were put on.”

J. C. PAYNE, Cayuga, Ont.—“It must be ten years now since I bought the metal ‘Safe Lock’ Shingles, and up to this time I have no reason to regret their purchase. We have had wooden roofs put on since which are open in spots from the splitting and shrinkage of shingles. No difficulty, so far as I have noticed at least, has arisen with your Metal Shingles, and the roof seems compact and durable. So far as I have been able to see, I have seen no wear or injury to the shingles during the ten years’ use, and cannot see but that the roof is just as good as when it went on.”

MURDOCK McKENZIE, Bear Line, Ont.—“The ‘Safe Lock’ Shingles have never given me any trouble, and they appear to be as good to-day as the day I put them on. I am well satisfied with them, as I believe them to be the best roofing that can be used on barn buildings.”

GEO. HARDY, Ashgrove, Ont.—“It will be eight years in June since the barn was shingled. I never had any trouble with it in any way, and it appears to be as good as when put on. I have been recommending your shingles as the best that can be got.”

MRS. JAMES STEWART, Pendleton, Ont.—“In reply to your letter asking about shingles I bought from you over five years ago. I looked the roof all over to-day, and they seem to be in as good condition as when they were put on the roof. The shingles don't seem to be any the worse for wear, and they will last for years.”

Send to-day for our book, “The Truth about Roofing” and full details of our Fire Insurance Policy payable in cash if your Safe Lock Roof is damaged by lightning.

The Metal Shingle and Siding Co. Ltd.
“Roofers to the Farmers of Canada”
Queen Street Factory, Preston, Ontario
Branch Factory, Montreal

CUT OFF THIS COUPON AND MAIL TO US

My Roof measures.....ft.....in. long.

The Metal Shingle and Siding Company, Limited
Queen Street Factory, Preston, Ontario

Please send me your booklet “Truth about Roofing,” with full particulars of your Free Safe Lock Lightning Insurance Policy.

I expect to build.....
Size of Roof.....
If interested in any other Metal Building Goods please state such fact here.....

Name.....
P.O..... Province.....

Give length of roof along ridge; also distance from ridge to eaves, and we will send approximate cost of a Safe Lock Roof.
ft.....in.

My roof measures.....ft.....in.

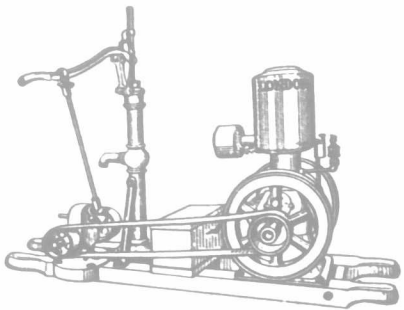
An Ideal Dairy Outfit.

Our Worm Gear Pat. Pump Jack operates pump, churn and cream separator at the same time, with our 2½ and 4½-5 H. P. engines.

No fan. No tank. No freezing.

A card will bring catalogue 14 G.

SCOTT MACHINE COMPANY, LTD.
LONDON, CANADA.



Salary—\$75 to \$150 a month.

Wanted—Brakemen and Firemen

We teach and qualify you by mail. Course simple, practical and thorough. After eight or ten weeks' study we guarantee to assist in getting you a position on any railway in Canada. The first step is writing for our booklet.

THE DOMINION RAILWAY SCHOOL,
Dept. F. Winnipeg, Man.



If everything else in the house did its share of the work as well as

"Black Knight" Stove Polish

very few women would complain of the housework. "Black Knight" does away with the everlasting rubbing and polishing. It shines quickly and produces a result that satisfies the most particular. Always ready for use for Stoves, Grates and other Ironwork. It's the best polish and the biggest can for the money.

Send dealer's name and 10c for full size can if you can't get "Black Knight" in your town.

The F. F. DALLEY CO. LIMITED, HAMILTON, Ont. SA

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, Thos. Southworth, Director of Colonization, Toronto.



On Points

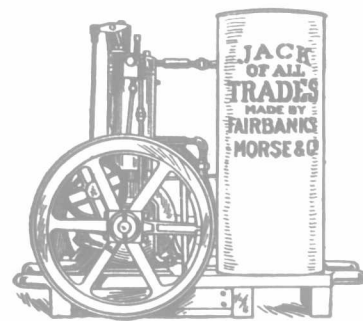
Ease of Operation,
Efficiency,
Durability,
Sanitation,

The De Laval

THE DE LAVAL SEPARATOR CO.

173-177 William Street, :: :: MONTREAL
VANCOUVER WINNIPEG

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A FAIRBANKS-MORSE GASOLINE ENGINE

a pump and a few feet of pipe will supply you with water from the nearest pond or river.

This equipment will save you from experiencing another water shortage.

Over 70,000 users.

Don't Depend on the Weather.

SEND FOR ILLUSTRATED CATALOGUE.

THE CANADIAN FAIRBANKS CO., LIMITED

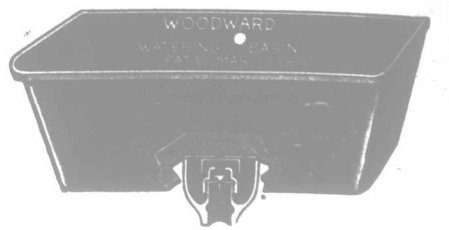
Montreal. St. John, N. B. Toronto. Winnipeg. Calgary. Vancouver.

For Drain Tile, Red and White Building Brick AND CEMENT CHIMNEYS, WRITE: R. J. DOYLE, OWEN SOUND, ONTARIO.

DON'T BUY GASOLINE ENGINES

UNTIL YOU INVESTIGATE "THE MASTER WORKMAN," a two-cylinder gasoline, kerosene or alcohol engine, superior to any one-cylinder engine; revolutionizing power. Its weight and bulk are half that of single cylinder engines, with greater durability. Less to Buy—Less to Run. Quickly, easily started. Vibration practically overcome. Cheaply mounted on any wagon. It is a combination portable, stationary or traction engine. SEND FOR CATALOGUE. THE TEMPLE PUMP CO., Mrs. Meagher and 15th Sts., Chicago. THIS IS OUR FIFTY-SIXTH YEAR.

Soak it, Kelly!!



We mean soak the water into your milk. Of course, we mean thro' the cows—sure. Our

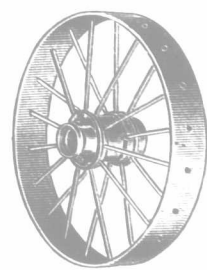
WOODWARD Water Basins

enable you to do this, causing greater flow of milk, and prevent your cows swilling, which is detrimental. Once installed, you need worry no more, for your stock will always be watered automatically. SOON PAY FOR THEMSELVES. Prevent disease contagion by water. REMEMBER, THERE IS ONLY ONE "WOODWARD." Others imitate them.

Ontario Wind Engine & Pump Co., Ltd., Toronto, Canada.

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. It will pay you to learn more about these Guaranteed Wheels, so write for catalogue.

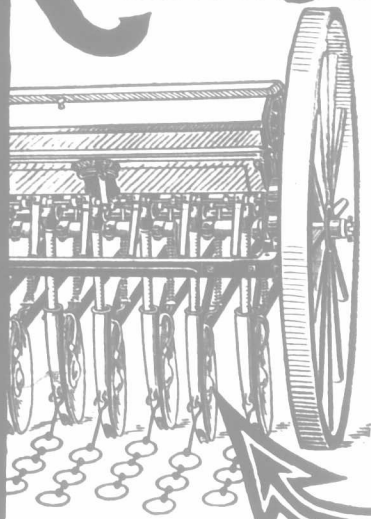
DOMINION WROUGHT IRON WHEEL CO., LIMITED, Orillia, Ontario.



Fastest drillers known. Great money earners! Loomis Machine Co., Tiffin, Ohio.

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Runs Easy; Sows Accurately



The "Champion" is bound to sow accurately because it is carefully tested. Both Grain and Grass Seed Boxes are set up complete, and run by machinery before leaving the factory,—so when you set your machine you are sure of the quantity you will sow.

The "Champion" has an Index that allows operator to sow as he pleases—no notches into which a shifting lever must be moved. No tying yourself down to so many bushels per acre. If there is a certain part of the field that requires a half-quart or so more per acre, simply change the "Champion" Index. You can sow as much or as little as is necessary, with the

Frost & Wood "Champion"

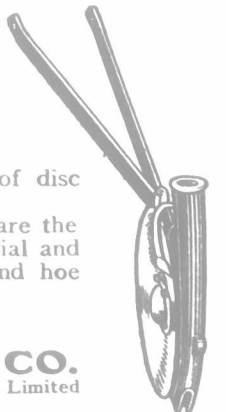
From conclusive tests it has been proven that the ball-bearing hub, enclosed in the dust-proof case of "Champion" Disc Drill, requires but one oiling per season. This bearing, of course, makes the "Champion" run far easier, keeps the plates snug, and adds years to the service of the machine. Certainly this feature makes the "Champion" more expensive to build—but that is just so much Extra Quality for you when you buy it.

Further, the Grass Seed Index is plainly marked for different kinds of grass seed—a convenience absent on other makes of disc drills.

Yes, indeed, Frost & Wood implements are the kind to buy if you value "Quality" in material and workmanship. You can have our disc and hoe drill catalogue if you'll just say so.

Ask for catalogue F 7

The FROST & WOOD CO. Limited SMITH'S FALLS, CANADA



The Farmer's Advocate

and Home Magazine

"Persevere and Succeed."

Established 1866.

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Vol. XLIV.

LONDON, ONTARIO, FEBRUARY 11, 1909

No 855

EDITORIAL.

Licensing Cheese and Butter Makers.

Coming, as it does, so soon after our editorial on the proposition of licensing cheese and butter factories, Mr. Parry's contribution on licensing the makers will be liable to cause some confusion, unless the reader keeps clearly in mind that the two proposals are entirely different, although having, to some extent, at least, a common purpose. The main object aimed at in licensing the factories would be to prevent the development of new ones in districts already well served with co-operative facilities, where additional factories or creameries would prove a bane to the industry. The object of licensing makers seems to be primarily to raise the standard of the profession, by requiring dairy-school certificates from all would-be head makers. It is argued, further, that, by excluding a proportion of poorly-trained or inefficient makers, the scale of remuneration would be raised, and some of the superfluous small factories in Eastern Ontario, being unable to pay the advanced wages demanded, would be obliged to close down, to the advantage of patrons, makers, and the industry in general.

Mr. Parry refers to the resolution passed at the Eastern Ontario Dairymen's Convention at Prescott, suggesting that we reprint it, and asking what action the Western Ontario Dairymen's Convention has taken in the matter. The resolution passed at Prescott was as follows:

"With a view to improving the position of cheese and butter makers in Ontario, and also to placing the owners and managers of factories and creameries in a position to secure well-qualified makers, this Association, in convention assembled, respectfully request that legislation be enacted setting forth the qualifications of makers who may be allowed to take full charge of the manufacture of either cheese or butter."

No such resolution was passed at the Western Dairymen's Convention, and no official action has been taken, save that, at a directors' meeting in London, on February 2nd, the matter was discussed, and a committee appointed to meet and confer with a similar committee from the Eastern Association, regarding this or any other dairy legislation that might be proposed.

It may be stated candidly that the makers of Western Ontario are not enthusiastic concerning the idea of licensing makers. At the district dairy meetings, held last fall, they could not, in any case, be persuaded to pass a resolution on the subject. This is largely explained, perhaps, by the fact that no tangible, clear-cut proposition has been placed before them defining the conditions of license or its plan of execution. They say, in effect, that, as it seems to be in the Eastern part of the Province where the conditions obtain that call for licensing of makers, let the Eastern Association come forward with a concrete proposition, and then, if it meets the views of the Western men, they will consider it.

Meanwhile, we cannot overlook the fact that a license based on satisfactory passing of a dairy-school examination might cut out some of the very best practical makers; while, on the other hand, it would qualify some who would fall short in actual factory work; and the suggestion that provision should be made for withdrawing licenses from those who proved incompetent factory managers is easier made than carried out. It is freely admitted that dairy-school training is good

and desirable for every maker, but, after all, the emphasis in this, as in farming, or any other occupation, must be placed on the man, rather than on certificates of training.

It may be that a workable and commendable plan may be thought out, though it is fraught with difficulty, for, to make the standard high enough to exclude the inefficient makers, would raise strong protest; while, to make it low enough to let everyone in, would accomplish little good. And the avowed object of thinning out the small factories by arbitrarily raising the salaries of makers, does not appeal as the best way of approaching this desideratum. It is, however, up to those who believe in the licensing or certificate plan to propose a definite and practical scheme.

Profit or Loss From Steers.

That the question of profit or loss in connection with raising cattle for beef purposes depends largely on the feeding of the young stock, was clearly shown by two lots of steers at the Livestock and Poultry Show, at Ottawa. One bunch of four represented the specimens commonly found on the farms throughout Eastern Ontario, while four others from the Central Experimental Farm were typical baby-beef animals, though not by any means the best that could be found.

Following are the details, conspicuously posted by the Experimental Farm authorities for the benefit of visitors as they scrutinized and contrasted the two lots of steers:

Central Experimental Farm, baby beef from dairy Shorthorn cows: Steers, 20 months old; average weight, 1,135 lbs.; cost to feed from birth, \$46.00; present value, \$60.00; profit per steer, \$14.00. Each steer consumed in 20 months, silage and roots, 14,729 lbs.; hay, 1,609 lbs.; meal, bran, corn, gluten, oats and oil-cake meal, 1,865 lbs.; skim milk, 1,638 lbs.

Average, Eastern Ontario steers: Average weight, 660 pounds; probable cost to feed from birth, \$28.00; present value, \$22.00; loss per steer, \$6.00; feed has consisted probably of silage and roots, 10,000 lbs.; hay, 800 lbs.; meal, 500 lbs.; skim milk and whey, 1,000 lbs.; pasture for ten or twelve months; straw, 1,000 lbs.

This was a most important feature of the show. No man interested in cattle could examine the specimens without feeling that the contrast was not overdrawn, even if he did not agree with the figures in detail. At the Experimental Farm it was possible to have accurate data; in the other case the figures are largely problematical, but admittedly a reasonable average. The placing, then, of these animals and of this information side by side, cannot fail to impress those who keep cattle with the fact that proper feeding is to a great extent responsible for the difference between profit and loss.

The importance of breeding is not overlooked. While the Experimental Farm steers were not great massive youngsters, such as are found on the farms of leading breeders of beef cattle, they showed the impress of beef-breeding qualities. But even the average steers of Eastern Ontario, if given food and care similar to that accorded to the Experimental Farm lot, would be in condition to give a profit instead of a loss. The average farmer, as is shown by the figures, saves \$18.00 in cost of feed, and thereby loses \$38.00 in value of the animal at an age of twenty months. This is a brand of false economy that demands attention in rural Canada.

Prince Edward County, Ont., has eleven Farmers' Clubs organized, and all doing good work.

Increasing Orchard Profits.

Orchards in many parts of Ontario, and in some of the other Provinces of Canada, are unprofitable only because no precautions are taken to insure cropping. Nothing pains an orchardist more than to drive along a country road and see an area planted to orchard trees, the branches of which are so thick that it is scarcely possible to see through them, even when the leaves have fallen. The long, straight limbs, towering high in the air, show that, from the time the trees were set out, no attempt has been made to prune them to give approved shape of top, or to encourage fruit production. The skilled orchardist looks below the trees, and, if the snow is not too deep, finds that the land has been allowed to go to grass, and that a tough sod has been formed.

These are two conditions which, outside of the recognized fruit districts, are commonly found, and to which may be credited, to a great degree, the unpopularity of orchards throughout the farming districts. Both can be remedied, at very little expense.

A fruit man, at a Farmer's Institute meeting in Ontario, recently, was heard to remark: "A man never should prune his own trees." This is a safe motto for the man who has not made a study of fruit-growing. With trees that have been left unpruned for several years, very few owners will cut out enough limbs and branches. The fear seems to exist that sufficient branches will not remain to bear fruit in quantity. It is forgotten that a free circulation of air and sunshine is essential to high-class fruit in abundance. When trees have run wild for a few years, a severe pruning or cutting back may not be followed by encouraging results the first season, but such practice is necessary, in order to bring the trees to desirable form, and the returns for succeeding years amply make up for the apparent loss.

The fact that, except in the severest climates, pruning can be done any time during the winter or spring months, reduces the labor cost to a minimum. Suitable saws, pruning shears and knives can be had at a comparatively low figure, and many trees can be trimmed during a season by taking advantage of spare hours. Ideal form of tree can be obtained most easily when a start is made while the trees are young, but even with older trees much can be done by anyone who interests himself in fruit production to make improvement.

That cultivation is an important factor in fruit yields, is shown by the orchard surveys conducted in New York State, where a five-year average from otherwise well-cared-for orchards, tilled for ten years or more, stood 337 bushels, giving an annual income of \$189, whereas orchards in sod ten years or more averaged 232 bushels, and returned only \$117 as yearly income per acre. The five-year average for all orchards (which class would include those that had been neglected as regards pruning and spraying) in sod for ten years or more was 176 bushels, and an annual income of \$87 per acre.

The results of the survey showed a gradual increase both in yield and income in almost every grade into which the orchards had been placed, according to the cultivation given. The series of classes were: Sod, ten years or more; sod, five years or more; sod, three years at least; tilled three years at least; tilled five years or more, and tilled ten years or more.

Not only did the yield from the trees increase as the cultivation given was more thorough, but prices, also, were higher. The prices paid by buyers for fruit off tilled orchards ranged from 15 cents to 18 cents per bushel more than for apples from orchards that were in sod.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

AGENTS FOR 'THE FARMER'S ADVOCATE AND HOME JOURNAL,
WINNIPEG, MAN.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday.

It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.

2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland and Scotland, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries 12s.; in advance.

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13. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

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

What is true of counties in New York State is true also of counties in various parts of Canada. Reasonable cultivation during spring and early summer, followed by the sowing of a cover crop in the latter part of July, has been proven to give best results. Sod wastes moisture, and in a few years retards the elaboration of plant food in the soil to such an extent as to injure the trees.

Prune the trees before the rush of spring work; gather the limbs that are cut as early in spring as possible, and practice cultivation for 1909. Spraying, too, should not be overlooked, if best returns are wanted, but thorough cultivation and judicious pruning are practices that give handsome returns, without great expenditure of money or labor.

Municipal Road Competitions.

That a number of municipalities in various parts of Ontario are planning competitions on a township scale to encourage the use of the split-log drag, for maintaining earth roads, is the encouraging assurance in a communication from W. B. Rittenhouse, of Lincoln Co., Ont., himself a successful competitor in the Provincial competition of 1907. Some municipalities, he states, are offering prizes in the townships, others dividing the townships into divisions, and offering a number of prizes in each division to those who will take a half mile or mile of road, make the most improvement, and keep it during the season in the best condition for traffic. The prizes, it seems, are offered in lieu of the usual maintenance appropriation, and it is believed that this incentive, conjoined with the public spirit and immediate self-interest of those dwelling along the highway, will produce good results for a modest outlay. The idea is capital, and it is to be hoped that many township councils will take it up. Wonders may be accomplished with the split-log drag.

I am very pleased with my premium, and will try to get more subscriptions for you.
Oxford Co., Ont. HERBERT PATERSON.

Another Level-crossing Disaster.

Editor "The Farmer's Advocate":

I was just reading what you said about that accident which occurred at Grimsby, and I thought a few words about what happened at Kingston recently would be in order.

On Tuesday, January 26th, about 7.15 o'clock, a fearful accident occurred at the G. T. R. crossing, near the outer depot, when Mr. William Spooner and son Wilfred were instantly killed, and Mrs. Spooner seriously injured. The outer depot is about one and a half miles from the City of Kingston, and the crossing is close by the station—a level crossing, of six tracks—over which Mr. Spooner had to pass on his way home to Glenburnie, where he farmed. This crossing has a flag-man on from six o'clock in the morning till six in the evening, but none through the night, when one is most needed. In the vicinity of Kingston there are four very dangerous crossings, and many lives have been lost at these places. Why are they not guarded?

About three years ago a man and team were killed at a crossing about a mile west of this station, and in 1899 a woman was killed on the same spot where Mr. Spooner and son were killed.

The court had ordered that a subway should be built at this crossing some years ago, and that the city and county should bear a portion of the expense; and when the railway company billed these parties for their portion of the expense, they backed down, and refused to pay their share, and so it was dropped. But now the county council is going to petition the Dominion Government to see that the railway crossings in the vicinity of Kingston are either protected by gates or by signal men.

So, this is another accident for which we may say the Senate must be responsible, and, if it had been one of the honored gentlemen from Ottawa, it might awaken the rest to the fact that level crossings should be guarded, and some steps taken at once to protect human life.

If it had been a bill before the Senators to increase their salaries, instead of a bill to protect human life, it would have been dealt with far differently. It is to be hoped that immediate action will be taken to protect all of these death-traps, before any more lives are sacrificed.

FRONTENAC SUBSCRIBER.

Need of Reforestry.

MANY ACRES SUITABLE IN NORTHERLAND COUNTY.

Editor "The Farmer's Advocate":

Having been requested to go over the proposed ground to be reforested in Northumberland Co., Ont., I would say if there is one question that is engaging the attention of the public more than another it is the question of forestry. And well it might be so, for these lands in their virgin state, before the rich mould was exhausted, thus leaving the sand exposed to the burning rays of the sun, were fairly productive, but the general removal of the timber has had an influence on climate. Torrents of rain would fall, running from the hillsides, submerging the low lands, causing great damage, followed by periods of drouth disastrous to agriculture. Shortly those farm lands became practically of no value, many of them now being abandoned, producing noxious weeds and being a breeding ground for injurious insects and rodents. This section is largely situated in the Townships of Hamilton and Haldimand, containing many thousand acres, and is in the uplands of the county, lying between Rice Lake and Lake Ontario. Mr. Zavitz has given an estimate that there are about 8,000 acres in Northumberland County suitable for reforestry.

There is to-day dotted on the hillsides second-growth timber, which, if protected, would soon be a valuable asset. It is desirable for various reasons that the Government would take over this waste land, with the view of reforesting such portions as are cleared. This would not only make them valuable in the production of timber, but, further, would provide a game preserve and a home for insectivorous birds. It would also tend to restore trout brooks, where once teemed millions of the finny tribe, and which furnished water power for grist and saw mills, not in evidence to-day.

Every effort should be put forward, not only by the Government, but also by private owners of land, to retain and foster remaining timber belts, and also to reforest as much as is practicable for the sake of future benefits. Realizing that this state of affairs is general throughout older Ontario, and this rapid depletion of the timber belts is still in progress, the farmers, at an Institute meeting in Northumberland County, felt compelled to memorialize the Government in behalf of this great educative movement, which will be of material benefit to future generations. Another resolution was passed by the ratepayers of Hamilton Township, on municipal nomination day, as follows:

"Whereas, the Government of the Province of Ontario has inaugurated a policy for the reforestation of the waste lands of older Ontario,

and, whereas, a large area of such lands are in evidence in this and the adjoining Township of Haldimand, containing many thousand acres, especially adapted to the growing of timber indigenous to the soil; and, whereas, such a policy would have an educative influence upon the minds of those who are ruthlessly destroying what nature has endowed them with; therefore, resolved, a policy which would reclaim such waste lands would be a twofold benefit, not only in furnishing material of merchantable value, but in having a climatic influence that would tend to increase the water supply which has in recent years become so alarmingly scarce; therefore, we, the ratepayers of this municipality, here assembled, desire its municipal council to memorialize the Government of the Province of Ontario, as to the great necessity of immediate action in reforesting such waste lands in this county as are unsuitable for agricultural purposes, and that this resolution be filed by the clerk, and a copy be forwarded to the press."

W. J. WESTINGTON.
Northumberland Co., Ont.

The Government and the Farmer.

There are three classes of remedies for the ills that overtake the tillers of the soil, which are primarily the function of the State:

1. Remove all handicaps and disadvantages that are not a natural part of the business, as the inequalities of transportation facilities; the effect of combinations in the interest of the few; discriminations in legislation, and the oppression of systems of marketing.

2. Give the farmer information to aid him in making a living, and in enjoying it.

3. Get some activity at work to arouse, energize and inspire to set out the possibilities of living on the land.—[L. H. Bailey.

A Classic Biography.

By request, for the convenience of readers who desire a beautiful edition of John Morley's great literary work, "The Life of William Ewart Gladstone," we make a special offer in the Home Magazine Department of this issue. The work was originally published at two guineas, but now may be obtained at popular prices. Look up the offer in this issue, and take prompt advantage of the opportunity.

HORSES.

Millet Injurious to Horses.

Will you please let me know how millet should be fed? I am feeding it to a mare, but I am not giving any grain with it, just the millet alone, still she does not put on much flesh. I feed a little potatoes, say three times a week. Should I feed any grain, or is there enough substance in the millet?
E. J.

Though from a chemical point of view millet hay should be superior to timothy for horses, being considerably richer in albuminoids, the experience of horsemen does not seem to bear this out. Experiments at the North Dakota Experiment Station seemed to demonstrate quite thoroughly that millet when used entirely as a coarse feed was injurious to horses: "First, in producing an increased action of the kidneys; second, in causing lameness and swelling of the joints; third, in producing infusion of blood into the joints; fourth, in destroying the texture of the bone, rendering it less tenacious, so that traction causes the ligaments and muscles to be torn loose." Johnstone, in "The Horse Book," is still more emphatic, declaring that millet and Hungarian hay "is an abomination." Henry says it is remarkable that millet, a feed used so extensively in various countries, should fall under this serious charge, and suggests that possibly hay from this plant is injurious in some districts while harmless elsewhere, though advising horsemen to use it with caution. It should be noted, he points out, that in the cases where the trouble arose millet hay was used exclusively for roughage. In small quantities and intermittently, it might, perhaps, be employed safely. In fact, we have used it thus apparently without bad results. Nothing unfavorable to the use of millet hay for cattle and sheep feeding has been reported. The experience of readers might throw light on this subject.

Improves with Age.

Enclosed you will find post-office order for \$1.50, one year's subscription to "The Farmer's Advocate." Have taken it for over thirty years. It improves with age.
ISAIAH J. SHAW.
King's Co., N. S.

Itchy Legs.

Draft horses, especially those of the Clydesdale and Shire type, are more or less subject to an itchiness in the skin of the legs, particularly in the region of the fetlock and cannons. This is much more noticeable in horses with bone and feathering of poor quality, commonly called round bone, or bone of the fatty or beefy type. It is seldom noticed in a horse with good quality of bone and feathering. In many horses there is, undoubtedly, a congenital predisposition, inherited from sire or dam, or both. While this predisposition exists to a more or less marked extent in all breeds of heavy horses, it is probably more marked in the hairy-legged classes. The trouble is much more marked during the winter months than at other seasons, and is noticed in horses that are practically idle much more frequently than in those at regular work. As stated, the predisposition exists, and the exciting causes are idleness, lack of brushing and grooming, dirt, alternate wet and dry condition of the legs, changes from heat to cold, high feeding, etc. Probably the most fertile cause is the too common habit of washing the legs to remove mud, ice, etc. Anything that has a tendency to check the circulation, even for a short time, tends to swelling of the legs, itchiness and eruptions. Whatever the cause, the legs become itchy, the horse stamps with his feet, bites the parts, rubs one leg with the shoe or foot of the opposite leg, etc. This continues until the legs become raw in places, small quantities of blood escape and adhere to the hair, collect dust, etc. If this be not removed, the parts become foul and fetid, and the trouble becomes aggravated. When warm water and soap are used for the cleansing of the parts, and the legs, instead of being rubbed until dry, are allowed to dry from the heat of the parts, the reaction causes a more or less marked stagnation of the circulation, which tends to increase the trouble. Hence, the accumulation of blood, dust, etc., should be removed by rubbing and brushing, instead of by the use of fluids, unless the attendant has the time and inclination to rub the legs until dry, and this requires so much time and labor in heavy-legged horses that it is seldom properly carried out. The question then arises, "How can we prevent the trouble?" Of course, the principal point is to produce horses with clean, hard, flinty bone, with fine feathering, and an absence of beefiness or roundness of bone. This can be done only when mares of the desirable quality are mated with sires of equal quality. The next question is, "Having horses in which the predisposition to itchiness exists, how can we prevent it?" This can be done only by taking care to prevent the operation of any of the exciting causes. Horses that are idle, or partially idle, should be fed on easily-digested, laxative food. The use of drugs or medicines as preventives is not advisable. Regular exercise, ordinary food of good quality, and in reasonable quantities, with an occasional feed of bran and a few roots daily, combined with daily brushing and rubbing the legs, in order to prevent the accumulation of dirt, etc., and the removal of scruff and dandruff, goes a long way towards preventing trouble. We are aware of the fact that it is usually considered unnecessary to groom idle horses, and also of the fact that the legs of working horses seldom receive the grooming they require. But experience teaches us that, while general grooming can probably be dispensed with in idle horses, if they be of the hairy-legged classes, the legs must receive regular attention, else trouble is very liable to follow. When the legs become covered with ice or mud, they should not be washed, but allowed to become dry, and then well brushed. All the exciting causes already mentioned should, as far as possible, be avoided.

Curative Treatment.—When the trouble under discussion appears, of course curative treatment is necessary. In the first place, the patient should be prepared for a purgative, by feeding on bran alone for about 18 hours; then an aloetic purgative of 8 to 12 drams of aloes, according to size of the patient, with 2 or 3 drams of ginger, should be given, and bran alone fed until purgation commences. After the bowels regain their normal condition, alteratives, as 1 to 2 ounces Fowler's Solution of Arsenic, should be given twice daily for a week. This can be given either mixed with bran or chop, or mixed with a pint of cold water and given as a drench. Local treatment consists in good and regular brushing and rubbing of the legs, and the daily application of something that tends to check the itchiness. A solution of corrosive sublimate, about 20 grains to a pint of water, or a solution of Gillett's lye, about a teaspoonful to a pint of water, gives good results. Whichever is used, it should be applied warm, and well rubbed into the skin, which can be done only by parting the hair in many places and applying the liquid carefully and thoroughly. It is good practice to then rub with cloths until the legs are dry, but at all events, colds and drafts must be excluded. If this treatment is well carried out, it usually results in a cure, but, if carelessly conducted, it will not pro-

duce satisfactory results. When the trouble has reached the eruption stage, the treatment for scratches or mud fever must be adopted.

"WHIP."

From Forge to Farm.

Editor "The Farmer's Advocate":

Seeing a letter from "Farmer's Boy," in issue of January 28th, re horseshoeing, I agree with him in fitting the shoe on cold. I learned my trade of blacksmithing in an Ontario town for four years, but I prefer the country, and am back on the farm. Many of my neighbors come to me when they cannot get the town shoers to do as they want. Farm work may seem hard, but when you are all day shoeing horses, some of them troublesome, that is hard, too; and machinery is now helping the farmer to bridge over some of the rough places. ANOTHER FARMER'S BOY. Parry Sound, Ont.

farmers keeping mares with bone blemishes and breeding to high-class stallions in the expectation of having clean, strong colts of high quality.

He had known localities where an inferior stallion, with a service fee running from \$5.00 down to 25 cents, secured 150 mares in a season, whereas four stallions of the proper type, but charging \$10.00, had to be contented with 160 mares for the four. When the colts grew to salable age the loss to the owner from breeding to the cheap stallion was \$90 or \$100. The owners of such stallions were not to be blamed; they were after money, and knew how to get the greatest profits. The men who owned the mares were at fault.

There were four classes of horses in demand on the market, viz.: draft (agricultural), carriage, road and saddle. Draft horses were best suited to the average farmer for breeding purposes. They were not so liable to blemish, and a slight blemish did not detract greatly from the selling price. Again, he was more easily broken, and was able for light work at an early age.

General-purpose horses were desirable if they were of the proper type. They should be similar to carriage horses in build, action and speed. Then the avenues of disposal were to millionaires, and to departmental stores and merchants for delivery purposes.

Q.—How do you like the German Coach?

A.—He is all right. In fact, he is almost ideal as a general-purpose work horse, and has style, action and speed.

Of the draft horses there are five breeds, said Mr. Kydd, and four of these are a curse to horsemen. There were good and bad in all breeds, but no matter how good they are, great damage is done by changing the breed, using Shires for a season, then Percheron, then Clydesdale, and later, perhaps, Suffolk Punch and Belgian. A locality should strive to make that district famous for a particular breed, so that buyers could come and secure a carload or more.

Desirable type and conformation were outlined by Mr. Kydd, and shown by means of a chart. As

regards the foot, a deplorable feature was the damage done by many blacksmiths in excessive cutting away of the frog and side bars, and in rasping and cutting the hoof unduly. Approved sloping pasterns were contrasted with straight pasterns by means of careful drawings. Ailments, such as sidebones, ringbones, bog spavin, bone (Jack) spavin, thoroughpin and curb, were discussed, and specimens of several of them displayed by bones from diseased legs.

Over Sixty Enquiries.

I am pleased to report remarkable results from my advertisement that appeared for only three successive issues in "The Farmer's Advocate." I referred to turkeys and Leicester sheep, and over sixty enquiries have come, every one of which mentioned your paper. I have had an advertisement in another agricultural paper for almost a year, and so far can trace only one enquiry. This last advertisement appeared in two other papers at the same time as it was in "The Farmer's Advocate," but none mentioned the others. The extraordinary results have taught me that it pays to advertise in the best. D. A. GRAHAM. Lambton Co., Ont.

Many thanks for the very handsome and useful knife we received. Let me say that your valuable paper seems to improve and become more interesting with each issue. No home should be without it. SAMUEL ELDER. Dufferin Co., Ont.



Dalffible Grace 2nd (imp.) —26353—

Ayrshire cow; five years old. Winner of first prize and championship, Western Fair, London, and Central Canada Exhibition, Ottawa, 1908. Imported and exhibited by Robert Hunter & Sons, Maxville, Ontario.

Pointers Regarding Horses.

Among the questions receiving special attention during the series of Farmers' Institute meetings held throughout Ontario this winter is one in which W. F. Kydd, of Simcoe, gives an exceedingly interesting and instructive discourse on various features of the horse industry. With a thorough grasp of the subject, and an evident desire for questions, every obstacle in the way of acquiring valuable information is removed.

While Mr. Kydd does not claim that horses are more profitable than any other class of live stock, yet it must be admitted that fair returns can be derived. It has been claimed that proper care and feeding would bring the cost of raising a colt to three or four years of age to \$90, or, perhaps, \$95 or even \$100, depending on the district and the food at hand. Average horses were worth \$175 to \$200. A carload recently shipped West from Middlesex County comprised several common blocks of fair quality that cost \$180. One extra good gelding had cost considerably more, and the buyer said he was willing to pay \$300 for such individuals.

A great many horses raised in Ontario did not bring prices that made it profitable. Localities that had the best horses kept all the high-quality mares for breeding purposes. Too many sold these, and they were found on wagons in our towns and cities. Unsoundness must be guarded against. Bone diseases were among the most hereditary ailments. There was no reason for

LIVE STOCK.

Meat Trade in Australasia.

A recent issue of Trade and Commerce Report contains an account of the development of the frozen-meat trade in New Zealand, Queensland, and New South Wales, from the pen of J. S. Larke, Trade Commissioner at Sydney, N. S. W. As early as 1866, the preservation of meat by cold process was attempted. Lack of suitable refrigeration machinery delayed a successful issue. In 1881, a cargo, consisting of 17,000 carcasses of frozen mutton, and some beef, was landed in England by a New Zealand company. Exports increased rapidly, and co-operative companies were formed. In 1906, the exports of frozen meats from Australia were valued as follows: Beef, £434,455; mutton, £1,095,120; pork, £60,936; poultry and game, £9,585; rabbits and hares, £491,434.

Dealing with the meat question, Mr. Larke writes: "Though all meat exported from Australia or New Zealand is frozen, some chilling is done for local consumption. It is somewhat difficult to get the number of establishments engaged in freezing for export, as a number of them carry on, in addition to freezing, meat preserving, cold-storage and butter factories. In New Zealand, the works were largely co-operative institutions, for which the capital was mainly furnished by the farmers, but these co-operative establishments have become, in almost all cases, joint-stock concerns. There are 27 of them, with a killing capacity of 77,800 per day, and a storage capacity of from 50 to 180,000 carcasses. The largest establishment has a capacity of 8,000 daily, with a storage capacity of 180,000. In Queensland, there are 11 freezing, preserving and boiling-down works, for which the 1906 output was 42,362,283 pounds of frozen beef, 4,251,216 pounds of frozen mutton, and 10,293,794 pounds of fresh and preserved beef.

"In Victoria, there are 14 freezing and preserving establishments, the estimated value on land, buildings and works being £292,524. The output was 651,914 carcasses of sheep, and 4,248 quarters of beef; of preserved meats, 6,011 cwts. of beef, and 1,700 cwts. of mutton.

GOVERNMENT OPERATION OF PLANT.

"The capacity of the freezing works of New South Wales, the number of which is not available, is given as being equal to 123,000 head of cattle, or 4,050,000 sheep, per annum. The chilling and preserving works are of a larger extent in this state than the freezing works. The figures for the other states are not available at the time this report is written, but in South Australia the Government has a Produce Department which operates freezing works. It has recently enlarged them to a capacity of 8,000 carcasses per day, with a storage capacity of 200,000. The Department reports that this establishment yields a profit to the Government.

STATE AID IN QUEENSLAND.

"The exportation of frozen meat is practically unassisted by any Government subsidies. In New South Wales, none appears to have been given, though the Government has an export department which leased freezing works for the purpose of encouraging the exportation of rabbits and hares, the preservation of eggs, and other minor articles of produce. In Queensland, the Government does not now control any freezing or chilling works; but some years ago, advances were made to assist in the erection of meat works and dairy factories to the extent of half the cost of erection and installation of the factory, the amount being repayable by half-yearly instalments of interest and redemption for 15 years. Four per cent. interest was charged upon the amount thus loaned, and no payment of either interest or redemption was required for the first five years. The Government has still some mortgages for amounts yet not repaid, but the large works are wholly independent of the state, though the majority were started with financial assistance from the Government.

OPERATION OF CO-OPERATIVE CONCERNS.

"In a few instances there are co-operative establishments, the capital of which has been furnished mainly by the producers who supplied the live stock. There are other works which do neither slaughtering nor killing, but confine themselves to freezing for the wholesale butchers or meat exporters. The large portion, however, of the export trade is in the hands of the joint-stock factories, which purchased the stock from the graziers, killing, freezing, and exporting on their own account. They are thoroughly equipped with modern appliances in all departments, utilize all portions of the carcass, and from the by-products, otherwise unmarketable, manufacture fertilizers.

"The pioneer factory was originally founded by the promoter of the frozen-meat export business. This establishment, amongst a number of industries, freezes for the wholesale butchers or exporters. When carcasses are brought fresh from the abattoir, each is weighed separately, and

a tag, supplied by the Government, attached to each carcass, duly numbered, with the weight and quality of the carcass marked thereon. Then it is transferred to the freezing chambers, maintained at a temperature of about 10 degrees. At the end of about three days the carcass is taken out of the freezing-chamber, enclosed in cloth, stocking net, calico or hessian, and replaced in cool-chamber until the steamer is ready to receive the cargo. For the English market, a single covering is used, but for South Africa, and where meat has to be carried some distance by railway and rehandled, a double covering of cloth is put on. The freezing charge is usually 1d. per pound, but varies according to circumstances and the amount of covering, to 5-16d. per pound.

GOVERNMENTAL INSPECTION.

"Great care is taken by the Governments of Australia and New Zealand, with respect to the health of the flocks and herds. The procedure in New South Wales is typical of that pursued in the different States and in New Zealand. The country is divided into districts, with a resident inspector, and, where necessary, assistants, who travel frequently over the districts and report upon the condition of the stock. At all principal sale-yards, qualified veterinary surgeons attend, and examine the stock before sale. All slaughtering establishments, where stock is killed for public consumption, must be registered, and notice given to the inspector when it is proposed to kill. At the five large abattoirs where slaughtering is done for export, there are resident inspectors who watch the operations. The carcass of any beast found to be diseased is destroyed.

"In Australia, in addition to this, the Commerce Act of the Commonwealth requires that each carcass shall be examined at a place ap-



Plan of Pigpen.

Erected by John Peirson & Son, Bruce County, Ont.

pointed for the purpose, and upon each carcass duly passed there shall be affixed an official tag specifying that the article is lamb, mutton or beef, and has been approved of for export, and also the registered trade-mark or name of the exporter. Upon the shipment of the carcass, a customs-house official requires that a certificate from the Departmental official, authorized to give such certificate, shall accompany the shipment, and watches to see that each carcass has upon it the official tag.

"The cold-storage premises are not only examined for cleanliness, but also as to the proper temperature being observed, for, if the temperature rises beyond safety point, the meat stored therein may be condemned.

GRADING OF EXPORT MEAT.

"With the grading of export meat, neither the State nor Commonwealth Government has anything to do. Exporters, however, have found it to their advantage to grade the meat sent out. The grading varies very greatly, both with the conceptions of the shipper and the requirements of the market to which the meat is to go. Many of the shippers in Australia confine themselves to three grades, but in New Zealand some of the large shippers have most elaborate systems. The Canterbury factories grade their sheep as follows: I. grade, under 48 pounds; A. grade, 48 pounds to 56 pounds; B. grade, 56 pounds to 64 pounds; C. grade, 64 pounds to 72 pounds; H. grade, over 72 pounds. And the mutton of the A. grade is worth 3d. per pound more than that of the H.; or, averaging the price of the A. grade

at 3½d. per pound, and that of the H. at 3d. per pound, it is worth one-sixth more.

"More attention is now being paid to the age and quality of the carcass than to the weight. Australian sheep, being lighter than those of New Zealand, have never had as special systems of grading as in the latter country. In New Zealand, the export of sheep has been steadily declining in weight, as it is found that the British demand is for younger carcasses. When the export began, the wethers of New Zealand were from three to four years old, averaging 80 pounds, but now the age is 1½ years, and the weight 60 pounds."

Compact Pigpen Plan.

Editor "The Farmer's Advocate":

A correspondent asks for plan of pigpen. I will send you plan of a pigpen we built last summer; perhaps he or someone else can get an idea. Our pen is 40x36; the walls, floor and foundation of concrete. The walls are 8 feet high between floor and plate; the walls are a foot thick. The cement for walls, floor, foundation, trough, etc., cost \$100, at \$1.90 per barrel; the cost of doing all the cement work was \$73. They found the horse to turn the mixer; we boarded the men and put the material as handy as we could put it.

We put wire partitions between pens and passage, and between beds, but put planks between pens, as pigs are sometimes restless and disagreeable if they can see each other. For mising the trough, make a shape of inch stuff the size of the inside of the trough, just sides and ends; cut notches 15 inches apart (more or less) to put iron rods across to keep the pigs from rooting the feed out of the trough. Set it down on the floor just where you want to have your trough; set up plank same height far enough away to have good solid sides for your trough. Make the mortar pretty rich and pretty thin, but not sloppy; stamp it in well, and you will have a trough that is a trough. I may say we pipe the water from a tank in the cattle stable. The doors between the pens will shut the pigs in the beds while the pens are being cleaned out.

Bruce Co., Ont. JOHN PEIRSON & SON.

[Note.—It would appear to be an improvement to have the furnace at the other end of building, near the feed and water tap; also a narrow door to each pen from the passage.—Editor.]

Sheep-raising Profitable.

Farmers were urged to keep sheep in greater numbers by A. W. Smith, M. P., Maple Lodge, Ontario, who gave an address at the Eastern Ontario Live-stock and Poultry Show. The advantages to be derived from flocks in that part of the Province were outlined, and it was claimed that the sheep-raising industry is more remunerative than any other one branch of farming. Experiment stations had proved that sheep could be raised at a lower cost per pound than any other class of stock. They would thrive on areas on which other kinds of stock, with the exception of goats, would starve. Returns for money invested and labor incurred were high.

Peter White referred to the question of dogs killing sheep, and also asked Mr. Smith how many sheep he would advise a man on an average farm to keep.

With regard to danger of destruction of the flocks by dogs, Mr. Smith said that legislation on the statutes of the Province made it possible in municipalities interested for farmers to receive compensation for sheep killed. However, it was wise to place the sheep in well-guarded pens every night. Ontario farmers are, he said, entitled to more protection in the matter. As for the number to be kept on a farm, it would be a mistake to go into this industry extensively at first. In mixed farming, a flock of twenty or twenty-five was most satisfactory.

Bacon Type in Hogs.

In an interesting talk on the bacon industry, at Ottawa, during the Eastern Ontario Live-stock Show, Prof. G. E. Day, of Ontario Agricultural College, Guelph, referred to the waning popularity of swine-raising during the past few years, and urged farmers not to drop this important feature from their farming operations before they were sure it was unprofitable. Many farmers decried bacon type because they claimed this type was more expensive to feed than the thicker types. No feeder ever had proved this to be a fact. The trouble was that the long, lean, lanky type was confounded with the desirable bacon hog. Ideal type and conformation were illustrated during the lecture by living animals and dressed carcasses, and those in attendance were instructed in what characteristics were wanted in breeding stock, and which cuts were most valuable for the bacon trade.

Profit from Pig-feeding.

Editor "The Farmer's Advocate":

I noticed some time ago in your columns an invitation for anyone having kept any hog-feeding accounts, to favor your paper with them. Following are my expenditures and receipts for the past season's feeding:

EXPENDITURE.	
May 20th, 1908, bought 11 pigs, 7 weeks old, Yorkshire and Chester White, at \$2.00 each	\$22.00
Fed them, 477 pounds shorts, at \$27.00 a ton	6.44
161 pounds barley, at \$26 a ton	2.09
330 pounds Western and fall wheat, at \$25 a ton	10.37
1,350 pounds oats and barley chop, at \$23 a ton	15.52
50c. worth of sulphur, 80c. worth of oil cake	1.30
Total	\$57.72
RECEIPTS.	
Oct. 24th, 1908, sold 1,780 pounds pork at \$6.00 per cwt.	\$106.80
Total expenses	57.72
Profit	\$ 49.08

These pigs got about 175 pounds of whey a day for the last three months, and all they wanted before that. They also had the run of one-third-of-an-acre pasture and one-third acre of rape, which was poor, on account of the dry weather prevalent last summer; while the pigs took a scurf which seemed to keep them back considerably.

Following is the account of another litter which I raised from a sow purchased last May, and whose keep up to the time of farrowing was practically nothing, as she received no roots or grain.

EXPENDITURE.	
Expenses	\$ 1.00
600 lbs. oat and barley chop, \$24 a ton.	7.20
980 lbs. mangels, at 6c. a bushel	.98
330 lbs. shorts, at \$26 a ton	4.29
15 lbs. oil cake, at \$33 a ton	.25
Total	\$13.72
RECEIPTS.	
Jan. 12th, 13 Yorkshire pigs, 11 weeks old	\$36.00
Expenditure	13.72
Profit	\$22.28

In reference to these accounts, I might say that they are as nearly correct as possible. I kept the pigs separate from all others, while I purchased practically all the feed from a neighboring miller. The latter litter might have been fed more cheaply if there had been whey or skim milk available. The price may seem small, but they were a rather mixed lot. They were not weaned until ten weeks of age, owing to lack of room. As I am but a beginner, I cannot say whether or not I have fed them as profitably as might be done.

It must appear to everyone who has kept track of the expenditure and receipts of any portion of his business, that "The Farmer's Advocate" and other agricultural papers cannot impress too strongly on their readers the benefits to be derived, for not only does it show the most profitable line to follow, but, also, the farmer is certain to study more thoroughly the most economical conditions under which his stock will thrive. Of course, the average man says he knows how much he has in the bank at the end of the year, and that's all that is necessary, but imagine the manufacturer who has no idea what the cost is of producing a certain article, or the merchant who has no idea of his profits on a certain line of goods, his only guide being his bank account at the end of the year. Considering the unbusinesslike methods pursued in the past, is it any wonder that farming too often has not paid? Middlesex Co., Ont.

R. ELLIOTT.

[Note.—Our correspondent is quite right in urging the keeping of farm accounts as a guide to accurate insight into the ins and outs of one's business. His pig-feeding accounts submitted are, on the whole, satisfactory, though, in calculating the cost of feeding the first lot of pigs, the whey should have been valued at from \$20 to \$30. It is only fair to the cows to do this. Good whey, in sweet, wholesome condition, is worth not less than 10 cents per cwt.—Editor.]

Good to Raise Boys On.

"The Farmer's Advocate" is welcomed in our home, and is eagerly read by both young and old. It is a good paper to raise a boy on, and I intend to see that my young "hopeful" will never be without it. W. E. WILLIAMS. Middlesex Co., Ont.

Economical Feeding of Bacon Hogs

At the Eastern Ontario Live-stock and Poultry Show, at Ottawa, the problem of feeding bacon hogs was dealt with as follows by J. H. Gris-dale, of the Central Experimental Farm, Ottawa:

To produce bacon at a low cost, one must begin with the breeding stock. Here, the first considerations must be health, type and prolificacy. Prolificacy means the lowering of the cost of production by from 5 to 10 per cent. It depends on strain. Type means the raising of the value of the product by from 2 to 5 per cent. Knowledge and skill figure here. Health means success and profit. Unthriftness means disgust and loss. Skillful feeding and proper care are here the controlling influences. Feed and care given the breeding stock affects their prolificacy, influences the type of the progeny, is all-important as a factor making for health or unthriftness, and largely controls the cost of production of the feeder's finished article, the right bacon hog.

The sow should receive a liberal ration of the right kinds of food. The right foods are not corn, barley and other heavy meals, but roots, clover hay, bran, shorts, oats and skim milk. She should be kept in good breeding condition, which does not mean block fat, but rather thin, thrifty and vigorous. An ideal ration for a mature sow carrying young would be, for the first two months of the gestation period: One pound clover hay, 10 pounds roots, and about 2 pounds meal—bran, shorts and oats, equal parts. Such ration is sufficiently nutritious, highly suitable in character, and very cheap.

Last winter, 29 brood sows, fed outside at the Central Experimental Farm, consumed, from Dec. 1st, 1907, to January 18th, 1908, 18,600 pounds roots, fed raw or cooked, 600 pounds clover hay, and 1,700 pounds bran. This feed cost 2½ cents per sow per day.

From January 18th, 1908, till March 14th, when the sows began to farrow, the feed consisted of 18,500 pounds roots, 950 pounds clover hay, 2,088 pounds bran, and 4,151 pounds shorts. This feed cost about 5½ cents per diem per sow. The average cost to feed one sow one day while carrying her young was 4½ cents, or to feed the sow during the whole gestation period cost about \$5.00. The sows gave large litters of healthy, well-formed, vigorous pigs.

The feeding of the young is done largely through the mother for the first two months. The early addition of skim milk and shorts, or other finely-ground meal, to the mother's milk tends to make more vigorous and growthy pigs.

The feeding of the pigs from weaning to block may be done very expensively or comparatively cheaply. The use of green feed or succulent feed along with the meal in summer is the key to success. In autumn and early winter, roots, pumpkins or potatoes, cooked or raw, and pulped, along with the right kinds of meal, are the conditions making for profit. Pigs fed in 1908, on a mixture of shorts 500 pounds, corn 200 pounds, feed flour 100 pounds, and an equal weight of roots, made gain during the whole feeding period at a cost of 4½ cents per pound live weight. The roots were cooked. If it was impossible to get roots, oil cake at the rate of 50 pounds to 100 pounds each of the other meals was very desirable.

Q. Do you feed meal wet or dry?

A. We feed it wet. If you have a large, clean feeding floor, it can be fed dry economically. As a rule, however, it is best to feed wet to a thick mash.

Q. Do you always boil the roots?

A. We have fed both ways. The returns are

not greatly different, but, when the labor and cost of boiling are considered, it is best to feed roots raw.

Q. Can you account for the falling off in the Canadian bacon trade?

A. I consider it is due to the increased price of feed, and no accompanying increase in price received for pork.

Sheep as Weed Scavengers.

Sheep are admittedly the best scavengers on the farm, and if a few were kept on every hundred acres, they would pay for a considerable proportion of their keep by their efficacy in suppressing and eradicating weeds. Nine years ago, said Jas. H. Wheaton, secretary of East Middlesex Farmers' Institute, I was persuaded to commence keeping sheep. At that time there was a great deal of ragweed and burs on the farm, especially around the buildings. Now we have scarcely any of these weeds, except some ragweed, which grows up in the stubble fields in summer, for, my sheep being pure-bred Shropshires, I do not like to turn them in the stubble fields. Sow thistle is the worst weed with which farmers have to contend nowadays. I had a few patches in a field, and went out and dug them up, and threw the thistles, root and branch, over into the sheep pasture. They cleaned every bit of it up. Afterwards, I put the sheep on a clover field, from which a crop had been taken, and, on examining, six or eight weeks afterwards, I found that they had even pawed up the ground for an inch or so over the sow-thistle patches, and eaten everything in sight.

Dogs? The flock come up every evening, and I could shut them in the sheep pen or paddock at night if I wished. I found it was not necessary in my case to do so, as I have not been troubled with dogs. There is a salt trough near the pen, and they have become used to coming up to the pen every night. I keep about 25 or 30 sheep, and I don't think they miss ten nights during the summer season that they are not up to the pen. Dairymen bring up their cows every evening to be milked; why not the sheepmen fetch the sheep and put them in the pen or paddock? Even this may not be necessary, if two or three in a flock carry bells the size of small cow-bells.

Live Stock in United States.

The Crop Reporting Board of the Bureau of Statistics of the United States Department of Agriculture estimates, from reports of correspondents and agents of the Bureau, the numbers and values of farm animals on farms and ranges in the United States on January 1st, 1909, compared with January 1st, 1908, the following changes: Horses have increased 648,000; mules increased 184,000; milch cows increased 526,000; other cattle decreased 694,000; sheep increased 1,453,000; swine decreased 1,987,000.

In average value per head, horses increased \$2.23; mules increased \$0.08; milch cows increased \$1.69; other cattle increased \$0.60; sheep decreased \$0.45; swine increased \$0.50.

In total value, horses increased \$106,522,000; mules increased \$20,143,000; milch cows increased \$52,888,000; other cattle increased \$17,816,000; sheep decreased \$19,104,000; swine increased \$15,764,000.

The total value of all animals enumerated above on January 1st, 1909, was \$4,525,259,000, as compared with \$4,331,230,000 on January 1st, 1908, an increase of \$194,029,000, or 4.5 per cent.



A Cosy Country Home.

Spruce Lawn Farm, property of Mr. Harry Mitchell, Mono Road, Peel County, Ontario.

THE FARM.

Weight Per Bushel and Quality.

Editor "The Farmer's Advocate":

In view of the emphasis commonly placed on weight per bushel, as indicating the quality of grain, would you kindly allow me space for presenting a few facts in connection with the subject. There are several factors that help to determine the ratio between such weight and the quality, but I will confine myself particularly to two or three of the more potent ones. Being convinced that grain having small kernels would outweigh that of similar quality with large kernels, and that the two sizes, evenly mixed, would outweigh either alone, I demonstrated the correctness of my theory, by comparing equal quantities of shot of different sizes. As a result of this test, No. 9 shot (of about half the diameter of No. 3) showed an increase in weight of 2.22 per cent. over that of No. 3, while the two sizes mixed (about half and half) showed an increase of 6.8 per cent. as well as an increase of 3.77 per cent., over that of No. 9 alone.

If we use the same figures for peas of uniform quality, with large ones weighing 60 pounds per bushel, those with half their diameter would weigh 61.33 pounds, and the two sizes mixed 63.64 pounds per bushel—quite a considerable increase to be credited to "quality." In addition to this, we find, in the O. A. C. Report for 1896, on page 127, a table of results, including weight per bushel, obtained from comparing 46 varieties of peas, and, on the following page, a diagram showing the comparative sizes, presumably for the same year. Comparing the two extreme sizes, we find a difference of 12.32 pounds per bushel in favor of the smaller ones, for seven of each an average difference of 5.51 pounds, while a division of them equally shows an average difference of 1.26 pounds, still in favor of the smaller ones. Nine tables found in the Dominion reports show the same relative results in each case, the average difference for all the tables being a little over one-half of a pound. It is very probable that the extra good showing in weight made by the grass peas is owing to their peculiar shape.

In the case of barley and oats, we find the prevalence of beards and awns, respectively, exercising probably a still more potent influence in widening this ratio. One authority states, in reference to oats, that, "The lighter the weight per bushel, the larger is the proportion of hull." Another says: "We frequently find that a variety which gives a heavy weight per measured bushel is an oat of poor quality, owing to the comparatively small amount of meal and the large percentage of hull obtained from one hundred pounds of grain." These statements come from honest and capable officials connected with the experimental stations, yet we find them, to a certain degree, contradictory. I will endeavor to show that the cases mentioned, in place of being exceptions, are, in fact, the rule. In cleaning oats for seed, especially where a comparatively coarse screen with a long mesh has been used, observant farmers may have noticed that the screenings often, if not invariably, in the case of awned oats, outweigh those used for seed. This is not on account of their being of better quality, by any means, but because, being free from awns and smaller in size, they lie closer together, making it possible to get a greater number of kernels in a measured bushel. My observation also leads me to believe that, size and shape being equal, the awned kernels are of better quality than those without awns. It seems natural to suppose that the fanning-mill should blow back a larger proportion of the awned kernels, the awns acting as "sails," yet, of 1,000 kernels from directly behind the mill, only 12.5 per cent. had awns, while the same number from the seed oats showed 16.5 per cent. with awns.

But let us again refer to official data. In the O. A. C. report for 1898 we have the percentage of hull, as well as the weight per bushel, for 91 varieties of oats. Of ten extreme cases, five which averaged 37 per cent. of hulls gave an average weight per bushel of 37.55 pounds, while the other five, with an average of only 26.6 per cent. of hull, gave an average weight of only 32.23 pounds. Again, the twenty varieties having the highest percentage of hull, with an average of 36.4, averaged 34.45 pounds per bushel, while the twenty having the lowest average percentage, of 29.55, averaged only 33.77 pounds. It seems remarkable that the Joannette oats, with only 22 per cent. of hull, should weigh only 32.72 pounds per bushel. Possibly there has been a mistake here on the part of someone. Now, if the oats having the smallest percentage of hull are the best, and those weighing the lightest per bushel are the poorest, we have the seeming paradox of the best oats being the poorest. Some of the American markets sometimes quote one price for oats weighing from 26 to 32 pounds, and a higher price for those weighing from 32 to 40 pounds per bushel, but it is possible, if not probable, that the 32-pound oats are of better quality, in many cases, than those of 40 pounds.

I think an investigation will show that those weighing 40 pounds and upwards are practically awnless, and also smooth and plump.

Perhaps other readers of your valuable paper may be able to give their views, as a result of their personal observation. In any case, I am firmly convinced that the subject is worthy of further research, if we are still to be asked to value the quality of grain by its weight per measured bushel.

H. F. T.
Brant Co., Ont.

Barn Frame Made of Plank.

Editor "The Farmer's Advocate":

As there is so much inquiry in regard to plank frames for barns in districts where timber is scarce, I will give my experience. In the spring of 1903 I decided to build a barn, and tried to buy timber for the frame, but could not get it at any reasonable price, so decided to use plank instead. The building is 40 x 60, 16-foot sides, with gambrel-hip-roof, no purline plates, set on a concrete wall nine feet high, one foot thick, on a footing 20 inches wide. For the wall, we used one part of Queenston cement to five parts of coarse gravel. There is a cistern under the approach, 6 ft. wide by 28 ft. in length, and the basement is floored throughout, requiring, in all, 125 barrels of cement.

The frame is made by using 2 x 4 in., 2 x 6 in., 2 x 8 in., and 2 x 10 in. plank. On top of wall I bedded a 2 x 4 around the entire wall. The sill is made by spiking a 2 x 6 on edge of 2 x 10, forming a trough; this spiked on 2 x 4 in the wall, the 2 x 6 being edgewise, flush with outside of wall on all four sides. Joists 2 x 10 are on top of 2 x 10 sill, and spiked to studding to prevent wall spreading. Posts are three 2 x 6 spiked together, set inside of 2 x 6 on sill, and braced both top and foot with a 4-foot run-brace, followed up with cripple stud between top and foot brace. The sides and gables are studded three feet apart all round. The girths are 2 x 4, spiked on outside of posts and studding. The plates are of 2 x 6, spiked on a 2 x 8 so as to cover the 2 x 6 studding and come flush with the girths below. All cross-beams are spiked to and into the posts, so as to hold the frame from spreading, the top beam lapping over the plate, and spiked. Gable end beams are two 2 x 10 on top of the V-shaped plate, so as to make them strong enough not to bulge out with the pressure when filled. The rafters are 2 x 6, 15 ft. 10 in. from heel to point, with inch pieces spiked on sides over hip for braces, shape of rafters at hip.

Now, as to labor, compared with a timber frame, this frame can be built at less than half the cost. Being a builder myself, I had one son and another handy man for three days, and another carpenter for the next three days, besides myself, and the frame was finished up to the plates, saving the trouble of a raising, and also the expense of getting up a supper for the men we would have needed to raise a timber frame. I had everything on the ground, and started the wall on the 25th of May, 1903, and we were eight days building it; and just as soon as the wall had set sufficiently hard to allow, we started the frame. In the meantime, we filled in the approach, and, with myself and three other men, we were ready for the hay by the 10th of July. We have filled this barn to the peak every year since it was built, using hay-fork for hay and slings for grain, and the whole frame seems to stand just as firm to-day as ever. It took about 17,000 feet of plank for frame and threshing floor, which is 24 x 40; also mangers and studding for stables. The 24-foot floor I believe to be a decided advantage over the common method of having the floor 16 or 18 feet, as the hay is in the narrower mow, and we have the one floor to fill with grain handy to thresh, and, after that, we have the whole 24 feet for storing wagons and cut feed. This is the only plank-frame in this section of the county, and people here were very sceptical about the building standing the pressure from within and the wind without. It stands in a very much exposed place; as one neighbor remarked, "No protection between it and the Rocky Mountains."

AMOS RITTENHOUSE.

Haldimand Co., Ont.

Only Words of Praise.

I cannot say anything but words of praise for "The Farmer's Advocate." It has come to be almost a household necessity with us, as it fits in so neatly with every branch of household and farm work. The Christmas number is something to be proud of, and something to keep for future usefulness. I have at present about 200 copies of "The Farmer's Advocate" on file, and find them exceedingly useful for references on farm work. I find the questions and answers handy to have; every subscriber should keep them. Wishing you every success in the future.

J. HARTLEY SHANNON.

Wentworth Co., Ont.

A Farmhouse Remodelled.

Editor "The Farmer's Advocate":

In answering your request for experience of those of your readers who have improved the arrangement of farmhouses, I send the following: We turned the parlor into a dining-room, and the dining-room into a kitchen, making the kitchen the most central and the warmest room in the house—a great improvement, as most of the time of a farmer's family is spent in the kitchen, and the kitchen stove warms the bedrooms, without extra cost. I took the backs off the kitchen cupboard and dining-room sideboard, and placed them in the wall separating the two rooms, at a cost of about \$2.00. By this arrangement, any dish or food placed in either cupboard can be obtained in either room, thus saving many steps in setting the table and clearing away dishes in the dining-room.

I also put in a dumb waiter in a corner of the pantry, at a cost of \$4, and this is used for holding victuals from one meal to another, and during hot weather is sent down to the cellar, saving carrying of the different articles.

I also put in a bathtub in a bedroom above the kitchen, and a sink in the kitchen, at which both hot and cold water can be obtained. This is a great convenience, as water hot enough to wash dishes in can always be obtained at a tap at the stove, besides always having warm water to perform one's toilet. The supply of water is obtained from part of the roof, by placing eaves-troughing on the fifth row of shingles, the conductor coming through the roof and ceiling to a tank holding about ten barrels, placed 1½ feet above floor. The bathtub, with hot and cold water taps, is placed near the supply tank, and the hot-water tank is fastened to the large tank in an almost horizontal position, and connected by ¾-inch pipe, with a coil in the kitchen stove. A 1½-inch lead waste-pipe extends from above the roof to a drain outside cellar wall, and connects with both bath and sink with lead pipe and traps. The whole outfit was installed at a cost of eighty dollars.

J. N. KERNIGHAN.

Huron Co., Ont.

Suggestion to Municipal Councils.

Editor "The Farmer's Advocate":

As the season will soon be here for rural municipalities to arrange for the building and repairing of roads for another year, I would like to draw the attention of those interested, as I have endeavored to do on previous occasions, to the importance of making timely and frequent use of the split-log drag on our earth roads. The drag as an implement for road maintenance has steadily increased in popularity ever since its introduction. Every one who has used it judiciously admits its usefulness, and many are loud in their praise of the improved condition of the roads where the drag has been faithfully used. It has taught many what can be done, and has been the means of getting many interested in the good-roads movement, so that they now are willing to maintain, at their own expense, a portion of road adjoining their farms, as they have so much better a road, besides the improvement to the appearance and value of their farms. What is more attractive or inviting than a nicely-graded road, free of grass or weeds from gutter to gutter, and the sides of the road to the fences kept free of weeds and rubbish, and a row of some fruit, nut-bearing or other trees, kept uniformly pruned and cared for? If a farmer begins taking pride by having a good road leading to his place, ten chances to one he will soon be anxious to have things about his residence and barn to correspond, being prompted to "tidy up" and make home more attractive for himself and family, thus instilling a desire for the beautiful. If there is anyone who can have an attractive home and beautiful surroundings, without very much expense, if he so desires, and goes about it, it certainly is the farmer, and he, above all others, is deserving of the very best.

As an incentive or inducement for others to become more interested in the good-roads movement, those who have caught the "spirit" of advancement should be willing to contribute a mite, and some energy, to show by their works their faith, and set a worthy example for others to follow.

"The Farmer's Advocate," in introducing, as it did two years ago, all over Ontario, the split-log drag, did a good work in more ways than one, the results of which have been worth thousands of dollars to Ontario. It is our privilege and duty to still further encourage the good work started, as there is ample room yet for development along the same line. A number of municipalities in various parts of Ontario are planning along lines similar to those adopted by "The Farmer's Advocate," to further educate and entice the public with the importance of good roads, and the use that can be made of the split-log drag in attaining that end. The incentive by the example already set by some in maintaining a portion of road free, is being caught by others, and a lesson learned of the importance of those interested in being willing to

assist in encouraging the good work. The man who is not willing to assist in any good work, unless for the direct remuneration he sees in it, is not attaining to the highest ideal a true Canadian should have in view. Let us ever look about us for opportunities to do some good, and cultivate one of our talents, that this world may be the better by our example.

Some municipalities are offering prizes in the township, others are dividing the township into divisions and offering a number of prizes in each division to those who will take a portion of road—mile or half mile—and make the most improvement, and keep it during the season in the best condition for traffic. It is thought, in that way, the councils being relieved of the expense in maintaining those portions of road, the work done by the contestants will in all probability amply repay for the appropriation made to be distributed in prizes; while, from an educational standpoint, the good results can scarcely be anticipated. I trust municipal councils which have not given this matter due consideration will do so now, and help along with the much-needed agitation for better roads.

Lincoln Co., Ont. W. B. RITTENHOUSE.

Possibilities of Northern Alberta.

The agricultural possibilities of the Peace River and Athabasca River districts in Alberta were acclaimed by Sheridan Lawrence, of Peace River, recently in an address before the Canadian Club, Toronto. After spending thirty-seven years in this north land, Mr. Lawrence told his audience that in these valleys there were sixty-five million acres suitable for grain-growing. Six hundred million bushels of wheat was said to be an easy possibility. Fifty-six bushels to the acre was on the agricultural records of Peace River. Wheat had been grown within 15 miles of the Arctic circle. A modern flour mill was in operation at Fort Vermilion, 58½ degrees north.

In this great Peace River district, garden crops of all kinds were said to be raised without difficulty. Cucumbers and pumpkins were included. Potatoes had yielded one thousand bushels to the acre.

In the Athabasca district it was claimed there was a deposit of asphalt comprising a thousand square miles. This is less than 200 miles north-east of Edmonton. In the sands of all the streams gold was to be found, and coal deposits and crude petroleum were found in abundance.

Lack of transportation facilities was referred to as being the chief drag to rapid development. The Provincial Government, however, was turning its attention to that factor, and great progress was assured.

A high tribute was paid to the efficiency of the Royal Northwest Mounted Police. Mr. Lawrence said that in no country was life and property safer. Magistrates tried to give justice, and no man escaped on a technicality.

[Note.—While not refuting the statements of Mr. Lawrence regarding the capabilities of Northern Alberta, it is only fair to state that the December issue of Census and Statistics Monthly contains a report from Fort Vermilion, which says that in 1908 wheat yielded 25 bushels, with no rust. Oats went 35 and barley 30 bushels to the acre. There is plenty of wild hay. Potatoes were fair and vegetables good, but these crops were kept back through dry weather in early spring.—Editor.]

Speed the Day.

Impressive calculations have been made of the advantage that would accrue to Canadian agriculture by raising the average yield of the oat, barley or wheat crop one bushel per acre, yet this is nothing compared to the uplift that would result if every farmer in Canada subscribed to "The Farmer's Advocate." Lend a hand to the good work. Speak a word to your neighbor, and speed the day.

Successful Farmers' Institutes.

Editor "The Farmer's Advocate":

Having just completed a series of Institute meetings in some of the counties bordering on Lakes Ontario and Erie, I must say that I cannot agree with the ideas expressed by a recent correspondent from Eastern Ontario, that the usefulness of the Farmers' Institute was done, and that the money so spent could be used to better advantage in other ways. Taking the series as a whole, I do not recollect, in my experience of 18 years, of helping at any better-attended or more interesting meetings in this Province, except, possibly, in the early days of Institute work, when only the larger centers were visited. Wherever the judging classes are held, and properly managed, they are a decided hit. There is room for a large extension of such teaching in nearly every county.

The method, too, of getting those in attendance to help the speakers develop the subject under discussion, by asking them frequent questions, and taking a vote on some of them, makes old subjects decidedly interesting to all.

There is always in evidence a good live secretary and active directors in successful meetings. The weather clerk, too, was kind this winter thus far in serving up very favorable weather most of the time.

That a larger number of the younger men were in attendance, was quite noticeable, and the idea of following up the annual event is taking root in organizing Farmers' Clubs. There is no doubt, too, but that the Women's Institutes are tending to increase the interest in the Farmers' Institute.

It is up to the Farmers' Institute delegates to freshen up, even the old subjects, in such a way as to make them decidedly palatable, so that the possibilities of Ontario farmers doubling the output of their farms in the next ten years, as they have done in the past ten years, may be made a reality, as suggested by Prof. James, Deputy Minister of Agriculture, in recent addresses he has delivered, when he says: "It is up to the individual to drain his land if it needs it, to improve his farm crops by using better-selected seeds, and by weeding, feeding and breeding his dairy herd to the best advantage."

T. G. RAYNOR.

The Fertilizers Act.

Editor "The Farmer's Advocate":

A Bill, introduced into the Senate last July by Hon. R. W. Scott, deserves more attention from the agriculturists and horticulturists of the country than it has yet received. Being a Government measure, it—or a similar Bill—will no doubt be again brought before Parliament this session. In fact, the intention of the Department of Inland Revenue to reintroduce it has been expressed in a circular sent out by the Deputy Minister last September, inviting criticism and suggestions from the parties interested.

The Bill is a proposed new Agricultural Fertilizers Act, to replace that which has been in force since 1890. The parties primarily interested are naturally the manufacturers, who will, no doubt, see that their side of the case is presented to the best advantage, and the users of commercial fertilizers. But, as will appear from a consideration of the old and the proposed Acts, the general public—both rural and urban—are interested, in so far as the wisdom of any change of policy in the expenditure of public money is of importance to all contributors to the public purse.

The Fertilizers Act of 1890 requires every manufacturer or importer of fertilizers to send to the Inland Revenue Department, before the end of January of each year, samples of the commodities to be placed on sale by him that year, together with a statement of the materials used in their manufacture and certificates of analysis. The evident intention of the Act is that the results of the analysis of these standard samples, made in the Departmental Laboratory, should be

published in time to serve as a guide to the farmer or gardener purchasing fertilizers in the spring. In practice, however, this clause has proved worse than useless as a measure for the protection of the consumer. It is only in comparatively rare instances that the manufacturer is prepared to send in a genuine sample of his product in the month of January. It is not easy, perhaps not even practicable, for him to have his whole stock manufactured by that time. Even if he had, he would be obliged to increase the selling price by the cost of two or three months' storage. There are two alternatives open to him. One is to make up a small quantity of fertilizer, representing as nearly as possible the product he intends to turn out; the other is to beg for an extension of time. The first gives to him the advantage of using the results of the Departmental analysis as advertising material, if they reach him in time. But to the purchaser it has the disadvantage that the analysis does not actually refer to the commodity he is buying. Suppose, for instance, that in January the manufacturer has made up and sent in as his standard sample a mixture of nitrate of soda, muriate of potash and superphosphate of lime, using high-grade materials, and taking care to guarantee considerably less than he is actually putting in. Later, he buys the same materials (nominally the same) in quantity, and makes up his mixed fertilizer in the same proportions as the standard. Now, the nitrate of soda actually used may be lower in nitrogen, the muriate of potash lower in potash, and the superphosphate of lime lower in phosphoric acid than the materials of the same name used in making up the standard sample.

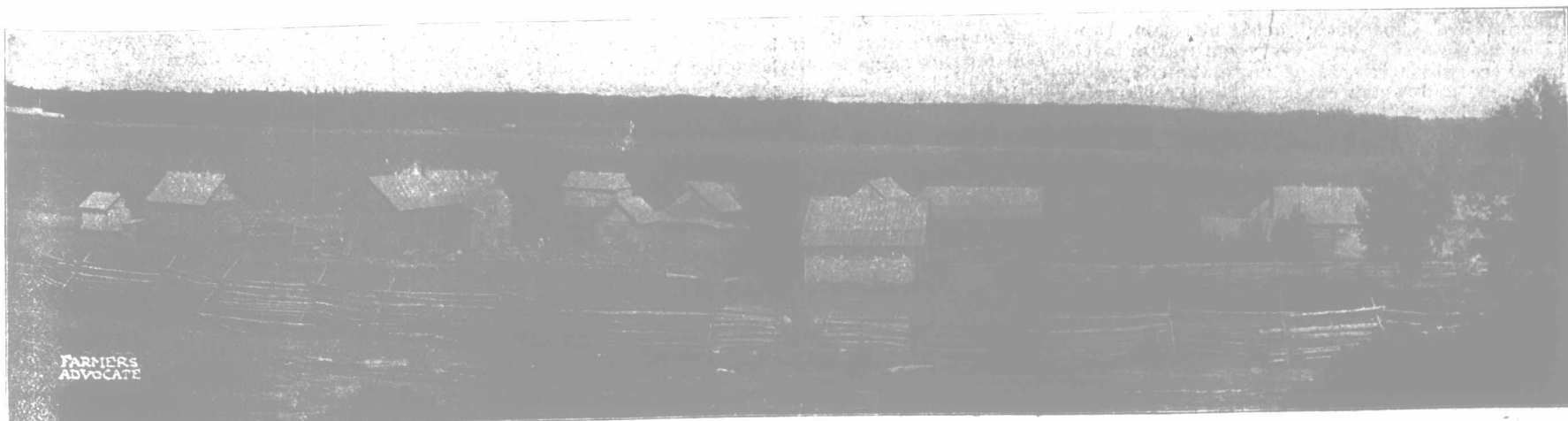
"It is no unusual thing," writes the Chief Analyst, in Bulletin No. 139 (July, 1907), "for a standard sample to possess a value greatly above the minimum value guaranteed by the manufacturer; and, to require every sample sold to reach the value possessed by the manufacturer's sample deposited, would result in condemnation of a very large percentage of all fertilizers sold. Nor would it be just to the manufacturer, who sells on the basis of a plainly-printed guarantee, which may be considerably below actual value, and all a purchaser has a right to do is to require him to live up to the guarantee."

If this be true, of what value is the analysis of the standard sample to the consumer? It may even be used to mislead him.

Suppose that, on the other hand, the manufacturers succeed in convincing the Minister that an extension of time for the sending in of samples, beyond the month of January, should be granted, so that they may be in a position to send in genuine samples of the actually-marketed products, what is the result? The publication of the bulletin giving the results of the analyses of standard samples is delayed until it is of no value to the consumer buying fertilizers for spring use. This is what has actually occurred for some years past. The bulletins have not been ready for mailing before the first of May, sometimes not before June. In some years, indeed, the results of the analyses of the standard samples have not been published until those of the analyses of the samples collected by the inspectors have been ready.

Evidently, then, the analysis of the standard samples is at best a waste of labor and a useless expense—useless, that is, so far as the protection of the consumer in that season, at any rate, is concerned.

Now, upon whom does the expense fall? The manufacturer is required to pay a fee of \$3.00 for each standard sample analyzed. A commercial analyst would charge \$10 for the same work. Allowing something for profit in the latter case, we may place the actual expense at somewhere about \$7 or \$8. The \$3 paid by the manufacturer is, no doubt, included in his estimate of the cost of his product, and eventually comes out of the consumer's pocket. The remaining four or five dollars comes out of the pockets of the taxpayers at large, whether they use fertilizers or not. The farmers of the Prairie Provinces pay their



Homestead of Sheridan Lawrence, Peace River, Alberta.

FARMERS
ADVOCATE

share; the dwellers in the city pay their share; fishermen, lumbermen and miners pay their share. And for what? For an analysis that is of value to nobody, if not to the fertilizer manufacturer, and in many cases not even to him.

These are the chief evils the new Bill is designed to do away with. It is worth while to consider how it proposes to meet the situation.

THE PROPOSED LAW.

The requirement of a standard sample is abandoned. Instead, the manufacturer is to procure annually from the Minister a registration number for each brand of fertilizers which he intends offering for sale during the year. This number is to be clearly and legibly placed upon every package offered for sale, so that it can be identified with certainty, and its composition compared with the guaranteed analysis deposited with the Minister, which is also to be printed upon the package. The Governmental fertilizer control would thus consist in a comparison of the samples collected on the market by the Inland Revenue Inspectors with the manufacturer's guarantee—a comparison which, in the Chief Analyst's opinion (as we have seen) is the only effectual control possible under the present law. The country would be saved the expense of the useless analyses.

But, further, the fee for each registration number is fixed at twenty dollars, a sum which would go far towards paying the expense of the control analyses—an expense which now falls entirely on the general public. Further, the purchaser of a legally-registered fertilizer is to enjoy the right of having an analysis made in the Departmental Laboratory for a fee of two dollars, provided that the method of taking the sample is accepted and approved by the manufacturer or his agent.

At first sight, this readjustment of fees appears very favorable to the consumer and to the general taxpayer. But will not the manufacturer now assess the registration fee of twenty dollars upon the consumer, in place of the old three-dollar fee, by raising the price of the fertilizer? It is evident that those fertilizers which are least used will be most affected in price in this way. The effect of the law will, therefore, undoubtedly be to discourage experimentation with new fertilizers. Thus, the imposition of this comparatively large registration fee will operate both directly and indirectly to the disadvantage of the consumers.

On the other hand, the low fee charged a purchaser for an analysis will enable the manufacturer, through the kindness of obliging purchasers, to obtain as many analyses of his registered fertilizers as he likes, at the low price of two dollars each—the general taxpayer making up the remaining five or six dollars of actual cost. The commercial analyst would also be a loser to the extent that analyses which should properly be made by him will be made, as now, in the Departmental Laboratory.

This question of fees is one requiring careful consideration on the part of our legislators. To what extent is it desirable that the expense of Government control should fall upon the users of commercial fertilizers, and to what extent upon the general taxpayer? And the equitable distribution of the burden having been determined, what system of fees will best secure it?

The system of registration number proposed might also be considered with advantage. The Bill, as introduced last session, provided that a new number is to be given to each brand of fertilizers every year. This scarcely seems desirable from the standpoint of either the manufacturer or the consumer. The consumer should be in a position to identify the same product year after year, and an annual change of number would tend to confuse him, and render him suspicious that "something just as good" was being palmed off upon him. Moreover, it would be difficult for the manufacturer to renumber stock left over from one year to another in the hands of dealers. A more rational system would be to issue a permanent registration number for each brand, but to require the manufacturer to renew the registration annually.

The new Bill alters the definition of fertilizer from "every natural or artificial manure which is sold at more than ten dollars per ton, and which contains phosphoric acid, nitrogen, ammonia or nitric acid," to "every natural or artificial manure which is sold at more than ten dollars per ton, and which contains phosphoric acid, nitrogen or potash." This change is an obvious improvement. There is no good reason why potash manures should not be subject to Government control, as well as others.

The clause fixing the extent of variation from the guaranteed analysis, to be treated with indulgence, is changed from "Provided that any percentage claimed to be contained in the fertilizer shall not be deemed wanting by reason only of a deficiency of one per centum of the ammonia, or its equivalent in nitrogen or nitric acid, or of the phosphoric acid," to "Provided, always, that a deficiency of one-half of one per cent. of the ammonia, or its equivalent in nitrogen or nitric acid, or of the phosphoric acid, or of the potash claimed to be contained in the fertilizer,

shall not be considered as evidence of fraudulent intent." That is to say, the margin of indulgence is narrowed from one per cent. to one-half of one per cent. of each ingredient. To this change, the consumer can have no objection. But he may well ask, "Why allow any margin at all? Why not make the manufacturer live strictly up to his guarantee?" The answer, no doubt, is that it is impossible to mix a fertilizer so thoroughly that there will be no chance that a sample taken at random will fall below the guarantee, unless the guarantee is placed so far below the actual average composition that it will convey no useful conception of the actual composition. The granting of a slight margin enables the manufacturer to guarantee a composition fairly close to the actual. To the writer, this slight indulgence does not appear unreasonable. Perhaps, however, it might be fairer to the consumer to require that any such small deficiency existing in one of the fertilizing ingredients (say, phosphoric acid), should be compensated for by an equivalent surplus in the others (nitrogen or potash, or both). A fertilizer containing more than one of these ingredients should not be allowed to fall below guarantee in all of them.

The phrasing of this provision would be rendered more consistent with the proposed new definition of fertilizer (which does not mention ammonia) by transposing the words "nitrogen" and "ammonia." This would reduce the margin of indulgence only very slightly.

There is one provision appearing in both the old Act and the proposed new one, which, in the writer's opinion, might better be omitted. It is the requirement that the published results of analyses shall include "a statement showing the relative value of each fertilizer, calculated from its contents in fertilizing ingredients at their current market value." Such a statement, given, as it is, in dollars and cents, merely distracts the attention of the practical man from the essential feature of the publication—the analytical results. For instance, there are two fertilizers described in Bulletin 151 of the Inland Revenue Department, which have practically equal percentages of phosphoric acid. One of them has 3.0 per cent. of nitrogen, and 6.3 per cent. of potash; the other has 5.5 per cent. of nitrogen, but only 5.0 per cent. of potash. Nitrogen being over three times as expensive as potash, the first is valued at \$24.35, the second at \$32.02, or nearly one-third more. The purchaser is apt to jump to the conclusion that the second is the better article. Yet, where potash is the fertilizing constituent most needed, the first of these mixtures would be actually more valuable to the consumer than the second.

The writer will be gratified if this comparison of the old and proposed new laws evokes some discussion of the matters at issue, on the part of either users or manufacturers of fertilizers, and especially if it shall serve to secure a satisfactory presentation of the consumer's side of the case, when the bill again comes up in Parliament.

J. F. SNELL, Asst. Prof. of Chemistry,
Macdonald College.

Solid Concrete or Cement Block.

I am thinking of building a silo the coming season. A round one built of cement is the kind which I am in favor of, but I am at a loss to know which of two, the concrete or the cement block, would be the better one. I would like to hear the opinion of those who have seen both kinds built and tested, and the cost of one, say twenty-eight feet high and thirteen feet in diameter, and also how many iron hoops would be required, or would heavy wire answer the purpose as well?
FARMER.

Canada's Oats and Barley.

A recent issue of Trade and Commerce Report contains statistics showing the world's production of oats and barley, in which it is shown that Canada ranks sixth in the former, and eighth in the latter, in 1907. In that year the grand total was 3,582,041,000 bushels of oats, of which Canada produced 210,869,000 bushels, and 1,267,814,000 bushels of barley, of which 45,235,000 bushels came from Canadian soil.

Best Number Ever Read.

I received your premium, the Carbo-Magnetic razor. I have tried it, and am much pleased with it. It is the best razor I have ever used. It is certainly well worth the trouble to get a couple of new subscribers for such a valuable premium. I also wish to thank you for extending my subscription another year. The four new subscribers are all well pleased with their paper, especially the Christmas Number. I am delighted with it, and think it the best number of the kind I have ever seen or read. We all enjoy reading your paper very much; the print is so clear, and the literature of the highest class.

Wellington Co., Ont. MARSHALL SMITH.

THE DAIRY.

Licensing Butter and Cheese Makers.

Editor "The Farmer's Advocate":

This question was advanced a step at the annual convention of the Eastern Ontario Dairy-men's Association, recently held at Prescott. A resolution was adopted in favor of butter and cheese makers being required to obtain a certificate or permit before being allowed to take charge of a factory.

The question is an important one from every standpoint, and would be far-reaching in its consequences, and undoubtedly beneficial in its results. Such a consummation from the maker's standpoint is earnestly to be desired, and, as a maker, the movement has my own sympathy and, I feel sure, that of my fellow makers also.

The fact that, in both the Provinces of Ontario and Quebec, there are numerous small and poorly-equipped factories that should not be allowed to exist, forms a strong argument in favor of licensing the makers, for such factories could not procure licensed makers, because they could not pay them enough, and the cheap man, without a certificate, such as they engage at present, would not be available; consequently, exult omnes the small factories.

Another result of requiring makers to be licensed would be to fill up our dairy schools and extend their work. With the exception of the St. Hyacinthe, Quebec, Dairy School, through whose courses pass annually three or four hundred students, the attendance at other prominent dairy schools is insignificant, compared with the interests they are designed to serve. One reason, no doubt, is due to the fact that it is not compulsory to obtain a certificate in order to run a creamery or cheese factory.

The amount of money represented in dairy-school buildings, their equipment, maintenance, and salaries paid the staff, is designed to serve an industry covering areas of several hundreds of thousands of square miles, with a population directly interested in dairying of approximately two million, and provided with close to three thousand creameries and cheese factories.

It is a remarkable thing, and to be deplored, that, with the exception mentioned, the average annual attendance at our dairy schools for the regular factory courses is only between forty and fifty students.

Advantages such as these—the filling of our dairy schools, the discouraging of the small-factory enterprise, and improvement in the quality of our factory dairy products—are obvious, and are worth effort and bold initiative to attain. However, of all the various interests which would be affected by the compulsory licensing of butter and cheese makers, to none is the innovation of such movement, and fraught with such promise, as to the makers themselves.

It at once places their vocation upon a higher plane, and broadens their conceptions of the possibilities which may be attained by success. Protection is afforded merit, and the injustices perpetrated in the name of economy would surely be a thing of the past. Nor do any serious obstacles confront would-be framers of such beneficial legislation; it is merely necessary to enact that makers be required to pass two or more years' apprenticeship, at the end of which time a full 'three-months' dairy-school course must be taken, and, in case of the student demonstrating sufficient ability both in practical work and written examinations, a permit be granted to be head maker in a creamery or cheese factory for one year, after which an official license or certificate is granted, confirming the maker in his status as such, but subject to cancellation for misconduct or special negligence, and continuing indefinitely, provided such maker attends a special short course for butter and cheese makers at the dairy school at the end of every third year.

By this plan, it is an easy matter to keep track of the makers, and the makers to keep in touch with one another and the dairy-school officials, as well, thus cementing a tie of mutual interest, which of itself would prove of immense advantage to the dairy industry at large.

In considering the status of those at present in charge of factories, there need be no occasion to trample on anyone's rights. No doubt, many makers possess the requisite qualifications, and possess dairy-school certificates; others may be deemed either the qualifications or the certificate, and others possibly both. Those first named, of course, need no further confirmation in their position, other than being notified that their qualifications must be kept up to standard, and that they must take the special short course every three years. Those next mentioned may be granted permits for one year, prior to being eligible for the certificate of license, provided, of course, that they satisfy the dairy-school staff in both practical and theoretical work. The last class need qualify without further delay.

The recommendations embodied in the resolution adopted by the Eastern Ontario Dairy-men's

Association are worthy of the serious consideration of every maker, as well as every friend of the dairy industry in the Province. What action the Western Ontario Dairymen's Association has taken in the matter, I really do not know, but I have no doubt such action has been taken as will tend to push this matter up to the firing line of advanced dairy thought, and that legislation will soon result.

H. WESTON PARRY.
Oxford Co., Ont.

Dairy Herd and Dairy Farms Competitions Proposed.

At a business meeting of the new directorate of the Western Ontario Dairymen's Association, held in London, on Tuesday, Feb. 2nd, Frank Herns was reappointed secretary-treasurer. Considerable time was spent in discussing a proposal for a Provincial dairy farms competition. A committee of two, viz., D. A. Dempsey and S. R. Wallace, was appointed to meet a similar committee from the Eastern Association, to discuss the possibility of such a competition.

It had been hoped that the dairy-herd competition, which has been held for the last three years under the auspices of the Association, would be taken up this year by the Provincial Department of Agriculture. In the absence of any assurance to this effect, it was decided that, if it were found, after the 1909 session of the Legislature, that a Provincial competition would not be held, the Western Dairymen's Association would continue the competition as before. They look on it as a very important line of work, and do not wish to see it dropped.

A committee, consisting of J. N. Paget, D. A. Dempsey, J. J. Parsons, G. A. Putnam, and the Secretary, was appointed to meet a similar committee from the Eastern Association, regarding any dairy legislation that may be proposed.

Other business of a routine character included the appointment of a committee on instruction and sanitary work, consisting of J. H. Scott, Wm. Waddell, and Geo. M. McKenzie. It was decided, too, that a special officer be again appointed for the work of procuring evidence and prosecuting in case of adulteration of milk, and that this same man (Mr. Farrington) be appointed, if available.

Loss of Fat in Cheesemaking.

In several hundred experiments, made at the New York Experiment Station by Dr. L. L. Van Slyke, it was found that the amount of fat lost in the whey varied from 0.20 to 0.50 pound, and averaged 0.33 pound for 100 pounds of milk. Of the fat in factory milk, from 86.5 to 94.3 per cent., with an average of 91.2 per cent., goes into cheese, while the 5.7 to 13.5, with an average of 8.8, goes into whey. The amount of fat lost is practically independent of the amount of fat in milk. The belief formerly held that all fat in milk over 3.5 per cent. was inevitably lost in cheesemaking, is disproved by these experiments. The loss of fat occurs mechanically. The fat globules on the cut surfaces of the curds are disengaged from these free surfaces, and go into the whey. The following are some of the conditions that increase the loss of fat in cheesemaking, as worked out by Dr. Van Slyke's experiments and those of others:

1. Any condition that interferes with complete coagulation by rennet, such as dilution with water, presence of preservatives like salt, formalin, etc., and certain other compounds.
2. Abnormal composition of milk in which casein is abnormally low, in comparison with fat.
3. Jarring or stirring milk after rennet coagulation has commenced, and before it is completed.
4. Cutting curd when too soft.
5. Violent, careless and rapid motions of the knife in cutting curd.
6. Heating curd too rapidly, or to too high a temperature.
7. Piling curd too much.
8. Putting curd in press too warm.
9. Too rapid application of pressure in press.
10. Fermentations that produce floating curds, or excessive acidity, or that dissolve casein.

An Appreciated Present.

When I beg to thank you for the splendid knife which I have received as a premium for sending you a new subscription to "The Farmer's Advocate." I may say that I was particularly anxious to secure this second knife, to give to my faithful creamery assistant, who thought a great deal of the first one you sent me. I only wish you could have witnessed his pleasure on receiving it.

H. WESTON PARRY.

Two Excellent Herd Records.

In a letter to hand from J. H. Grisdale, Agriculturist, Central Experimental Farm, Ottawa, he says: You will remember publishing a year or two ago a report of the milk record made by a herd of Holstein and grade cows, owned by E. Dennis, Ontario Co., Ont. I have pleasure in including herewith a record of his herd for the past year. You will see that this herd is keeping up its good record. I am sure your readers will be interested in seeing their record for 1908. Following is the record:

YEARLY RECORD FOR 1908.
Herd of E. Dennis, Ontario Co., Ont.

	Lbs.
1—Holstein, 3rd calf, 9 months.....	12,439
2—Grade Holstein	11,535
3—Grade Holstein	11,387
4—Grade Ayrshire	11,239
5—Grade Ayrshire	11,105
6—Grade Holstein	10,658
7—Grade Shorthorn	10,455
8—Grade Shorthorn	10,118
9—Grade Holstein heifer	9,416
10—Grade Holstein heifer	8,926
11—Holstein	8,144
Total	115,462
Average	10,496½

Mr. Grisdale also sends us a detailed report of the yield of milk by a herd of Holstein cows belonging to Messrs. R. Connell & Son, Grenville Co., Ont., which, he thinks, should make inspiring literature for the dairy farmers of this country. The table in full is somewhat inconvenient to publish, but it shows a remarkably well sustained flow of milk for nearly all of the cows from month to month. Following are the yearly totals for each of the respective cows (omitting fractions): 8,559 pounds, 10,159, 7,585, 9,983, 8,745, 9,842, 9,071, 7,573, 8,679, 11,713, and 7,590 pounds. The aggregate production for the eleven cows for 1908 was 99,503 pounds milk; average per cow, 9,045 pounds.

Methods with Dairy Herds.

Dairy cows, their feed, their care, and important details in selection of individuals, form the basis for an interesting talk by R. R. Elliott, of Grey County, at meetings held under the auspices of the Farmers' Institutes. At a largely-attended and enthusiastic meeting in Middlesex County, recently, Mr. Elliott stated that the average production from cows in the herds of patrons of cheese factories and creameries was about 3,000 pounds of milk per season. Extra-good individuals had given four or five times that quantity. This showed there was opportunity for vast improvement, and that could be achieved only by breeding continuously with a definite aim in mind. Fads or fancies regarding colors and certain characteristics frequently were carried to extremes, whereas constitution and performance should receive first consideration.

Farmers living near a town or city, or so located that they could go exclusively into dairy farming, perhaps could profit by keeping only one of the breeds of recognized milking propensities; but, for the average farmer, the dual-purpose cow—one capable of giving a liberal flow of milk, and also one that could be fattened for the butcher—was commendable. Cows of the dairy breeds, he claimed, frequently were lacking in constitution.

Sanitation in the stables, and thorough ventilation, must receive attention if the dairy industry is to prosper. It was well to strive for milk in large quantities, but a more laudable aim was healthy cows, and consequent healthful milk. Abundant windows and frequent cleaning-up, accompanied by a ventilation system that gives continual liberal supplies of pure air, were wanted in every stable. Dairy cows and breeding stock should not be housed all the time. Exercise in the outdoor atmosphere was essential. After nine years' experience, he had concluded that the most satisfactory temperature for the cow stable was 50 to 55 degrees.

Q. How can you maintain such temperature and get pure air?
A. No law can be laid down. With a good system of ventilation, it is not difficult to keep well within bounds.

An interesting discussion on feeding practices followed. Several members advocated feeding only twice a day—once in the morning, and again at 4 o'clock in the afternoon. Mr. Elliott said that he had tried feeding twice, but had gone back to three times a day. The cows appeared to be too hungry, and to eat too much—at times, more than was good for their digestive systems. The quantity of meal advised ranged from 4 to 20 pounds per day. The speaker claimed that, for the cow of average size, 9 or 10 pounds was ample. Cut straw always was mixed with the silage.

Pasteurization of Whey as a Practical Proposition.

Editor "The Farmer's Advocate":

Just a few comments on the letter of Prof. Harrison, which appeared in issue of "The Farmer's Advocate," Jan. 28th. It is encouraging to see Prof. Harrison again publicly place on record his belief in the pasteurization of whey as a means of partially getting rid of yeasts and some other flavors that may be due to returning whey in the milk cans.

Although it took the patrons of Innerkip factory several years before they put into practice the advice given them by the Professor at the time of his investigation of the yeast fermentation at that factory, it only took these patrons and the patrons of numerous other factories in Western Ontario about as many minutes to decide on pasteurization of whey, so soon as a "practical demonstration" of its benefits was shown, and different systems of heating worked out which are suitable to nearly all factory conditions, together with an estimate of the cost.

It is doubtful if pasteurization would ever have been adopted by these factories, had not work along the above line been taken up. The fact that pasteurization increases the feeding value of the whey through an even distribution of the fat, instead of leaving it floating in the tank, that the cans are easier to wash, and several other advantages, were, no doubt, stronger arguments, so far as the patrons are concerned, than the possible destruction of yeasts.

The term, "germ-free whey," used by the writer, was qualified by the words, "so far as possible," meaning that the whey would be germ-free only to the extent that the pasteurization temperature of 150 degrees to 160 degrees (to which we are confined), and the time of exposure, would be efficient. However, the omission of these words was explained by the Editor in the footnote to Prof. Harrison's letter. We remembered "the extraordinary resisting powers of many organisms; that 155 degrees lies near the lower limit of the killing effect of heat," and intended to qualify our statement accordingly.

There was no intention to infer that the system advocated would "kill all the bacteria and yeasts that are apt to bother the cheesemaker, by causing abnormal flavors in his products." It is scarcely necessary to point out that were no whey returned in the cans, or if that which is returned might be rendered "germ-free," we would still have to contend with injurious bacteria with which the milk may be infected through numerous other sources, as difficult to deal with as those which may be directly due to returning whey unheated in the cans.

Distinct emphasis was given by the writer to the point that pasteurization of whey, as advocated, was to do away, "so far as possible," with the whey-tank evil, gravity-skimmed whey, and relieve the whey from bacterial life, "so far as possible," and was not a panacea for the evils of improperly-cared-for milk.

We are glad to note that Prof. Harrison confirmed our practical results, that, a temperature of 150 to 160 degrees, maintained for 10 minutes, would destroy the yeasts that give rise to bitter and yeasty flavors.

The points mentioned, that a temperature below 150 degrees is on the border of efficiency, that lactic-acid bacteria are first to succumb, that certain undesirable bacteria might still remain and give rise to off-flavors, are well worth repeating, and bring out strongly our contention in previous articles, that care must be taken to reach the highest temperature consistent with practical work (150 to 160 degrees), and not depend on lower temperatures, as has been suggested by a few makers.

With regard to the temperature mentioned in summing up, also temperature re tuberculosis, he says, "2—This temperature (150 to 160 degrees) can only be efficient when the whey is held at this temperature for 15 to 20 minutes"; and for killing tubercle bacillus, the following temperatures are mentioned: Heated to a temperature of 121 degrees, four hours; heated to a temperature of 140 degrees, 30 minutes; heated to a temperature of 149 degrees, 15 minutes; heated to a temperature of 168 degrees, 10 minutes; stress is laid on the point that the efficiency will be in proportion to the length of time of exposure at these temperatures.

At factories where the whey is heated by turning live steam directly into the tanks (tanks covered), pasteurization begins shortly after the whey comes off the vats, or about 12 o'clock. Some makers turn on the steam as soon as the whey from the first vat is run off, about 11 o'clock a. m. It takes from one-half to one and one-half hours to heat the whey (depending on the amount) from 98 to 155 degrees. The temperature above 140 degrees will be maintained very much longer than 30 minutes; in fact, the whey goes into the patrons' cans the next morning at temperatures from 110 to 120 degrees, depending on temperature of atmosphere during the night. This would indicate that the whey would be at a temperature above 120 degrees for eight to ten

hours, instead of four hours, and above 140 degrees about two hours. Some factorymen practice turning on the steam again in the morning, while the whey is being loaded. In such cases it goes into the patrons' cans at a temperature of 130 to 135 degrees, after having been heated the day before to 150 degrees.

With the large volume of whey which most Western factories have from day to day, the temperature of 150 degrees would, in most cases, be maintained for 30 minutes at least. The writer, in calling upon a number of factories during the past season, where pasteurization was practiced, found the whey at 150 degrees at five o'clock p. m., although the heating to 160 degrees was finished one hour earlier. One of the main causes of possible contamination after the whey is heated is from running into the tanks wash-water from the factory, which may be introduced after the whey has cooled down much below 150 degrees, so that, although these temperatures and time of exposure may insure practically sterile whey at one factory, this might not be true of another.

I am sure that, so far as the Dairy Instructors in Western Ontario are concerned, we would only be too pleased to co-operate with Prof. Harrison or the Bacteriological Department at the O. A. C., and secure the information asked for in regard to temperature, time of exposure, and acidity. We already have considerable data on these points. The writer has many times suggested that this and other matters should be taken up from the standpoint of bacteriological and chemical investigation.

It is one of the problems which might well engage the attention of a special dairy bacteriologist and chemist at the Ontario Agricultural College.

FRANK HERNS,
Chief Dairy Instructor, Western Ontario.

From the Dairy Instructor's Standpoint.

From the report of instruction in Western Ontario cheese factories, referred to in our report of the Western Dairymen's Convention, we extract a few additional particulars, as follows:

IMPROVEMENTS AT FACTORIES.

Considerable improvement is shown at the factories in the matter of new and cleaner whey tanks, new floors, new wells, better equipment, and inside and outside appearance. There are still a few factories, however, which are not up-to-date, and a few makers who do not keep things clean and tidy. The Chief Instructor visited a number of factories where the sanitary conditions were very bad, and in every case conditions were made satisfactory without compulsion. There did not seem to be much difficulty in getting some of the worst abuses remedied, but it seems difficult to get all the makers up to a point where they will keep their factories absolutely clean and tidy.

GREEN CHEESE.

The question of shipping green immature cheese is important, and the cool-curing of cheese and the cooling of milk are, no doubt, the most important problems in our dairy work to-day. Yet they seem to be two conditions very slow to improve. It is to be feared that the continuous shipping of green cheese will have a tendency to lower the standard of milk taken in at some of our factories, some makers reasoning that as the cheese are going out early, defects caused by the milk will not show before the cheese are shipped, therefore a more inferior quality of milk is often accepted. Again, buyers ask for the cheese to break down early, and in order that the maker may get green cheese to break down faster, he is inclined to leave more moisture in the curd, and since the cheese are going out quickly, he salts the curd too early, thus giving rise to open, weak-bodied cheese. The efforts of isolated individuals can have very little effect on these conditions; improvements must be brought about by the united efforts of every one in the business.

DATA COLLECTED AND IMPROVEMENTS EFFECTED.

There are 200 cheese factories in the six instruction groups, and 7 outside factories, making the same total as last year. The average per cent. of fat in the milk for 1908 was 3.5%, being in May 3.3%, in June 3.37%, for July 3.38%, for August 3.5%, for September 3.65%, for October 3.8%. The average loss of fat in the whey for the season was .25%. Tests for adulteration of milk showed 223 samples deteriorated from the normal, 180 samples on one test, and 43 on several tests. This was 17 fewer than in 1907, indicating that the system adopted in 1907, of prosecuting for adulteration, is having a marked effect. Two thousand two hundred and seventy-two new milk cans were bought, 584 more than in 1907. Twenty-three factories were paying by test, being four more than the previous year. Thirteen fac-

ories had cool-curing rooms, as against twelve in 1907. In other respects progress was shown. Total expenditure for improvements at Western Ontario cheese factories in 1908 amounted to \$24,092.00.

Forty-three cases of adulteration of milk were looked after by the special officer appointed for this work, and fines ranging from \$10 to \$25 were imposed. One case was defended, but the conviction was finally secured.

Milk Preservatives Condemned.

No man should be allowed to put any preserving material into milk, whether intended for town or city customers, or for factory use, but every effort ought to be made to produce clean, wholesome milk, and to have it placed in the consumers' hands in the cleanest and most appetizing manner possible, was the conclusion of a paper by Prof. R. Harcourt on the use of food preservatives. The chief chemical compounds other than salt, sugar and alcohol used in the preservation of food are: (1) Boric or boracic acid and borates, the so-called boron preservatives; (2) sulphurous acid and sulphites; (3) fluorides; (4) salicylic acid; (5) benzoic acid or benzoates; (6) formalin or formaldehyde. The boron preservatives are apparently the most used, and sold under a great variety of names, which, as a rule, afford no clue to their real nature. They are commonly used in milk and cream, and for preserving meat food generally.

Just whether these so-called chemical preservatives are injurious to health is a disputed point. Formalin is, however, generally recognized as too strong a disinfectant to be used in the preservation of human food, and its use for that purpose is prohibited in nearly all countries that seek to control the nature of the food supply. The effect on the system of small quantities of boric acid, borax, salicylic acid, salicylates, sulphurous acid and sulphite has been studied at Washington, and the conclusion reached that even very small quantities taken into the system produced injurious effects, and as the presence of these newer preservatives in the food is not manifest to the consumer, he may easily be taking into his system more than is good for him. Either the use of these preservatives should be prohibited, or the manufacturer compelled to state on the package, in the plainest possible terms, the name and amount of the preservative employed.

Coming more particularly to milk and its products, there is a growing tendency to use preservatives to keep milk sweet. This is not necessary, and should not be countenanced. By cleanliness and careful cooling milk can be kept in a perfectly sweet condition until delivered to the factory or consumer.

The use of preservatives removes the incentive to cleanliness. The preservative does not destroy the myriads of germs which dirty milk contains; it only holds them in check, so that such milk may come to the consumer loaded with all manner of germs. Furthermore, the preservative retards the development of the lactic acid ferments, which naturally control the putrefaction and other undesirable germs in milk, and these develop bad flavors, even though the milk is still sweet. A further difficulty is that unless the use of preservatives is discouraged, the view of vendors may prevail, and the consumer may, by adding preserving material to the same milk, render it wholly unfit for use.

The use of preservatives for milk intended for cheese factories cannot be condemned too strongly. It not only encourages carelessness, but decreases the yield of milk from the vat, for material that keeps milk from souring will prevent normal coagulation of all the milk with which it may be mixed. Even a little soda will have this effect, reducing both the yield and quality of cheese from the vat into which the "doctored" milk is introduced, so that the cheesemaker and all the patrons suffer loss.

Fights the Farmer's Battles.

Enclosed please find post-office order for \$2.50, for my 1909 subscription. [American subscribers pay \$1.00 extra for postage.] I have been a subscriber for your excellent journal for a great many years, and wish to congratulate you on the improvement very noticeable every year. "The Farmer's Advocate" is certainly true to its name, because it not only fights the farmers' battles, but it is always full of practical suggestions. Looking at it from the farmer's standpoint, it is without a peer in American journalism. Wishing you continued success.

W. D. FOSTER,
Washington, U.S.A.

Butter is said to be one of the oldest articles of human diet. Four thousand years ago, the Hindoo cattle-breeders of India valued their cows according to the quantity of butter obtained from them, and the butter was used as food.

POULTRY.

A British Columbia Flock Record.

Editor "The Farmer's Advocate":

As it is past the close of the poultryman's year, I am now able to give an exact statement of the yield of my flock since January 1st, 1908. At that time the flock consisted of 88 females—about thirty-six White Wyandottes, the rest White Leghorns—and in the lot, less than half were pullets. An accurate account was kept of all eggs laid, and such as were used for hatching or kitchen were booked at the same price as those marketed at that time. Each month, the average number of hens for the month was put down, also, and by this it will be seen that, contrary to the usual case, after July 1st, the yield in cash per hen was as great for six months as in the first six, which included the spring flush. This is accounted for by the continuous killing off of the drones during the spring, and in June I sold what Leghorns I had left in a bunch, as they have not been nearly so satisfactory as the Wyandottes. If I had had from the first only those I kept at the last, the average yield would have been far greater.

Month.	No. hens.	Dozen.	Value.	Av. per hen, cents.
January	88	24.4	\$11.10	12.62
February	86	50.8	18.95	22.03
March	80	76.8	26.80	33.5
April	68	76.10	26.85	39.48
May	63	56.	19.60	31.11
June	53	27.	9.45	17.83
July	29	30.8	10.50	36.2
August	28	30.5	10.85	38.75
September	28	27.4	9.45	33.75
October	28	14.2	7.00	25.
November	28	5.	3.50	25.
December	28	0.	.	.

The total value for the year was \$154.05, and the average for the year per hen was \$3.02. Eggs sold at 50 cents and 40 cents in January, 40 and 35 cents in February, 35 cents rest of the year until October, when they were 50 cents, and in November 70 cents, and I sold a few dozen pullets' eggs at 90 cents last week, which is the best I ever got in open market.

In reviewing the above, it will be noticed that the 28 hens retained to the last gave practically a dollar and a half per head after July 1st, in this being a lot of eight old hens, two and three years each, that had raised chicks, and in August, September and October these eight gave, on several different weeks, upwards of 40 eggs per week, one week giving 47, and another 46; this was easily remarked, because they had never returned to the henhouse after brooding, but occupied a stable at a distance, where they had been kept as a special breeding pen in the spring.

I cannot say what the cost of feed was, as I fed wheat in the straw entirely last year, no mashes or condiments whatever, but plenty of mangels and green bone in winter, with lots of crushed bone and grit at all times, and free range in summer. When buying feed, however, in former years, it cost about a dollar and a half per head, and should be a bit less when raised at home.

A. B. SMITH.

B. C.

Inexpensive Methods of Poultry Management.

Editor "The Farmer's Advocate":

Our henhouse is 12 x 15 feet, with a wing at each side 8 x 15 feet. The wings were put up several years after main building. The wings have one sash, 2 x 2 feet, in each. The main building has four sashes, each 2 x 2 feet. The house is double-boarded and battened. It is on a stone foundation about one foot in height. The roosts are hung from the ceiling, and are rubbed with coal oil frequently to keep them free from lice. The nests are boxes nailed on the wall. They are dusted with a louse-killer every week or two. The floor is gravel, and is kept well covered with litter. The hens are provided with a dust-bath, in which is put some sulphur and louse-killer. Our hens are troubled very little with lice.

In the morning the hens are given some oats and barley in the litter; also one or two turnips cut in halves. The ducks and geese get oats and barley, with some pulped turnips. After dinner the hens are given a mash composed of finely-ground oats and barley, mixed with boiled potato skins. Small potatoes and scraps from the table are thrown in; we put a teaspoonful of cayenne pepper in it for every dozen hens. We do not fast our ducks and geese any unless we wish to make them lay. At night, all are given some oats and barley. We feed corn when we can get it. We pound up plaster and broken crockery for grit. For ground bone, we burn large animal bones, and burnt corn cobs make excellent charcoal.

T. S.
Huron Co., Ont.

Frozen Vegetables for Fowls—Poultry from Scotland.

- 1. Are frozen turnips or cabbages bad for laying hens?
2. If so, will we have to boil them?
3. Would you kindly give me the address of the secretary of the Game Bantam Club, if there is such in Canada?
4. What is the best way to get poultry brought out from Scotland; also, eggs for incubation?
5. What are the charges?

ANXIOUS.

Ans.—1. I should say that turnips or cabbages frozen are not so much relished by the fowls as when unfrozen. Experience has shown us that the birds have difficulty in getting their beaks into frozen turnips, carrots, mangels, etc. Frozen cabbages become brittle, and the fowls manage to break off pieces. If the roots or cabbages are given unfrozen, a goodly part of them will be eaten before they become frozen so hard as to be uneatable. I would not like to give my laying stock frozen food of any kind.

2. I would much prefer to boil the vegetables and feed them as part of a warm mash. If egg production in winter is an object, the aim should be to feed what would aid, rather than deter.

3. A. H. Trebilcock, London, Ont. The president of the Game and Game Bantam Club is Charles R. Crow, Guelph, Ont.

4. The best way to get poultry from Scotland is by express; eggs the same. We have had eggs come by freight, and, owing to the careful and skillful manner in which they were packed, they hatched fairly well, but I am doubtful whether as well as if they had been sent by express.

5. Difficult to say, as no point of shipment is mentioned. If shipped via Liverpool, the usual charge for live poultry of 25 pounds and under is \$6.00; 25 to 50 pounds, \$8.00; from 50 pounds to 100 pounds, \$10; over 100 pounds, at the rate of 10 cents per pound. From point of purchase in Scotland to port of shipment, say Liverpool, approximately, for 3 to 5 pounds' weight, 90 cents; 5 pounds, 95 cents; 5 to 10 pounds, \$1.15, and so on. If the birds come in an all-wooden box, or shipping coop, the charges will be less than if the box or coop was canvas-covered. There will be the charges from Canadian port of arrival to, presumably, Montreal, which, doubtless, could be learned from the local express office.

A. G. G.

GARDEN ORCHARD.

A Farmer's Small-fruit Garden.

Editor "The Farmer's Advocate":

Everybody will admit the necessity, convenience and utility of a supply during the summer months, of fresh fruit and vegetables. The luscious strawberries, covered with rich cream, and powdered with sugar; the juicy raspberries, both black and red; the black, glistening blackberries; the sparkling currants and tempting gooseberries—all appeal very strongly to the palate on a summer's day, when the mercury is hanging around the ninety mark. But many will say, "Oh, that's all very well, but we have not the time to put on such frills," or, "We have tried that kind of thing, and found it too much work." Now, the chances are that the man who tried gardening and failed, did not make a proper attempt. I have seen many such attempts. A few berry bushes are planted along the fence, and left to fend for themselves; the grass chokes them; the horses and cattle nip them off; then, when they do not bear, the planter will say they are only a nuisance, and straightway plow them up. Another cause of failure is the square garden plot—short little rows of berries, currants, etc., so short that they cannot be advantageously worked with a horse cultivator. This means endless hoeing, and the owner soon tires of the game, especially if he has a two-hundred-acre farm to work besides.

Now, in laying out a garden for small fruits and vegetables, have the rows as long as possible; forty rods is a fair length. A loamy soil is best, but any soil will do, if well underdrained and well supplied with manure.

Now, let us suppose that the reader has determined to put out a small-fruit plantation this coming spring. The land has been plowed during October or November to a depth of ten inches, and thrown up in narrow ridges, to allow of frost action pulverizing the soil. A good heavy coat of manure will be applied in the spring, and plowed down. Thoroughly work the land with a disk to incorporate the manure with the soil. Now stake out the rows, which should not be closer than 12 feet, to allow room for working and thickening up of the row. Now take a team and plow and throw out a double furrow; that is, throw the dirt to both right and left; this will form a good-sized trench. Now take the raspberry bushes, which have been secured from a nursery or a neighbor's patch, and place them three feet apart in the trench. Throw a

little dirt over the roots, to hold them in place. Now take one horse and a plow, and close in the furrow from both sides. Plow several more furrows, throwing the dirt towards the plants, and the trick is done. The blackberries, currants, blackcaps and gooseberries may be planted in the same manner. In the case of the last-named fruits, it would be well to tramp the dirt firmly around the plants with the boot, and throw a little loose dirt on top to act as a mulch. In planting the strawberries, a line is of great benefit; a piece of binding twine does admirably. Take a strong spade, drive it six inches into the ground, pull it back and forth so as to widen the cut, and withdraw. Thrust the strawberry roots into this cut, and tramp the sides together. The plant should be so firm that a leaf may be pulled off without pulling up the plant.

Now, as to what quantity of the different fruits to plant: A row of raspberries 40 rods long will give a plentiful supply for any ordinary family. A similar row of black or thimbleberries will supply that fruit in plenty. A 40-rod row, half currants and half gooseberries, will be sufficient. A full row of strawberries will make a supply certain. I always think a family has not enough of any fruit till they have some to spare; therefore, do not try to economize by planting a supply that in a poor year may prove too small. The reader must use his own judgment in the planting of blackcap raspberries. In this section (Middlesex) they are only a partial success, being liable to winter-kill.

In two years the berry patch will begin to bear. Give clean cultivation, using the cultivator freely between the rows. What few weeds show up in the row itself must be hoed out. Every spring the old wood must be cut out and burned. The berry is, in a sense, a biennial; the shoot grows up the first year, bears the second, and then dies. The old wood can be readily distinguished from its white appearance and brittle texture. A top mulch of strawy manure is beneficial to all the bush fruits, and is almost an absolute necessity to the blackberry (thimbleberry), as the fruit is liable to dry up during hot, dry weather. The strawberry patch is good for two years, and should then be plowed up, a fresh patch having been planted the year previous. When the ground freezes up in the fall, take your manure spreader and fill up with strawy manure; straddle the strawberry row with the horses, and give the plants a good heavy coat. This is a quick, easy way of putting on the winter protection. In the absence of a spreader, the manure may be put on with a fork, but do not get it too thick, for if it heats it will rot the plants. This covering must be removed in the spring, and tramped down between the rows, where it will aid in keeping down weeds, and will conserve moisture.

Now, a word as to varieties. The gardener may give the best cultivation and care, but if the varieties he has planted are poor, his results will also be poor.

In strawberries, Woolverton is a fine berry for eating out of hand or with cream and sugar, but is not acid enough for preserving. The Sharpless is a good all-round berry, and a sure cropper. Clyde is a great bearer, but poor grower. The Ryckman is highly recommended, but I have not had much experience with it.

In raspberries, the best early raspberry I have tried is the Marlboro; it comes in fully two weeks before Cuthbert. The Cuthbert is the best main-crop berry in existence. Here in Middlesex it is almost perfectly hardy; is a large, firm, fine-flavored berry, and fills the bill for the farmer's garden. If a yellow raspberry is desired, Golden Queen is the best. The bushes are of a half-trailing nature, and a heavy storm will sometimes bend them down badly, when the berries become soiled by the clay, unless there is a heavy mulch beneath.

In blackberries (thimbleberries), Taylor or Snyder are about the only safe varieties in this locality. Even they will winter-kill during a bad season. Kittatiny is a magnificent berry, but I have not been able to keep it from winter-killing.

In currants, I have grown Black Naples, White Grape, and Cherry, with good success. The only attention necessary is to keep the currant worm down. Two sprayings with Bordeaux mixture will settle this point.

In gooseberries, the Wilson and Pearl are good-bearing varieties, and will not mildew.

If it is permissible here, I would like to advise every Ontario farmer who grows or intends growing small fruit to join the Exp. Union of the Ontario Agricultural College, at Guelph. Many varieties of small fruits are sent out to members every spring, and the membership fee is only 50 cents a year—much less than the intrinsic value of the material sent out to members. Drop a line to Prof. H. L. Hutt, or J. W. Crow, B. S. A., O. A. C., Guelph, Ont., for further information.

Last, but not least, in planting a small-fruit garden, do not forget a good supply of grapes. Lay out your grape row some place where it can be a permanency. A berry patch is good for nine or ten years, but a grape plantation is good

for a lifetime or more, if properly tended. Fifteen or twenty vines will be sufficient, planted twelve feet apart. Put down posts 25 feet apart, and staple on four wires. This is all the trellis required. The first year, allow the vines to grow at will; the second year, cut back to two buds, which will form two arms. The following spring tie these to the lowest wire of the trellis. The vines from these two arms are tied to the remaining wires. Many elaborate forms of pruning are advocated, but I have practiced cutting the new growth back in early March to two or three buds, and have had good success. Keep the wires fairly tight and the vines firmly tied to them. The grape is a gross feeder, and cannot be injured by manure, but do not put on hardwood ashes too thickly, or you will kill your vines, as I know to my sorrow. Barnyard manure will enrich the vines, retain moisture, and insure a good crop of fine grapes. As to varieties, Worden is the king of grapes for the farmer's garden; it is larger, earlier and better-flavored than Concord. Moore's Early is a good hardy, early grape, and a sure bearer. Lindley and Delaware are good red grapes, of high flavor. Niagara is the best white grape, a heavy bearer, and hardy. Vergennes is a fine, large, pink grape, but is late in ripening, and is sometimes caught in this section by early frosts.

In conclusion, I would say that what has been written in this article has been my own actual experience, and has brought me success, with a minimum of labor. More intensive methods might bring larger returns, but I have made no attempt to grow small fruit for market. My aim has been only to supply my own home with an abundance of fresh fruit during the summer, and for preserving, and in that I have succeeded.

Middlesex Co., Ont. W. E. WILLIAMS.

[Note.—This excellent, instructive and encouraging article will surely prompt many readers to set about it and do likewise. There is scarcely a farmer in the older part of Canada but may have a productive small-fruit garden with a little care and study, and a trifling expense. Mr. Williams' methods are most commendable, although commercial growers may take exception to the spacing of rows that he advises. If the fruits are kept properly pruned, six feet apart is wide enough for rows of currants and raspberries, seven or eight feet for blackberries, and ten or eleven feet for rows of grapes. A scuffer and a one-horse plow solve the problem of economical cultivation. In correspondence with Mr. Williams, he says his object in having the rows so far apart is to allow room for a team and cultivator, and, when necessary, for a plow (presumably a two-horse plow). This, he says, is the most expeditious way of destroying weeds and keeping a mulch, adding that his hired man and he run a 200-acre farm, besides attending to the garden and a good-sized lawn, so that he has to devise ways and means for doing everything in the most expeditious way. A word of caution is perhaps advisable with regard to manuring grapes. There is a danger of promoting excessive wood growth, and probably inducing mildew, by using manure excessively, though a reasonable coat once in three years, with a moderate dressing of wood ashes about as often, should give best results. Our correspondent informs us that he applies coarse, strawy manure about once in three years, and has yet to see the first trace of mildew. While this is his experience to date, we feel inclined to caution readers against employing manure too freely for grapes, having witnessed injury therefrom.—Editor.]

Spruce Seedlings—Black-knot on Cherry Trees.

1. At what time of the year should cones be taken from spruce for the purpose of saving the seed? Should they be dried? And how would you set about to propagate trees from this seed? Is there a variety inclined to the weeping type, or do some of them assume this shape with age? What is the proper season for cutting back, and would three feet be too much?

2. Cherry trees are affected with black-knot so badly I will have to cut down in spring. Is there a variety of sour cherry immune from the black-knot, or nearly so? What variety or varieties would you advise planting?

SUBSCRIBER.

Ans.—1. Spruce cones may be gathered any time in the fall after they have matured, or even during the early part of the winter. They usually open naturally during the warm days of early spring, after severe freezing. To gather the seed, the cones should be dried in pans over a moderate heat, such as may be obtained by placing them some distance from a stove or furnace. The seed should be sown in a carefully-prepared seed-bed of a more or less sandy nature, and great care must be exercised during the first year or two to prevent the tender seedlings being injured by excessive heat or drouth. For this purpose, the seed-beds are usually shaded with brush or lattice work. I may say, however, that, because of the difficulty in growing such seedlings, it will hardly pay the amateur to attempt it, as they

can be bought so cheaply from large nurseries which make a specialty of this work. Seedling Norway spruce, from four to six inches in height, can be obtained for a few dollars a thousand. At such a rate, the amateur can buy all he requires cheaper than he can raise them. These seedlings should be placed in a nursery row for three or four years, and make good-sized trees for transplanting into permanent wind-break or shelter-belt.

I would recommend allowing the trees to grow naturally, without cutting them back at all, unless it is intended to keep them in a low hedge. In such a case, the heading-back should begin when the trees are a couple of feet in height, and would have to be repeated every year, cutting back part of the new growth, and never at any time cutting back farther than the present season's growth.

2. There are no varieties of the sour cherry immune from the black-knot. This may be largely prevented, however, if trees are carefully sprayed with Bordeaux mixture, and care is taken to keep knots cut out promptly whenever they appear. An effort should also be made to see that no diseased trees are allowed to grow in the neighborhood, to spread the infection to healthy trees. The best varieties of cherries for your district are Early Richmond and Montmorency. H. L. HUTT.

Ontario Agricultural College.

THE FARM BULLETIN

The Case of Montenegro.

Editor "The Farmer's Advocate":

I have noticed several letters, pro and con, on protection and free trade, in your columns, so pardon me if I am intruding. I heartily believe in free trade, and consider that this country would be far better if she had it. Why? Because protection is as silly as the efforts of a man pulling on his bootstraps and trying to convince himself that he is sailing in the air. If Canada advances, it is in spite of protection, not because of it. If the effort spent in trying to build up a country's industries, in a similar manner to that of the man above in raising himself, were spent in making the most of the country's splendid opportunities, what would not our country do?

If Montenegro, or the "Land of the Black Mountain," were to obstruct trade as we are doing, every agriculturist would die for lack of the necessities of life, if it should continue. By protection, she could, for a short time, obtain fac-

tories and workshops, securing their raw materials from the ends of the earth, and exporting them, by reason of the bounties given by the Government. A large foreign trade would spring up, but the country would not be prosperous. They would be unmercifully taxed on all goods they bought, and a large direct tax to the government would prevent them from buying more? Would that be prosperity? So, if in a barren country protection would impose hardship, is there any reason for it here, with such a variety of resources, and so rich, besides? If we were to abolish our tariffs, I would, perhaps, make an exception to the above by asking for the imposition of an anti-dumping tariff, to prevent such corporations as the American Tobacco Trust and German Iron Association from unfairly driving our companies to the wall, and then raising their prices considerably, if possible. A Board of Trade Commissioners would allow imports only at the prices charged in their respective countries. This would destroy unfair competition, while allowing the farmer, the artisan, and the manufacturer themselves, to obtain their supplies at a fair price; or, perhaps better still, at the prices obtaining on goods imported from Great Britain and other free-trade countries, goods could be obtained from those companies. The artisans are bled, but are able, in many cases, to raise their wages through their unions, while the farmer is bled the most of all. He cannot raise his price on his goods any higher than the price received for his surplus, which is sold on the great free-trade marts of the world.

As for the bonusing of industries, there is little excuse for it. When the Dominion Iron and Steel Company received orders from Australia and India for rails, at a price astonishing to the iron manufacturers of Europe, the president of the company said they made a profit without the bounty. Sydney was excellently situated, he said, and it was always intended to do a large export trade. Why, then, should our treasury be depleted by two to three millions every year to bonus the iron and steel industries? It is a good thing that the farmer is waking up in regard to the matter of protection and bounties.

Oxford Co., Ont.

S. W. C.

The "Men of Great Minds."

Editor "The Farmer's Advocate":

In your issue of Jan. 7th, Mr. James S. Miller, of Parry Sound, Ont., asks "Pro Bono Publico" to give him the names of the men of great minds in Canada and the United States who favored protection. I will take the liberty to

mention a few. In Canada, there were Sir John A. Macdonald, Sir John Thompson, Mackenzie Bowell, Sir Charles Tupper, R. L. Borden, and last, but not least, our Canadian Premier, Sir Wilfrid Laurier. In the United States, Wm. McKinley, Mr. Dingley, M. C.; President Roosevelt, Sec. Elihu Root, Pres.-elect W. H. Taft, and a host of others.

On the other hand, Mr. J. S. Miller, of Parry Sound, says, "Protection is a curse," and asks us to believe him, in preference to those great men I have mentioned. A Mr. G. Beer, of Wellington Co., Ont., says he will "give us a case," evidently intended to prove that the Canadian farmer pays the duty on a grain binder imported from Chicago, U. S. A. Now, I take issue with Mr. Beer on this point. That gentleman places the Canadian duty on an imported binder at \$25, and he tells us that, provided an Ontario farmer purchases a similar binder, made in Ontario, he still has to pay the equivalent of \$25 duty! According to Mr. Beer, the Ontario farmer is between "the devil and the deep sea." If he purchases a Chicago binder, he is forced to pay \$25 extra to the Government at Ottawa. If he purchases a homemade machine, he is forced to pay a similar amount to the manufacturer in Toronto! Thus for Mr. Beer. Now, I contend that the Ontario farmer pays no duty, either directly or indirectly, whether he purchases a Chicago or a Toronto made machine. When McCormick or the Deerings send binders to Canada for sale, the duty is paid on entering; up to that time our farmers have had nothing to do with it. McCormick sells binders in Illinois, Ohio, New York State, and New England; the New York farmer pays precisely the same price (\$125) as does the Ontario farmer. The New York agent remits this amount, less freight and commission, to his principal in Chicago. In other words, McCormick receives \$115 net for his machine sold in New York State. His Ontario agent remits \$125, less freight, commission, and the Canadian duty, in all amounting to some \$35, leaving \$90 net. To recapitulate, machine sold to New York farmers, \$115; binders sold to Ontario farmers, \$90.

I beg to call Mr. Beer's attention to this matter, and ask him to tell us who pays the duty in this instance. Mr. McCormick doesn't like to pay duty, and as he has failed to induce the Government at Ottawa to adopt free trade, and does not appreciate being out of pocket \$25 on every binder he sells in Ontario, he acquires a site in Hamilton, Ont., and is manufacturing binders for the Canadian trade, thus getting rid of paying the Canadian duty. WILLIAM BOYLE.
York Co., N. B.

Businesslike Convention of Nova Scotia Farmers.

The thirteenth annual convention of the Nova Scotia Farmers' Association met in Digby on Tuesday afternoon, January 26th. President E. J. Elliott's annual address was a model of conciseness and comprehensiveness, and dealt with the state of the different agricultural industries of the Province and agricultural education.

S. J. Moore, of the Seed Branch, explained the work of the Canadian Seed-growers' Association, and the methods of judging in the field competition which it is proposed to inaugurate this year, and showed that fields should be judged according to stand (thickness and regularity of plants), average freedom from weeds, freedom from other kinds of grains, and from smut and rust; apparent yield, plumpness, and fullness of the head. Mr. Moore urged farmers all over the Province to enter into the competition.

Prof. Cumming, Secretary for Agriculture, said the Provincial Department of Agriculture had decided to appropriate \$500 for prizes for fields of standing grain, and showed how the Province would be divided into seven districts, with an appropriation for each district, and that the prize-money would be awarded according to the number of points scored; i. e., if one field scored 90 points, and the second field 80 points, the one scoring 80 points would win eight-ninths as much money as the one scoring 90 points. There would be not fewer than six prizes in each section, and the competition this year would be for oats only.

F. L. Fuller, Superintendent of Agricultural Societies, spoke on "The Farm-labor Problem," and submitted some questions to the Association in regard to the propriety of the Provincial Legislature enacting a law which would make eight hours a legal day in the factories and mines of the Province.

Several of the delegates expressed themselves as strongly opposed to any such legislation, and a committee was appointed to consider the question and draft a resolution which should be submitted to the convention. This committee brought in a resolution Wednesday morning that, in the opinion of this Association, any legislation shortening the hours of the working day would be detrimental, not only to agriculture, but to the best interests of the laborers themselves. This resolution was unanimously adopted.



A. E. McMahon, Aylesford, N.S.

President Nova Scotia Farmers' Association, 1909.

Capt. Jennings, of the Immigration Department of the Salvation Army, said that his Department had brought 5,000 people to Canada last year, and that 500 of these had settled in the Maritime Provinces. He had no hesitation in saying, as he often did to immigrants, that the opportunities for making a comfortable living and advancement are as great in the Maritime Provinces as anywhere in Canada.

The Tuesday evening session was a very pleasant meeting. The addresses of welcome from the Town and County of Digby were of a very high order, and the reply, by the Vice-President, A. E. McMahon, was both pleasant and informing. The address of Prof. Cumming was full of instruction as to what the Department has done and purposes doing for the agriculturists of the Province.

On Wednesday morning a lot of business was put through, including the auditor's report, which showed the receipts to be \$1,104.52, and expenditure \$1,175.19, leaving a balance of \$70.67 on the wrong side.

The report of the exhibition commission was read by R. S. Starr. The Provincial Exhibition had been in many ways a success, but, owing to the early date of the exhibition last year, the display of fruit and field products was not as good as we are capable of making. The exhibits and attendance from the country was not as large as we would wish, and it had been decided to hold the exhibition next year at a later date.

The report was adopted, and a resolution passed expressing appreciation of the action of the commission in putting on the show at a later date, and in cutting out the vaudeville show.

Superintendent Fuller reported the work done under his department. There had been over 160 Institute meetings held during the year, with an attendance of something over 10,000.

The secretaries of the different county Farmers' Associations reported the work accomplished in the different counties, and all believed in the good work that is being done by our Institute system.

The subject of farm drainage was introduced by Peter Innis, of Coldbrook, and spoken on by several of the delegates present, all of whom recommended underdraining.

The officers for the ensuing year were elected as follows: President, A. E. McMahon, Aylesford; 1st Vice-President, Howard Kennedy, Alma; 2nd Vice-President, W. H. Woodworth, Berwick. Directors—Samuel Freeman, Amherst; S. P. Goudy, Yarmouth; J. M. Jackson, North Sydney; Wm. O'Brien, Windsor; W. R. Barrs, New Germany. Auditors—E. S. Archibald and Stanley A. Logan, Truro. Exhibition Commissioners—R. S. Starr, Port Williams, and C. R. B. Bryan, Durham.

The committee on legislation re fertilizers, foods, and the dog nuisance, reported that the Act, which passed its first and second reading at last session of the Legislature, should be reconsidered, and become law; that the manufacturers of feeds be required to register the name or a number of their feeds, which shall be required to conform to a stated guaranteed analysis; that

the law regarding analysis of fertilizers be enforced, and that some amendment be enacted, further safeguarding the purchasers of fertilizers. The report was adopted, and Paris green and other insecticides were included in the resolution.

A committee was appointed to wait upon the Government and urge the building and equipment of a students' residence in connection with the Agricultural College at Truro. The committee consisted of W. H. Woodworth, Wm. O'Brien, and C. H. Black.

Dairy Commissioner J. A. Ruddick, of Ottawa, gave an instructive address on "Some of the Essentials to Success in Co-operative Dairying," showing what progress Denmark and some of the other Eastern countries have made, and also how the Provinces of Canada have developed in the dairy industry, and urged Nova Scotia farmers to make greater efforts to live up to their opportunities. He thought Nova Scotia should produce at least \$25,000,000 worth of dairy products. Three essentials to successful dairying are: (1) Organize butter and cheese factories; (2) breed, use only pure-bred sires, weigh and test the milk so as to weed out the poor cows, and raise the heifer calves from the best cows; (3) make dairying the business of the farm—no side-issue. This paper brought out a good deal of discussion, and showed that many of the farmers of Nova Scotia are deeply interested in the dairy business.

The address of Harvey Mitchell, on the "Improvement of the Dairy Herd by Keeping Individual Records" was illustrated by charts, and was very instructive. Mr. Mitchell showed how it often happens that cows of similar breeding, and having the same feed and care, differ greatly in

the amount of their milk and butter. The discussion upon this address was quite spirited. F. E. Foster, of Kingston, said that he began to weigh and test the milk from his cows two or three years ago, and now he weighed it every morning and night, and tested frequently, and would not think of doing without.

The address of Howard Corning, of Chegoggin, N. S., upon "Producing the Food for the Dairy Cow," was clean-cut, crisp, and instructive. Mr. Corning simply gave his own methods and his reasons for them, and showed that he had the courage of his convictions; he believed in lots of roots and clover, and feeds some cottonseed or oil-cake meal, which is the only feed he buys. He outlined his system of feeding, and also, briefly, his rotation of crops, showing how he raised the feed for his cows.

Wednesday evening, Mr. Ruddick gave a very interesting address on "Dairying at Home and Abroad," illustrated by lantern slides.

Prof. Smith, of Truro, spoke of the ravages of the Brown-tail moth, describing its habits of life, and how to combat it. Mr. Payne, of Granville, Ferry, continued the discussion upon this subject, giving some valuable instruction as to how to prevent the spread of this dreaded pest.

The telephone monopoly came in for a severe criticism from several of the delegates present, and Peter Innis and C. R. B. Bryan were appointed a committee to act with the different Boards of Trade, and interview the Government, with the idea of controlling the rates and charges of the N. S. Telephone Co.

Thursday morning, Fred H. Johnson, of Bridge-

town, read a valuable paper on "Fruit Thinning."

A resolution was moved by E. J. Elliott, and seconded by Howard Bligh, and adopted, asking that no change be made in the Fruit Marks Act relative to the size of No. 1 and No. 2 apples; also one urging better trade relations with Germany in apples.

There was considerable discussion in regard to the Game Laws, and S. P. Goudy, Wm. O'Brien and Mr. Gould were appointed a committee to make inquiries, and report at the next annual meeting.

Votes of thanks were tendered to the Town of Digby and to the Dominion Atlantic Railway for their hospitality and courtesy; also to Prof. Cumming and ex-Pres. Elliott, for their assistance toward making the meeting a success. And, with the singing of the National Anthem, one of the most businesslike sessions that the Association has ever held was closed.

British Shows for 1909.

- February 23 to 26—Shire Horse Show, London.
- March 3 to 5—Hackney Horse Society's Show, London.
- May 26 to 31—Bath and West of England Show, Exeter.
- June 5 to 15—International Horse Show, Olympia, London.
- June 22 to 26—Royal Agricultural Society's Show, Gloucester.
- July 20 to 23—Highland Society's Show, Stirling.
- December 6 to 10—Smithfield Club Show, London.

Toronto Shorthorn Sales a Great Success.

That there is iron in the blood and optimism in the air of the beef-raising industry in America, was amply demonstrated by the bumper attendance and brisk bidding at the joint sales of Shorthorns, held at the Union Stock-yards, West Toronto, last week, when, in two days, bidders from five of the Provinces of the Dominion and eight States of the Union appropriated one hundred head of cattle at an average price of \$265, and the entire one hundred and eleven head offered, young and old, at an average of \$248, and where a Canadian-bred heifer sold for \$2,500, a record price for many years in this country. That the character and quality of Shorthorns in Canada is being well maintained is beyond dispute, as it was acknowledged on all hands that never in the history of sales of the breed in this country were so many first-class animals offered; and the veteran auctioneer, Col. Woods, of Nebraska, made the statement that in his extended experience as a salesman he had never seen so many good ones in a two days' sale. The explanation of this revival of interest in and demand for Shorthorns at the present time lies in the acknowledged shortage of and active demand for beef cattle in America, to feed the ever-increasing population at home and supply the steady demands of the export trade. The hope of the country to meet these demands at a profit to the producer lies in the use of pure-bred sires, and when it comes to a question of improvement by grading up the common stock of the country, the Shorthorn certainly claims pre-eminence. Good seed and good feeding is the secret of success in the stock-raising business, and only from the ranks of the pure-breds can good seed be had.

The cattle in these sales were nearly all Canadian-bred; they were with very few exceptions a distinct credit to their breeders and feeders, and the sales clearly demonstrated the wisdom of presenting good stock in prime condition, and liberally advertising the same, precautions which, as a rule, ensure the maximum of success and satisfaction. The fact that a large proportion of the animals sold were bred and fed

by young breeders, and that a large percentage of the bidders and buyers were comparatively young men, was a pleasing and promising feature of the occasion. The animal bringing the highest price of the series, the charming two-year-old heifer, Pleasant Valley Jilt, winner of the female grand championship of the breed at the Canadian National Exhibition last year, was bred by Geo. Anos & Son, fed by the son, and contributed by the Miller Brothers, young men. The second highest-priced female, Missie of Pine Grove 6th, contributed by Senator Edwards, was purchased at \$820 by J. F. Mitchell, of Burlington, Ont., a young

Stock-yards proved an ideal place to hold such sales. Following is the list of sales of \$100 and upwards. Only 11 sold for less than \$100, and these were mostly quite young or in thin condition:

J. A. WATT.

FEMALES.

Secret Rose, calved May, 1907; Elmdorf Farm, Lexington, Ky.	\$ 810
Mildred 30th, Oct., '06; D. Horrel, Midland, Ont.	265
Matchless 45th, Jan., '07; J. G. Biller & Sons, Hartington, Neb.	200
Jilt's Lady, Jan., '08; D. Horrel	210
Matchless of Mapleton 2nd, July, '01; John Scott, Waterloo	150
Marion Stamford, Nov., '06; Jas. Scott.....	125
Isabel Ruth 2nd, Dec., '04; S. E. Findley, Mansfield, Ohio	140
Mysie 51st, Nov., '05; Thos. Mercer, Markdale... ..	145
English Lady 30th, July, '06; J. G. Biller & Sons	100
Matchless 37th, May, '06; F. McCrae, Port Elgin	130
English Lady 35th, Dec., '07; Geo. Kinnon, Cottonwood, Sask.	150
Orford Queen, Sept., '07; W. G. Geary, Bellwood, Ont.	130
Fanny Nonpareil, Feb., '08; Thos. Johnston, Columbus, Ohio	125
English Lady 33rd, Jan., '07; J. J. McKenna, Toronto.....	110
Olga's Fair Stamford, Oct., '07; W. G. Geary...	105

BULLS.

Jilt Stamford, Dec., '07; R. W. Caswell, Saskatoon, Sask.	\$ 360
Bellona Victor, Feb., '08; Geo. Gould, Edgar Mills	180
Victor's Lad, Feb., '08; W. Woolcott, Newton... ..	125
Bonny Victor, Feb., '08; Thompson Bros., Spires	120

W. J. PETTIT & SONS.

FEMALES.

Dido 21st, Oct., '06; Thos. Johnston, Columbus, Ohio	\$ 500
Ury's Star 5th, Oct., '04; Hon. W. C. Edwards.. ..	465
Averne 13th, Nov., '06; Herr Bros. & Reynolds, Lodi, Wis.	475
Rosetta 16th, Sept., '06; D. Horrel, Midland.....	290
Roan Lady 8th, Oct., '06; Thos. Johnston.....	240
Roan Lady 9th, Dec., '06; F. W. Harding, Waukesha, Wis.	230
Waterloo Princess 38th, Oct., '06; J. J. McKenna, Toronto	165
Pride 6th, Jan., '08; D. Horrel	160
Claret 3rd, April, '02; T. S. Sproule, Markdale... ..	125
Primrose 8th, March, '01; Chas. Thompson, Teeswater	160
Martha 7th, Sept., '08; T. S. Sproule	150
Countess of Balmoral 5th, March, '02; T. L. Pardo, Cedar Springs	115

BULLS.

Prime Favorite (imp.), March, '02; P. M. Bradt, Regina, Sask.	\$ 570
His Grace, March, '07; T. Douglas & Sons, Strathroy, Ont.	190
Lord Fyvie, May, '07; T. S. Sproule	125
Silver Prince, April, '07; M. Vrooman, Living Springs	130
Waterloo Star, October, '06; W. J. Wray, Schomberg	165



Pleasant Valley Jilt.

Two-year-old Shorthorn heifer. Sold for \$2,500 at auction sale, at West Toronto, last week.

The third highest female, the yearling, Secret Rose, sold for \$810, was contributed by J. A. Watt, of Salem, a young man; and the top-priced female of Mr. White's fine offering, the yearling, Rosa Hope 17th, was fed by his young herdsman, John Douglas.

These sales should certainly prove a stimulus and an inspiration to breeders to improve their herds, and to feeders to keep their stock always gaining ground.

The contributors to these sales were: J. A. Watt, Salem, Ont.; W. G. Pettit & Sons, Freeman, Ont.; Miller Bros., of Stouffville, Ashburn and Brougham, Ont.; W. C. Edwards & Co., Rockland, Ont.; Peter White, Pembroke, Ont.; Sir George Drummond, Beaconsfield, Que.; David Birrell and Arthur Johnston, Greenwood, Ont. Thirty head were taken by buyers from the United States and 81 head by Canadians. The sales were honorably and admirably conducted, and the Union

Scottish Leader, Oct., '07; E. Rathburn, Thorn- dale	120
Red Lad, Sept., '07; J. Cross, Maidstone.....	115
Scottish Favorite, March, '08; D. Horrel	145

MILLER BROS.**FEMALES.**

Pleasant Valley Jilt, Oct., '06; Thos. Johnston, Columbus, Ohio	\$2,500
Rosabel, Jan., '07; S. Dymont, Barrie	660
Village Fairy 15th, Feb., '08; Sir Wm. Van Horne, Selkirk, Man.	500
Lady Madge 4th, Sept., '07; Thos. Johnston.....	480
Meadow Girl, Dec., '06; P. M. Bredt, Regina, Sask.	370
Missie Rosebud, April, '07; Thos. Johnston.....	390
Village Queen 8th, Dec., '07; Elmdorf Farm, Lex- ington, Ky.	380
Bessie Lass 6th, April, '06; S. Dymont	205
Ruby of Blairgowrie, Nov., '06; J. G. Barron, Carberry, Man.	175
Bessie Lancaster, April, '08; D. Horrel, Midland. Golden Beauty, Sept., '08; F. W. Harding, Wau- kesha, Wis.	185
Golden Bud, Oct., '07; F. W. Harding	225
Village Violet, April, '08; J. G. Biller & Sons, Hartington, Neb.	160
Mina Millicent 2nd, Oct., '03; R. D. McLellan, Fergus	200
Scotch Bud, Jan., '06; Jas. Scott, Waterloo.....	155
Idlewild 4th, Sept., '07; D. Horrel	240
Julian Princess 4th, Oct., '01; Thos. Johnston.....	185
	130

BULLS.

Royal Secret, Oct., '07; H. G. Keyes, Elkhart, Ill.	175
Mina's Lad, Sept., '07; Robt. Eastwood, New To- ronto	165

W. C. EDWARDS & CO.**FEMALES.**

Missie of Pine Grove 6th, Jan., '04; J. F. Mit- chell, Burlington, Ont.	\$ 820
Pine Grove Mildred 18th, '05; F. W. Harding, Waukesha, Wis.	560
Zoe of Pine Grove 9th, Dec., '06; S. Dymont, Barrie	530
Golden Gem, Nov., '06; Thos. Johnston, Colum- bus, Ohio	405
Zoe of Pine Grove 3rd, Jan., '03; J. G. Washing- ton, Nings, Man.	320
Ruby of Pine Grove 12th, Sept., '07; Robert Miller, Stouffville	165

BULLS.

Count Lavender, Nov., '07; S. Dymont	\$ 500
Duke of Gloster, Sept., '07; H. G. Keyes, Elk- hart, Ill.	460
Scotch Thistle, Jan., '08; J. G. Barron, Car- berry, Man.	420
Royal Lavender, May, '07; Jas. Scott, Waterloo	360
Royal Star, Nov., '07; John Clough, Binbrook...	245
Baron's Pride, April, '08; J. T. Gibson, Denfield Prince Victor, Dec., '07; L. Powell, Wallenstein. Clipper Prince, March, '08; T. J. Stuckey, Me- chanicsburg, Ohio	205
Star Chief, Sept., '07; Wm. Croft, Maidstone, Ont.	190
Royal Statesman, Sept., '07; T. L. Pardo, Cedar Springs	135
Lord Amaranth, Oct., '07; Geo. Gould, Edgar Mills	130
Lavender King, Nov., '07; T. L. Pardo.....	105
	120

PETER WHITE.**FEMALES.**

Rosa Hope 17th, Jan., '07; Elmdorf Farm, Lex- ington, Ky.	\$ 775
Belmar Rosewood, March, '07; Thos. Johnston, Columbus, Ohio	460
Belmar Lavender, Jan., '08; Joseph Johnston, Ashburn	180
Belmar Augusta, July, '07; John Miller, Ashburn	175
Belmar Grace, May, '07; John Ivy, Jarvis	120
Belmar Bessie 4th, Oct., '07; Jas. Scott, Water- loo	110

BULLS.

Gloster Sailor, Nov., '07; H. J. Wayne, Orange- ville	\$ 400
Rosewood Champion, Jan., '08; J. I. Graham, Vandeleur	100

SIR GEORGE DRUMMOND.**FEMALES.**

Queen of Sunshine, April, '06; John Bright, Myrtle	\$ 200
Dorrit, Nov., '07; F. W. Harding, Waukesha, Wis.	145
Molly Queen 3rd, Sept., '07; T. L. Pardo, Cedar Springs	125
Lady Betty, Nov., '07; James Hyslop, Stratford	150
Dinah, Sept., '07; Elmdorf Farm, Lexington, Ky.	110
Sylvia, Oct., '07; R. J. McLellan, Fergus.....	100

BULL.

Golden Lavender 2nd, Dec., '07; W. A. Galbraith, Dutton	205
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BIRRELL & JOHNSTON.**FEMALES.**

Blythesome Girl 8th, Sept., '06; F. W. Harding, Waukesha, Wis.	\$ 310
Scotch Lass, Dec., '05; F. W. Harding	205
Crimson, Fuchsia 29th, Sept., '06; Thos. John- ston, Columbus, Ohio	190
Choice Dearie, Sept., '07; Thos. Johnston	150

BULLS.

Lord Lavender, July, '07; J. H. Clare, Tweed...\$	200
Stout Lad, Nov., '07; John Webster, Fordyce...	195
Commodore, Nov., '07; John Miller, Brougham...	160
Splendor, Jan., '06; J. H. Stewart, Brechin.....	175
Bedford Hero, Nov., '06; W. Wylie, Tara	115

SUMMARY.

J. A. Watt's 15 females averaged	\$193.00
J. A. Watt's 4 bulls averaged	196.25
W. G. Pettit & Sons' 12 females averaged.....	260.41
W. G. Pettit & Sons' 8 bulls averaged.....	195.00
Miller Bros.' 17 females averaged	420.00
Miller Bros.' 2 bulls averaged	170.00
W. C. Edwards & Co.'s 6 females averaged.....	466.66
W. C. Edwards & Co.'s 11 bulls averaged	276.27
Peter White's 6 females averaged	300.33
Peter White's 2 bulls averaged	250.00
Sir Geo. Drummond's 6 females averaged	183.33
Sir Geo. Drummond's 1 bull averaged	205.00
D. Birrell and A. Johnston's 4 females averaged	213.75
D. Birrell and A. Johnston's 5 bulls averaged..	169.00
34 bulls averaged	\$214.15
66 females averaged	291.00
100 head averaged	265.45
111 head averaged	248.75

Meetings for Dairy Patrons.

A list of sixteen district dairy meetings has been arranged by Frank Hens, Chief Dairy Instructor, West-ern Ontario, and Secretary of the Western Ontario Dairymen's Association. Commencing at Canboro on February 16th, the series will terminate at Dorchester on February 26th. Addresses will be delivered by Geo. H. Barr, Dairy Commissioner's Branch, Ottawa, on the care of milk; Jos. Burgess, Ottawa, on cow-testing associations, and Frank Hens, on the pasteurization of whey. Mr. Barr's address will be illustrated with lantern views. The dates and places are as follows:

Canboro, Feb. 16th, 1.30 p.m.; Jarvis Hall, Feb. 17th, 2 p.m.; Simcoe Town Hall, Feb. 17th, 7.30 p.m.; Norwich Town Hall, Feb. 18th, 2 p.m.; Tillsonburg Council Chamber, Feb. 18th, 7.30 p.m.; Woodstock City Hall, Feb. 19th, 2 p.m.; Hickson Hall, Feb. 19th, 7.30 p.m.; Ingersoll Town Hall, Feb. 20th, 2 p.m.; Listowel Town Hall, Feb. 22nd, 2 p.m.; Atwood Hall, Feb. 22nd, 7.30 p.m.; St. Mary's Town Hall, Feb. 23rd, 2 p.m.; Kerwood Hall, Feb. 24th, 2 p.m.; Watford Music Hall, Feb. 24th, 7.30 p.m.; Belmont Hall, Feb. 25th, 2 p.m.; Mapleton Schoolhouse, Feb. 25th, 7.30 p.m.; Dorchester Hall, Feb. 26th, 2 p.m.

Dairymen Meet at Huntingdon.

Valuable addresses by capable men characterized the twenty-eighth annual meeting of the Dairymen's Association, of Huntingdon, P. Q. Among those who dealt with subjects of practical interest to dairymen were: Prof. H. S. Arkell, B. S. A., of Macdonald College; J. H. Grisdale, of C. E. F., Ottawa; G. H. Barr, of Ot-tawa; J. N. Lemieux, of St. Hyacinthe, and C. F. Whitley, Ottawa.

The report from Secretary W. H. Walker showed a balance of \$90.55 on hand. The president, Robt. Ness, of Howick, compared conditions now with those of the days when the Association was formed, and claimed that the advent of the silo and improved transportation facilities had much to do in bringing the dairy industry to its present state.

High-class stock of milking propensities and liberal feeding of economical rations were advocated by Prof. Arkell. Concentrates should be added, according to the season and the milk flow. The advantages of corn-growing to dairymen, and the benefits of crop rotation and thorough cultivation were discussed by Mr. Grisdale. The varieties of corn recommended were Long-fellow, Early Learning, and White Cap Dent. G. H. Barr advocated thorough cooling of milk, and gave the results of experiments to show that cooling was superior to aerating. The importance of testing the milk of each cow in the herd at least three days in the month, was referred to by Mr. Whitley, who said the boys and girls should be interested in such work. According to Mr. Lemieux, cool-curing was a great benefit to texture, flavor and quality of cheese. Higher prices, amounting to five cents per hundred of milk, had been received for cheese from cool-curing rooms.

Forthcoming Events.

Winnipeg Industrial Exhibition—July 10th to 17th, 1909.

I received my knife and razor some time ago, and like them fine. My father has taken "The Farmer's Advocate" for about ten years, and would not be without it. I think your Christmas Number was grand this year—better than ever.
NORMAN WARD,
Peel Co., Ont.

Canadian Ayrshire Breeders' Association.**RAILWAY RATES TO ANNUAL MEETING.**

I beg leave to inform those of our members and breeders—and we hope there are a large number—who purpose attending the annual meeting, to be held in the Monument National, 296 St. Lawrence Main St., Montreal, on Wednesday, Feb. 17th, at 10 a. m., that, in order to secure reduced rates from all points in Canada, they must purchase a first-class single ticket to Montreal (not more than three days before the meeting), and get from the agent at starting point a Standard Convention Railway Certificate, on presentation of which to the secretary-treasurer for signature, and to the railway official who will be present at the meeting, this will entitle you to a reduced rate for the return journey, within three days after the meeting closes. We especially desire that all coming to the meeting will secure their tickets in this way.

Those coming to our meeting will also have the privilege of taking in the Winter Carnival, with all its special attractions. As Feb. 17th has been proclaimed a civic holiday, it will be a gala day in Montreal. We expect an interesting meeting, and an interesting day following, when we purpose visiting the Ayrshire herds at St. Anne's, as well as that finest of institutions, Macdonald College.
W. F. STEPHEN, Sec.-Treas.
Huntingdon, Que.

Short Courses in Fruit Culture.

All phases of fruit-growing were ably handled by recognized authorities at the short course in horticulture at Ontario Agricultural College, last week. The work was planned by J. W. Crow, B. S. A., Lecturer in Pomology at the College.

Theories and practices of horticulture were presented and discussed by Professors Harcourt, Gamble, Jarvis, Crow, W. H. Day, Reynolds, Hutt, and Caesar, of the College staff, while Messrs. Macoun, A. McNeill, Harold Jones, J. E. Johnson, R. Thomson, A. W. Peart, S. H. Rittenhouse, J. L. Hilborn, J. Gilbertson, Wm. H. French, A. E. Sherrington, D. Johnston and Elmer Lick represented the practical growers, the co-operative societies, and the Dominion Department of Agriculture. Fruit-growers generally would do well to plan to attend next year. Practical fruit-growers propose to divide the course into two sections, one for Niagara and Lake Erie growers of tender fruits, and another for growers of hardier fruits, notably apples. Differences in climate in Ontario, and variation of products, will probably justify this change when the course is taken more general advantage of.

Death of James Gibb.

The ranks of Canadian Shorthorn breeders have been bereft of a stalwart member by the death of Mr. James Gibb, of Brooksdale, Oxford County, Ontario, which took place on January 22nd, 1909, at the age of 57 years, after a long and tedious illness, which he bore with many fortitude. Mr. Gibb was one of the most intelligent, enterprising and successful breeders, and most skilful handlers of Shorthorns in Ontario, having established, many years ago, an excellent herd on a first-class foundation, which he kept continuously headed by high-class sires, prominent among which was the noted Toronto grand champion, Spicy Marquis =36118=. Mr. Gibb was a quiet man, of unassuming disposition, but of sterling character and generous impulses, and he will be missed by his compeers of the Shorthorn fraternity. The herd, we are pleased to know, will be retained in its entirety by his son, Wallace E. Gibb, Brooksdale, Ont.

George Rice's Sale.

The entire herds of Holsteins and Ayrshires, 100 head, belonging to Mr. Geo. Rice, of Tillsonburg, Ont., will be sold by auction on March 11th and 12th, as he is retiring from business.

Sale Dates Claimed.

March 11th—R. H. Reid & Sons, Pine River, Ont.; Shorthorns.
March 11th.—At Woodstock, Ont., H. J. Davis, John T. Gibson, T. E. Robson, and Wm. Waldie; Shorthorns.
March 11th and 12th.—Geo. Rice, Tillsonburg, Ont.; Holsteins and Ayrshires, dispersion.

The "Leaders' Gazette" comes forward with a proposal that, as a feature of the celebration of the tenth anniversary of the International Live-stock Exposition, to be held in London, Ontario, in 1910, invitations be issued by all the Canadian and American breeders' associations represented by members of the International to distinguished foreign breeders to attend the International at the forthcoming event.

Annual Meetings of Breeders' Organizations.

Leading breeders of pure-bred cattle, sheep and swine met in Toronto last week, to discuss the work of 1908, to arrange plans of campaign for 1909, and to elect officers whose duties are to see that these plans are followed. A regrettable feature of the Dominion Society meetings was the dearth of delegates from Provinces other than Ontario. With many breeds, the trade depression has resulted in fewer registrations of animals, and consequently fewer members and smaller amounts in the treasury. It was pointed out, however, that present indications were for a rapid development in the live-stock trade for 1909, and a return to the demand of a few years ago in a year or two.

Dominion Cattle Breeders.

At the annual meeting of the Dominion Cattle-breeders' Association, considerable discussion ensued over the question of disposing of Ontario surplus pure-bred stock in Western Canada. The prevailing opinion seemed to be that every possible step should be taken to meet the Western demand for high-class animals. A proposition to establish a large live-stock exhibition at West Toronto was dismissed, without lengthy consideration.

The report of Secretary Westervelt showed that seven Association cars of stock were shipped from Ontario to the Western Provinces in 1908, and distributed to 65 points. Shipments were made in March, April, June and October, and comprised 22 horses, 74 cattle, 14 sheep, and 15 swine. A balance of \$19.44 remains to the credit of the cars' account.

The report called attention to the fact that, at the last annual meeting, a suggestion was made that greater efforts should be made, in conjunction with other live-stock associations in Ontario, to keep more prominently before probable purchasers in the West the quality and quantity of pure-bred stock of the different breeds, bred, and for sale in this Province. During the past few years a large amount of land has been taken up in the West by persons who are not familiar with conditions in this country, know nothing of Ontario and her pure-bred stock, or think it too far away to consider doing any business. Ontario is a long distance from the Western market, and there are, therefore, natural conditions to be overcome. It was claimed that the first requirement was to impress Western buyers with facts as to the condition of pure-bred stock in the Province of Ontario; second, to provide some means by which persons in the West, who have no personal knowledge of the reputation of Ontario breeders, may be assured of procuring value for money expended; third, to make them thoroughly familiar with the easy and cheap method of transportation by means of the Association cars.

In order that these three things may be accomplished, there would first require to be appointed a representative, or representatives, in the West, whose business it would be to make Western farmers and stockmen more familiar with Ontario conditions; someone who would be present at fairs and exhibitions, visit different districts, and keep closely in touch with live-stock conditions there, and who would also book orders. There should be advertisements in the prominent agricultural papers in the West, and possibly some of the larger local papers. The representative would also be in a position to make suggestions as to the best plan to adopt to reach the buyers, so as to make the work satisfactory to both buyer and seller. He would also be familiar with the rates and dates of shipment of the Association cars of pure-bred stock, and these should be thoroughly advertised in the West.

One thing required, in order to put this Western trade on a more satisfactory basis, was to have cars shipped at stated intervals. This would mean, however, that sometimes a car would be shipped without a full load of stock, and the deficit would require to be made up directly out of the funds of the associations. The advantage to the buyer, the seller and the general trade, it was claimed, would easily warrant the expenditure.

In Ontario, it would be necessary to keep closely in touch with the breeders having stock for sale, the quantity, prices, age, etc. One of the most difficult, and, at the same time, one of the most important matters, was the selection of the stock. This should be done by appointed inspectors—persons in whom everyone would have confidence—located at different points in the Province, so that the travelling expenses would be kept as low as possible.

It is suggested that this work should be organized and arranged by a joint committee, consisting of the executives of the various associations interested, who should be given power to take such action regarding the matter as they may decide upon.

It was claimed by John Bright, of Myrtle, that breeders in the West would object to this

Association advertising in that part of the Dominion. He suggested that an attempt be made to have Institute speakers, while touring the Prairie Provinces, apprise farmers of the conditions under which they could secure high-class, pure-bred stock from Ontario breeders. G. W. Clemons, of St. George, thought strict attention to inspection, insuring the shipment only of the best, was the main point in holding the trade.

That large sales of pure-bred stock of high quality could be made by judicious methods, was the opinion of Col. McCrae, of Guelph. President John Gardhouse, of Highfield, Ont., considered Ontario was the natural source of breeding stock for Western farmers. Care should be taken not to allow intending purchasers to drift to the United States, or even to the Old Country. A. W. Smith, of Maple Lodge, said that there was weakness in the argument that this Association, being a Dominion one, should not advertise the stock of any one Province in another Province. It should be the duty of the Dominion Cattle-breeders' Association to do all that was possible to further the interests of each Province. Judicious advertising where stock was needed should not be objectionable. Mr. Smith approved of the suggestion to have a representative committee appointed to arrange details for increasing the trade. That the market for pure-bred stock in Western Canada was growing, and sufficiently large to absorb most of Ontario's surplus stock, was the opinion of R. J. Mackie, of Oshawa, Ont. A few breeders of the West might consider it was injurious to their business, but they could not supply the demand. He, therefore, moved a resolution approving of the suggestion of the executive to have a committee appointed to deal with the matter. It was carried unanimously.

The attention of the meeting was called to the matter of prize-money at exhibitions by Thompson Porter, of Lambton West, Ont. In

Delegates to the various fairs and exhibitions were appointed as follows: Toronto—John Gardhouse; Ottawa—A. W. Smith and Robt. Ness, of Howick, Que.; London—Capt. T. E. Robson, of London, and A. W. Smith, Maple Lodge; Winter Fair, Guelph—W. W. Ballantyne, of Stratford; R. S. Stevenson, of Ancaster; John Bright, of Myrtle, and A. Johnston, of Greenwood. Eastern Ontario Live-stock and Poultry Show, Ottawa—Peter White, of Pembroke; J. H. Gridale, of Ottawa; W. F. Stephen, of Huntingdon, Que., and the President.

With the object of interesting stockmen in the erection of a large arena suitable for exhibitions and sales, A. Dods, of the Union Stock-yards, West Toronto, explained that if one hundred breeders would subscribe \$100 each as life-members, and thus assure continued support, his company would provide the balance required to furnish the necessary arena. He suggested that a committee be appointed to get in touch with the Stock-yards management. In reply to a question from Col. McCrae, of Guelph, Mr. Dods said he was not prepared to say who the proprietors of the Union Stock-yards were. He did, however, assure him that they were men well acquainted with the live-stock industry, and men who wanted to help the breeders, and who had the money required.

In view of the fact that the breeders were not largely represented at the meeting, it was deemed advisable to take no definite action at present.

Dominion Shorthorn Breeders Meet.

A considerable decrease in membership was shown by the report of the Dominion Shorthorn Breeders' Association, at their annual meeting in Toronto last week. The figures for the past few years are: 1905, 2,538; 1906, 2,018; 1907, 2,052; 1908, 1,512. A regrettable feature is that 882 old members have not renewed their membership. The lack of funds resulted in curtailing the grants to the various fairs and exhibitions throughout the Dominion.

A lively discussion developed over the question of having some assurance of a suitable building for the purpose of holding shows and conventions in the interests of live stock. It was agreed unanimously that the most desirable plan was to approach the Ontario Legislature, requesting a liberal grant.

The general statement of the Secretary, W. G. Pettit, of Freeman, showed that during 1908 there had been 7,038 registrations, 2,272 transfers, 480 duplicate and new certificates, and 1,512 membership fees received. The cash balance on hand is \$3,040.40, against \$7,005.86 a year ago.

In referring to the status of the Shorthorn cattle business, and the outlook for 1909, the President, A. W. Smith, of Maple Lodge, regretted the decrease in membership, and the consequent decrease in funds and registrations. While this condition of affairs was not desirable, it was to be hoped that good would result. The apparent depression would mean that many inferior animals would be sold for beef that otherwise would be sold as breeding stock.

Communications requesting grants for exhibitions were read, showing an increased demand on the generosity of the Association. The president pointed out that the funds were considerably less than for several years, and that for this reason the executive recommended smaller distributions this year than had been granted during recent years. It was suggested that \$3,000 be the total sum granted for fairs and exhibitions in 1909. This sum was distributed among the Provinces as follows: Ontario, \$1,600; Manitoba, \$600; Saskatchewan, \$300; Alberta, \$300; Quebec, \$100; Maritime Provinces, \$50; British Columbia, \$50. The executive is empowered to distribute the Ontario donation as seems best. In Manitoba, Brandon and Winnipeg get \$300 each. Regina gets the \$300 given to Saskatchewan, and Calgary is entitled to the same amount. Sherbrooke Fair gets Quebec's allowance, and Victoria receives the British Columbia share, while the \$50 grant to the Maritime Provinces is to be credited to the exhibition making the largest grant for Shorthorns. In every case the stipulations are that the money is not to be paid until the directors are satisfied that the winning animals were recorded in the herdbook prior to the show, that they are the property of the exhibitor, and that the exhibition association shall grant a sum at least equal to the donation from this Association. This arrangement leaves no response to the request from Portage la Prairie, Man., and no grant to the Winter Fairs in Saskatchewan and Alberta.

The problem of providing a suitable arena for a Canadian show of cattle in the winter was introduced by Robert Miller, who presented a resolution suggesting that this Association approach



Capt. T. E. Robson, London, Ont.

President Dominion Shorthorn Breeders' Association, 1909.

his opinion, there should be a special class for Canadian-bred stock. It would be an encouragement to those who kept every breed of cattle to have such class.

The President said that this question had been discussed at various times. It would have to be worked out through the exhibition boards.

G. W. Clemons said that, in the Holstein classes, very few imported animals were exhibited, but there could be no objection to raising the prize-money.

A motion was presented by Col. McCrae, seconded by T. Porter, that, in view of the importance of the cattle industry to Canada, and also of the length of time cattle are held at Toronto Exhibition, a deputation from the Dominion Cattle-breeders' Association wait upon the Canadian National Exhibition board, and urge increased grants. Mr. Smith said that, already, most of the breeds were represented on the cattle committee of the exhibition board, and the recommendations of this committee usually were followed by the main executive. In view of the proposed changes of distributing the prize-money, it was considered inadvisable to take steps to further press the matter this season.

The representatives nominated by the various breed associations as directors to this Association were approved. John Gardhouse was elected general director, and Prof. G. E. Day as director from the Ontario Agricultural College.

the Ontario Legislature with a view to getting a grant for the erection of a suitable building.

A proposition from A. Dods, Manager of the Union Stock-yards, West Toronto, was explained by R. E. Gunn, of Beaverton. This scheme was that Canadian breeders to the number of at least one hundred subscribe \$100 each to become life-members, and show that they would support an annual show and sale. If such were done by the breeders, the Stock-yards Company would provide the building, and do everything possible to accommodate the breeders and further the live-stock industry. Mr. Gunn moved, in amendment, that a committee be appointed to confer with the Stock-yards Company, and try to make arrangements, and to collect the subscriptions, and ascertain whether or not satisfactory plans could be made.

In support of the resolution, Mr. Miller said that if the Government granted the necessary money, the breeders themselves would have charge. W. H. Gibson said the question of railway convenience would need to be considered carefully. Jas. Russell, of Richmond Hill, claimed that the Association should not pay funds to a stock-yards company, or any other company. His opinion was that the breeders should remain in control. He would back any move to go to London or Guelph, in preference to settling in Toronto. That the Shorthorn breeders should have a home, was the opinion of John Gardhouse, but as to the best plan, he was not yet sufficiently informed to speak definitely on the question. Peter White favored remaining free from Government aid. The Union Stock-yards, however, had proposed their scheme a year ago, and little had been done to secure the necessary subscriptions. The natural conclusion was that this proposition was not received with favor, and he was inclined to favor Mr. Miller's resolution. The lack of a proper winter fair, it was claimed by W. G. Pettit, was a serious drawback to Canadian breeders, and he wanted a large central home for shows and annual meetings. Mr. Miller's proposition seemed best.

Wm. Smith, of Columbus, president of the Clydesdale Horse-breeders' Association, favored the erection of a suitable building for winter-fair purposes by the Government. In the past, Ontario farmers had not received their share of public funds. Government grounds, centrally situated within the limits of the City of Toronto, should have been left for such purpose. For the present, it was not essential that the location should receive serious consideration. The main factor was to take a definite step in demanding a home for Canadian breeders. The amendment was withdrawn, and a standing vote endorsed Mr. Miller's proposition to approach the Government. The committee named to take action comprises Capt. T. E. Robson, A. W. Smith, Wm. Smith, W. A. Dryden, Peter White, Robert Miller, and W. G. Pettit.

A resolution from Peter White asked that the executive urge the Live-stock Commissioner to approach the railway companies, with a view to getting lower rates on full cars of pure-bred stock. It was pointed out that lower rates prevailed for part cars than for full cars. The resolution carried.

The question of railway transportation for Western delegates to this meeting was brought up by A. W. Caswell, of Saskatoon, Sask., who pointed out that the representatives from the West were not allowed the privileges accorded those who attended from Ontario points. A. Graham, of Pomeroy, Man., and J. G. Barron, of Carberry, Man., were appointed to confer with the railway authorities in the West, and try to make satisfactory arrangements for the future.

The election of officers resulted as follows: President, Capt. T. E. Robson, London, Ont.; 1st Vice-President, Peter White, Pembroke, Ont.; 2nd Vice-President, Harry Smith, of Exeter, Ont.; Directors—Hon. P. Talbot, of Lacombe, Alberta; J. T. Gibson, of Denfield, Ont.; Jas. Leask, of Greenbank, Ont.; John Davidson, of Ashburn, Ont.; John Gardhouse, Highfield, Ont.; J. M. Gardhouse, Weston, Ont.; W. A. Dryden, Brooklin, Ont.; Thos. Russell, Exeter, Ont.; F. W. Brown, Portage la Prairie, Man.; James Snell, of Clinton, Ont.; Wm. Smith, of Columbus, Ont.; J. F. Mitchell, of Burlington, Ont.; J. G. Barron, of Carberry, Man.; Jos. Washington, of Ninga, Man.; and John Isaac, of Markham, Ont.

Delegates to exhibitions were selected as follows: Toronto—W. G. Pettit and Robert Miller; London—J. T. Gibson and C. M. Simmons; Ottawa—Peter White and A. H. Foster; Halifax—H. S. Kennedy and F. L. Fuller; Fredericton, N. B.—T. A. Peters and B. Fawcett; Charlottetown—C. C. Gardiner and John Richards; Winnipeg, Man.—Walter James and Jas. Yule; Brandon—Geo. Allison and S. Simpson; Regina—Geo. Kinnon and P. M. Bredt; Calgary—James Sharpe and John Ramsay; New Westminster—T. W. Patterson and Geo. Shannon; Victoria—G. H. Hawden; Sherbrooke—E. V. Norton; and J. A. McClary; Maritime Winter Fair, Amherst—J. Rupert Coates and C. A. Archibald; Ontario Winter Fair, Guelph—W. A. Dryden and W.

Linton. John Isaac and Arthur Johnston will represent the Dominion Shorthorn Association in the Dominion Cattle-breeders' Association. Delegates to the National Records Board are: Robert Miller, Harry Smith, A. W. Smith, Peter White, Hon. John Dryden, J. M. Gardhouse and W. G. Pettit. Mr. Pettit was reappointed secretary, and R. G. T. Hitchman, of Ottawa, registrar.

Holstein Breeders' Annual Meeting

Healthy progress characterized the sessions at the annual meeting of the Holstein-Friesian Association in Toronto last week. Substantial gains in membership, registrations and funds, in the face of financial stringency, is the best evidence that the Holstein trade is on a sound basis. A balance of over \$5,000 in the treasury augurs well for the future. Delegates from Quebec and the Maritime Provinces joined with the leading breeders of Ontario in enthusiastic discussions, and in voting liberal sums of money to fairs and exhibitions, to be used in giving handsome prizes that will insure such displays as to keep the black-and-white cattle to the front.

For many years a steady and healthy growth has attended the efforts of Holstein men, because of an enthusiasm that resulted in the members working shoulder to shoulder, and losing no opportunity to make known to the farming public the merits of their favorite cattle. This year that enthusiasm was further aroused by means of a magnificent banquet on the evening preceding the annual meeting. About eighty prominent breeders attended. The menu was appropriately



B. Mallory, Belleville, Ont.

President the Holstein-Friesian Association of Canada.

"Holstein." Responses to toasts were of a high order. Young men were in evidence, and to them the history of the Association, given by older members, was exceedingly interesting. The prominent guests of the evening were: Prof. H. H. Dean, of Ontario Agricultural College; A. E. Donovan, M. P. P., of Leeds; J. D. Allan, president of the Union Stock-yards, and G. A. Putnam, of Toronto. Professor Dean referred in a happy strain to the prowess of the Holstein cow, and then dealt with the future of the dairy industry, claiming that the fact that it was a manufacturing branch of farming, furnishing labor throughout the year, made it advisable and profitable, if followed properly. Dairy farmers should endeavor to increase the consumption of milk in towns and cities. Since milk is elaborated blood, it was essential that only cows with strong constitution and vigorous circulation should be kept. Prices for milk were not in keeping with its food value. One quart of milk was said to be equal to a pound of beef, yet the cost of the former ran from seven to nine cents, whereas the latter retailed at fifteen to twenty cents.

Every feature of the annual gathering of breeders demonstrated that the members realized the value of advertising, and knew how to get it at a minimum cost. So striking were the features that daily papers did not hesitate to give space liberally, and care was taken by the officers to furnish the facts.

Great interest was taken in the annual meeting on Thursday. Speeches that had been crowded out of the banquet list were heard before business was taken up.

In opening the annual meeting, G. A. Gilroy, of Glen Buell, president of the Association, stated that the Holstein cattle were at the top of the dairy breeds in Canada. New members for 1909 totalled 142, thus showing that there was a rapidly-increasing popularity. For the production of revenue, no feature of farm work was equal to dairying. That many herds throughout Canada should be displaced by Holsteins, was shown by the careful tests of recent years. Several of the "Black and Whites" had exceeded 15,000 pounds of milk per year. If breeders used only superior breeding animals, the supremacy of this breed would be maintained for all time to come.

The annual report of Secretary Clemons, of St. George, showed that the number of registrations for the year totalled 2,618, while transfer certificates were 2,398. During the past year, 85 cows had been accepted in the Record of Merit, making a total of 448. Total registrations of Holsteins now stand: 7,009 bulls and 10,362 cows, and 5,342 bulls and 7,215 cows have been transferred.

The work of the literary committee in furnishing articles for agricultural and news papers was outlined. Numerous articles setting forth the merits of Holsteins in various regards had been published from time to time, with good results.

The financial statement showed a very healthy condition. Last year's balance of \$4,396.48 had increased to \$5,050.54. Registrations and transfers during 1908 totalled \$4,694.15.

The sum of \$100 was voted to the Dominion Cattle-breeders' Association. For exhibitions, the sums agreed on were: Toronto, \$100; London, \$50; Ottawa, \$50; Winnipeg, Man., \$50; Brandon, Man., \$25; Calgary, Alta., \$50; Charlottetown, P. E. I., \$50; New Westminster, B. C., \$50; Halifax, N. S., \$50; Victoria, B. C., \$50; Fredericton, N. B., \$50; Sherbrooke, P. Q., \$100; and, in addition, liberal sums to the winter fairs throughout the Dominion. Silver cups, also, are donated to each of these fairs.

It was pointed out by F. E. Came, of Montreal, that some Fair Boards had not given a reasonable amount for Holsteins in addition to donations from this society. It was, therefore, voted that in no case was this money to be handed over to the exhibition boards, unless this was offered in excess of the regular prize-list. It was also stipulated that cups are to be exhibited in windows for at least two weeks prior to the show.

The vitality of Holstein milk was discussed by J. E. K. Herrick, of Abbotsford, P. Q., who gave the opinions of chemists, doctors and others who had wide experience in analyzing milk and in feeding children and patients, claiming that Holstein milk contained the proper food elements for human systems.

J. W. Richardson, of Caledonia, outlined the development of his father's farm. For a time beef cattle were kept. Tests of milking cows showed that only a few were being kept at a profit. In order to fill an increasing demand for milk, it was decided to specialize in dairying, and a pure-bred Holstein sire was procured. Gradually the herd was weeded out, only good milkers being kept. In a few years, pure-bred females were bought, and a large-producing herd of Holsteins built up. The results showed that any farmer could, in a very few years, establish a herd of cows that would return a yearly profit.

Owing to the great number of registrations, it was deemed advisable to amend the constitution, so that in future descriptions of animals be left out of the herdbook, and that simply "black and white" or "white and black" be inserted. J. W. Richardson proposed an amendment in regard to customs charges on imported animals, whereby no import certificates can be issued by the secretary until the fee of \$5.00 each for females, and \$10.00 each for males, has been paid to the secretary-treasurer for the same.

A motion by R. F. Hicks, of Newtonbrook, asked that, "For the purpose of facilitating the sale of cattle by correspondence, especially where buyer and seller are widely separated, the buyer, by making application to the secretary's office, accompanied by a fee of \$5.00 for the first animal, and \$1.00 for each additional animal to be inspected; also, the letters received from the seller. On such application being received, the secretary shall send an official to inspect the animal or animals before shipment, and ascertain if they have been fairly described; the secretary shall send one of the men who are recommended by this Association to act as judges at the fairs." After thorough discussion, the resolution passed.

To cows qualifying for the Record of Merit on the seven-day test, \$5.00 is granted, and for those qualifying on the thirty-day test, \$10.00. It was also voted to endeavor to have the management of Toronto Exhibition arrange for a two or three days' milking test. For the literary committee in 1909, the sum of \$25.00 was set aside.

The continuance of an official organ was the subject of considerable discussion. A number of prominent members maintained that if the Association could not pay a certain sum per member for a

certain paper, it could pay that amount on the subscription price of whatever paper the member wished to select. It was urged that no discrimination should be made. After a conglomeration of motions and amendments which confused the delegates, it was voted, by a small majority, that the Association continue for another year to recognize an official organ, and to pay 90 cents per member out of the general funds.

The officers for 1909 are: President, B. Mallory, of Belleville; 1st Vice-President, H. Bolpert, of Cassel; 2nd Vice-President, S. A. Logan, of Truro, N. S.; 3rd Vice-President, J. E. K. Herrick, of Abbotsford, P. Q.; 4th Vice-President, Jas. Rettie, of Norwich; Secretary-Treasurer, G. W. Clemons, of St. George. Directors—J. W. Richardson, of Caledonia; R. F. Hicks, of Newtonbrook; W. W. Brown, of Lyn, and D. C. Flatt, of Millgrove.

Jersey Cattle Club.

At the annual meeting of the Canadian Jersey Cattle Club, in Toronto, last week, lengthy discussion ensued over a proposition to change the standard of admission to the Record of Performance. The executive recommended that greater importance be attached to pounds of butter-fat. The standard suggested was that cows must equal or exceed 5,500 pounds milk and 218 pounds fat at two years; 6,500 pounds milk and 257 pounds fat at three years; 7,500 pounds milk and 297 pounds fat at four years; and 8,500 pounds milk and 337 pounds fat at maturity. Discussion by L. J. C. Bull, of Brampton; Thompson Porter, of Carleton West; C. E. Rogers, of Dorchester, and F. L. Green, of Greenwood, favored special attention to butter-fat, rather than to pounds of milk, but it was agreed to let the matter stand for the present year. A committee, comprising L. J. C. Bull, D. Duncan, of Don, T. Porter, the President, and Secretary R. Reid, of Berlin, was appointed to bring in recommendations at the next annual meeting.

The report given by Secretary Reid showed a balance of \$440.86 on hand, against last year's balance of \$430.36. The amount received from registrations was \$380.04. There were 223 registrations, 92 transfers, and 4 duplicates. Grants of \$50 each to Toronto, London and Ottawa fairs were made on condition that these Fair Boards give an equal amount for Jerseys.

The officers for 1909 are: President, R. J. Fleming, of Toronto. Vice-Presidents: Ontario—D. O. Bull, of Brampton, and D. Duncan; Quebec—H. W. Edwards; Nova Scotia—H. S. Pipes; Manitoba—W. V. Edwards. Secretary-Treasurer, R. Reid. Directors—F. L. Green, T. Porter, H. A. Dolson, of Alloa; S. J. Lyons, of Norval, and Robert Tufts.

Representatives to Fair Boards are: Toronto—W. P. Bull; London—C. E. Rogers; Ottawa—W. P. Hurdman; Winnipeg—David Smith; Calgary—C. A. Julian, Sharman; Maritime Provinces—H. S. Pipes. Judges recommended for fairs are: Toronto—W. R. Spann; London—F. L. Green; Ottawa—H. C. Clarridge; Western Provinces—R. Reid; Sherbrooke—H. G. Clarke. Messrs. Reid, Duncan and Porter were appointed to the Record Board.

Dominion Sheep Breeders' Association.

In opening the annual meeting of the Dominion Sheep-breeders' Association, in Toronto, last week, the president, John Campbell, of Woodville, regretted the presence of scab in a very small percentage of the flocks of Canadian breeders, but in sufficient evidence to cause a deplorable embargo by the United States Government. He urged breeders to use the knife freely for 1909, and keep none but the best animals, free from scab, so that in a short time the American breeders would be so anxious to have Canadian sheep that no stringent regulations would prevail. During 1908, there was no doubt but that scab in sheep had resulted in a loss of tens of thousands of dollars to Canada, owing to the embargo. The sheepmen could eradicate the disease if they wished.

The report of Secretary Westervelt showed 2,060 registrations, 190 transfers, and 13 duplicates and new certificates. There were 220 members. The financial statement gave a balance of \$2,362.72 in the treasury, against \$1,497.52 a year ago. Registrations during 1908 totalled \$1,118.84. It was recommended by the directors that \$1,000 be set aside for printing the record. After paying \$503.68 charges against the Association by the Record Committee for last year's work, a balance of \$1,859.04 remains to the credit of the Association, to be divided among the various provincial organizations.

A report of the committee that went to Ottawa to interview the Department regarding the duty on wool, was given by Col. McCrae, who stated that the Minister of Customs had been approached and changes in wool tariff suggested. It was noted that there was practically no duty charged against wool coming into Canada, al-

though a tariff of three cents was on the books. From the wool-growers' viewpoint, conditions were not satisfactory. Manufacturers had bought foreign wool in large quantities, at high figures, and, to get even, offered low prices to Canadian farmers.

A duty on all wools was urged by J. Lloyd-Jones, of Burford. Canadians could produce all the wool of any grade that was required. J. Campbell said that, despite the fact that five or six million pounds of wool had been imported in 1907, the duty collected amounted to about \$6. Manufacturers and wool-growers should have a joint convention. A. W. Smith, M. P., of Maple Lodge, pointed out that this was a question that must be considered carefully. Citizens of Canada required woollen clothes, and they must have them at reasonable prices. If we taxed ourselves in one way, we paid it in another. Climatic and other conditions did not make it possible to grow higher grades of wool. If it was possible to place a tax on wool, without having it come back on the consumers, he would be pleased to do what he could in the matter while in the Dominion House. The importance of a general knowledge by men engaged in all phases of work connected with growing wool and manufacturing woollen goods was emphasized by Dr. J. G. Rutherford, of Ottawa. It was possible that arrangements could be made to have the Dominion Government assist in arranging for a general conference.

The manufacturers' side was brought forward by E. B. Biggar, of Toronto, who said a conference was most desirable. A study of tariffs in other countries led him to conclude that a duty on wool was advisable. It was necessary to consider the problem, beginning with the producer. Canadian manufacturers brought in five to eight million pounds per year, and at the same time sent out three to five million pounds, because the grades grown were not suited to the machinery used in Canadian mills. A reasonable tariff would benefit the producers over \$2,000,000 in the first year. In addition, the consumers would get better cloth.

It was agreed to make an effort to arrange for a convention of representatives of the wool-growers and manufacturers to discuss the question of duty. Col. McCrae; R. H. Harding, of Thornedale; Jas. Bowman, of Guelph, and J. M. Gardhouse, of Weston, were named as a committee to arrange with the manufacturers to approach the Dominion Government, with a view to obtaining a conference to discuss the question of duty on wool and shoddy, and to press the claim of the sheep interests of Canada for more protection.

A hearty vote of appreciation to Dr. J. G. Rutherford and J. B. Spencer, B. S. A., of the Dominion Live-stock Branch, was tendered in return for the most excellent bulletin recently published in the interests of sheep-raising. The authors were congratulated on making the bulletin so practical and so attractive to young farmers.

A resolution was passed, asking that the Provincial Winter Fair Board remove the clause relating to sheep stating that animals shall have been the property of the exhibitor for three months, and that the requirements be that sheep shall be the bona-fide property of the exhibitor at time of entry.

Efforts made by the Dominion Department of Agriculture to have the embargo on sheep going into the United States removed, were outlined by Dr. J. G. Rutherford, Live-stock Commissioner. Letters had been sent to the American authorities stating the case, and explaining that no scab was known to exist in Canada, although a few cases had been from time to time discovered and dealt with in one section of Ontario. Communications indicated that the mission would be successful, but replies contained a suggestion that Canadian regulations in regard to hog cholera were too severe. Sheep scab could not be compared to hog cholera in seriousness. The swine disease frequently was brought into Canada by means of imported hogs. The cost to the country, on payment of one-third value of hogs slaughtered in 1902, was \$36,000. It was, therefore, essential that strict precautions as to quarantine regulations be enforced. It could not be expected that these precautions should be relaxed. It was impossible to imperil the hog industry of Canada by removing that embargo on any consideration.

It had been learned from the American authorities that the regulations against Canadian sheep had been provoked by deputations of sheepmen from the Western States, who maintained that they had received inferior animals from breeders in Ontario, in some cases affected with scab.

Q.—Would compulsory dipping have any effect in securing the removal of the quarantine regulations?

A.—No, especially as scab is not now known to exist in any part of Canada.

Q.—How long might scab be in a flock before it could be detected?

A.—That depends on the season of the year.

If contracted about shearing time, it might not be noticed before November. On the other hand, if it were contracted in October, it might be seen by Christmas.

Dr. Rutherford stated that he would continue to press the question of removing the quarantine on sheep.

The circulation of a petition, asking that, if need be, the embargo against hogs be raised, in order to secure the removal of the quarantine against sheep, was introduced by J. G. Hanmer, of Brantford. Sheepmen had to sell two-thirds of their high-class lambs at low prices, which could have been disposed of in the United States at high figures. There could be no injustice in allowing hogs for immediate slaughter to come in, if this would restore the trade.

In reply, Dr. Rutherford said that, if the sheep business were pushed as it should be, a profitable market for all the high-class lambs could be found in Canada. Steps should be taken to force as many sheep as possible into a district, and make that locality famous for high-class sheep.

Compulsory dipping was urged by some. Col. McCrae said that nothing should be done that would hint at admitting American hogs, with the consequent danger of bringing in hog cholera. Compulsory dipping would cause endless trouble and ill-feeling. J. G. Hanmer moved that a deputation of three be sent to Ottawa to discuss the question of ridding Canadian flocks of scab with Hon. Sydney Fisher and Dr. Rutherford. It was explained by Dr. Rutherford that for some time no reports had gone to Ottawa to indicate that scab existed in Canada at present. If any person would let him know where scab existed, he would at once take steps to have it eradicated.

Since the discussion had brought out the fact that scab was not known to exist in Canada, A. W. Smith brought in a resolution tendering thanks to Dr. Rutherford and his staff for the efficient work done, and leaving further steps regarding this disease and the removal of the embargo on sheep in the hands of the Live-stock Commissioner.

The officers for 1909 are: President, Andrew Whitelaw, of Guelph; Vice-President, J. G. Hanmer. Directors: Cotswolds—Col. McCrae; Leicesters—Jas. Snell, of Clinton; Hampshire and Suffolks—John Kelly, of Shakespeare; Dorsets—R. H. Harding; Southdowns—John Jackson, of Abingdon; Lincolns—J. T. Gibson, of Denfield; Oxfords—J. E. Cousins, of Harriston; Shropshires—C. W. Gurney, of Paris. O. A. C. Director, Prof. G. E. Day; General Directors, W. H. Gibson, of Beaconsfield, Que., and A. W. Smith. Representatives to National Live-stock Record—Messrs. Whitelaw and Hanmer. Representatives to the Fair Boards for 1910: Toronto—Hon. John Dryden and J. G. Hanmer; London—Col. McEwen, of Byron, and Geo. Teller, of Paris; Ottawa—N. F. Wilson, of Cumberland; Eastern Ontario Live-stock Show, Ottawa—A. Whitelaw; W. A. Wallace, of Kars; R. Richardson of Southmarch, and N. F. Wilson; Provincial Winter Fair, Guelph—A. W. Smith, J. Jackson, Col. McEwen, and Robt. Miller; Winnipeg, Man.—J. E. Brown, of Portage la Prairie, and Geo. Allison, of Burbank.

Ontario Sheep Breeders' Ass'n.

Proceedings, as developed at a meeting for organization of the Ontario members of the Dominion Sheep-breeders' Association, were read by Secretary Westervelt at the first meeting of the Ontario Sheep-breeders' Association. Clauses of a constitution, as drawn up, were adopted in toto. It was resolved, by unanimous vote, to take the proper steps to have the Association incorporated under the Agricultural Associations Act.

A suggestion to encourage the raising of sheep by the carrying on of practical experiments with a flock of twelve to twenty grade ewes and a pure-bred ram, to demonstrate that sheep-raising was profitable, met with interesting discussion. John Campbell, of Woodville, said that lambs could be produced at about \$1.00 per hundred pounds less than the bullock or the bacon hog, and, at the same time, could be sold for higher prices than beef or pork. Col. McEwen urged that efforts should be made to have more attention paid to sheep at Ontario Agricultural College. The idea of illustration flocks in different localities, under the supervision of a competent man, also, was a proper move. It was claimed by John Kelly, of Shakespeare, that all experiments should be conducted at Guelph. In reply, Mr. Campbell stated that, while they had excellent facilities at Ontario Agricultural College, it seemed that success did not attend the efforts of the College men during the summer season. The pasture lands did not seem satisfactory. J. G. Hanmer, of Brantford, thought that if as great attention were paid by the College men to sheep as was paid to hogs or cattle, the difficulty would be removed. Jas. Snell, of Clinton; J. Lloyd-Jones, of Burford; C. Wood, of Freeman, and John Campbell indicated that results with flocks at the College were an injury to the industry. It was claimed that few students were stimulated to keep sheep or ever developed as judges of this class of stock, while visitors to the College during the June excursions were disgusted with the

specimens seen, and refused to have anything more to do with sheep. This opinion was refuted by John Kelly, who said that many breeders had bought excellent specimens from the College. As for judges, he could assure the public that the young men of the College could show many of the prominent breeders points they never had dreamed of, and that they were doing much to further the interests of sheep-raising, as well as to improve the stock. John Gardhouse, of Highfield, said that it could not be expected that a College should be able to secure the very best results from handling a flock of sheep. He thought it was best to leave the matter in the hands of the executive. It was unanimously agreed that demonstration flocks, sales, etc., would be in the interests of the sheep industry, and the executive was empowered to act as they deemed best.

J. Lloyd-Jones handed in a resolution stating that, since it is advisable that working terms be arranged between the Canadian National Records and the several American Record Associations, the Ontario Sheep-breeders' Association urge upon the Record Board the necessity of making some arrangement (if possible) whereby sheep can be recorded in both Canadian and American Associations, so that one certificate and one record ear label will be sufficient. The resolution was discussed and carried.

Following are the officers for 1909: President, Geo. Telfer, of Paris; Vice-President, John Campbell, of Woodville. Directors: Cotswolds—Col. D. McCrae, of Guelph; Lincolns—J. H. Patrick, of Iderton; Leicesters—Jas. Douglas, of Caledonia; Shropshires—J. Lloyd-Jones, of Burford; Oxfords—J. Cousins, of Harriston; South-downs—Geo. L. Telfer, of Paris; Dorset Horns—Jas. Robertson, of Milton; Hampshires and Suffolks—Geo. Cavan, of Toronto; General Directors—John Campbell and J. G. Hanmer.

Dominion Swine Breeders' Association.

The delegates to the Dominion Swine-breeders' Association's annual meeting expressed strong indignation against the circulation of a petition by certain parties interested in sheep-raising to have the embargo on live hogs coming into Canada from the United States raised. After a thorough discussion, it was decided to inform the Minister of Agriculture at Ottawa of the true situation, and to ask that the embargo be maintained.

By way of restricting the apparent tendency to exhibit animals that are over age in certain show classes, the feeling expressed was that judges should be given power to throw out animals that were considered improperly entered. Many delegates, however, favored having sworn declarations for entries, as now prevailed in the dairy contest. It was also voted unanimously that the Dominion Government should be pressed to increase the duty on pork imported from the United States from two cents to four cents.

The report, presented by Secretary Westervelt, showed a balance of \$1,886.23 on hand, against \$3,037.47 a year ago. The number of records for the different breeds appearing in Volume 19 follows: Berkshires, 1,475; Yorkshires, 2,126; Cheater Whites, 421; Poland-Chinas, 43; Tamworths, 317; Duroc-Jerseys, 23, and Essex, 30. The receipts, on account of the swine records at Ottawa, were \$3,422.

Grants to exhibitions were voted as follows: Winter Fair, Guelph, \$75; Toronto, \$100; London, \$50; Ottawa, \$50; and Eastern Ontario Live-stock and Poultry Show, Ottawa, \$50. The question of increasing the sales in Western Canada was dealt with by placing the working out of a satisfactory plan in the hands of a joint committee consisting of the executives of the various associations interested.

The presentation of a copy of the petition being circulated by those interested in the sheep industry to be sent to the Minister of Agriculture at Ottawa, provoked animated discussion. This petition, which set forth the facts synthesized on page 167 of "The Farmer's Advocate" of Feb. 14th, proposed that, if necessary to bring about a rescindment of the United States quarantine of 30 days on Canadian sheep, the Canadian Government should raise the embargo against Canadian hogs coming into our packing-houses in bond. The framers of the petition felt it an injustice that the pure-bred sheep industry of Canada should be practically ruined just possibly to benefit the hog-breeders to the extent of from 25c. to \$1.00 per cwt. for possibly a month or so in the year.

The president, D. C. Flatt, regretted that the sheepmen were troubled with diseases among their flocks, but he did not see why the hog industry should be jeopardized by the possible introduction of hog cholera, in order to satisfy the sheepmen. E. E. Martin, of Canning, said he was a breeder of both sheep and swine, but he did not feel that this petition should be allowed to go through, if any efforts of the Swine-breeders' Association could prevent it. T. A. Cox, of Brantford, said it was absurd to sug-

gest cutting off the pig's head to save the sheep's tail. One member had signed the petition, but had not had time to read it over, and only the first part of the petition had been explained to him. Several others deplored the situation, and spoke rather strongly regarding the men who instituted the petition. Some suggested a counter-petition. J. E. Brethour pointed out that it was unnecessary to send a petition. A more effective means would be found in sending a deputation to Ottawa.

The following resolution was carried unanimously: "That we, the members of the Dominion Swine-breeders' Association, in annual meeting assembled, having learned of a petition about to be presented to the Honorable the Minister of Agriculture for the Dominion of Canada, asking that the embargo on American live hogs coming into the country should be raised, wish to strongly express our disapproval of such action being taken, on account of the grave danger of hog cholera being distributed throughout this Province, which the careful administration of the Dominion Department of Agriculture has almost eradicated; it is further resolved that a copy of this resolution be immediately forwarded to the Hon. Sydney Fisher, and that the Minister be requested to obtain accurate information as to the calling of each person signing the petition."

Regrets were expressed regarding the falling-off in the Canadian bacon trade in Great Britain. A suggestion was made that a delegation be sent to Denmark to study their methods of breeding, feeding and marketing, but it was decided to leave the matter in the hands of the executive.

The action of the directors during the past few months, in calling the attention of the Dominion Government to the fact that fluctuations in the Canadian hog markets were due largely to the importation of certain grades of pork from the United States, was explained by President Flatt. It was stated that, while there was a duty of five cents on Canadian bacon going across the line, the American product could come to Canada on a duty of two cents. This resulted in the importation of supplies of rough pork for camps and construction gangs, and took this trade from the Canadian packers. It was suggested that the duty be raised to four cents. Indications were that the Government would move in the matter at an early date, as Hon. W. S. Fielding had mentioned it in his budget speech.

The question of complaint regarding size of hogs at the various exhibitions was brought up by R. H. Harding, of Thorndale. It was pointed out that many pigs were improperly entered as to age. A vote favored that the judges be left to use their judgment in throwing out animals, and a resolution instructing the executive to ask fair boards to instruct judges to act on these recommendations was passed.

A resolution asking that fair boards be requested to make special classes for Chester Whites on their prize lists was carried.

F. W. Brown, of Portage la Prairie, Man., claimed that all Provinces of the Dominion should be represented on the board of directors. Under present conditions, Western breeders looked upon this Association as an Ontario organization. It was pointed out by Mr. Brown that, although the various Provinces got their share of the funds, they had no voice in the business transacted.

Following are the officers elected: President, D. C. Flatt; Vice-President, Wm. Jones, of Zenda. Directors: Berkshires—W. H. Durham, of Toronto; Yorkshires—J. E. Brethour; Chester Whites—D. DeCourcy, of Bornholm; Poland-Chinas and Duroc-Jerseys—W. M. Smith, of Scotland; Tamworths—Geo. Douglas, of Mitchell; Essex—Jos. Featherstone; General Director—R. H. Harding; Ontario Agricultural College Director—Prof. G. E. Day.

Representatives to Fair Boards are: Toronto—D. C. Flatt, and Sam Dolson, of Allou; Ottawa—R. J. Garbutt, of Belleville, and R. O. Morrow, of Hilton; Winter Fair, Guelph—Prof. G. E. Day, Major Hood, of Guelph; Wm. Jones and R. H. Harding; London—Geo. Douglas and R. H. Harding; Eastern Ontario Live-stock and Poultry Show, Ottawa—D. C. Flatt, P. O. Collins, of Bowesville; J. C. Smith, of Hintonburg, and W. H. McNish, of Lyn.

Large Yorkshire Association.

At the annual meeting of the Ontario Large Yorkshire Association, held in Toronto last week, the decrease in funds from registration and membership fees was responsible for a decrease in the grants to exhibition boards. Last year's total grants were \$550. This year they will be cut to \$100. The sums are: Toronto, \$125; Winter Fair, Guelph, \$125; London, \$50; Central Canada, Ottawa, \$50; Eastern Ontario Live-stock Show, Ottawa, \$50. The financial statement showed a balance on hand of \$131, but the registrations were very much lower, having fallen to \$539 in 1907, to \$215 in 1908. While the outlook for the swine industry was bright, it was not likely that breeders would feel the influence for several months.

A resolution was read and passed, asking

the Association petition the Lieutenant-Governor-in-Council to incorporate the Ontario Large Yorkshire Association under the Agricultural Associations Act.

Directors were elected as follows: J. E. Brethour, of Burford; H. J. Davis, of Woodstock; Wm. Jones, of Zenda; H. Koelln, of Glen Allan; Jos. Featherstone, of Streetsville; R. J. Kelly, of Ilagersville, and D. C. Flatt, of Millgrove. The directors chose Mr. Brethour as president, and Mr. Featherstone as vice-president.

Mr. Davis suggested that steps be taken to increase the membership. The purposes of the Association, it was claimed, were not known by Yorkshire breeders. It was decided to have the constitution printed and forwarded to members.

Ontario Berkshire Society.

The financial statement, presented by Secretary Westervelt at the annual meeting of the Ontario Berkshire Society, showed a balance of \$176.47 on hand. A constitution, drawn up by the executive, was approved by the meeting. By resolution, it was, therefore, voted to arrange that the Ontario Berkshire Society be incorporated under the Act respecting agricultural associations.

The importance of advertising the breed, and the duty of the breeders in seeing that the merits of the Berkshires were made known, were brought up by the president, W. H. Durham. It was stated that at Chicago six firsts out of seven went to the popular blacks. This, along with the prominence at shows in England, demonstrated that the Berkshires took second place to no breed. Much could be done by granting money to fairs and by judicious advertising. E. E. Martin, of Canning, said the funds were too low to permit of appreciable grants. As a rule, the benefit fell chiefly to the exhibitor. T. A. Cox said the fact that prizes were increased meant a larger display, and a consequent increase in popularity of the breed. It was claimed by John Kelly, of Shakespeare, that the men who exhibited made up the bulk of the registrations, and it was the duty of this society to return a part of it to them in prize grants. The executive was given power to arrange the grants to fair boards for 1909.

It was pointed out that in the United States the demand recently changed from the thicker type to the larger and more lengthy type so common in Ontario, and Ontario breeders should look to that market. Several present urged offering only the best for sale. No man should dispose of an animal that he would not keep in his own pen.

Directors were chosen as follows: W. H. Durham, of Toronto; E. E. Martin, of Canning; S. Dolson, of Allou; H. M. Vanderlip, of Cainsville; Robert Vance, of Ida; T. A. Cox, of Brantford, and Thos. Teasdale, of Concord.

To Our Club-raisers.

There are thousands of farmers who do not know what they are losing every year through not being subscribers to "The Farmer's Advocate and Home Magazine." Therefore, we want all readers of "The Farmer's Advocate" to act as club-raisers this year, and send us large lists of NEW SUBSCRIBERS.

If you send us two new names and \$3.00 to cover same (each new subscriber paying \$1.50), we will mark date on your paper forward one year as remuneration to you; or, for each single NEW NAME, accompanied by \$1.50, we will advance the date of your address label six months. Cash commissions or premiums, as preferred, for larger lists of new names.

In clubs of FOUR RENEWALS OR OVER, we will accept \$1.25 each.

Premiums not included in club offers.

Start raising your club immediately. Get "The Farmer's Advocate and Home Magazine" into every household in your locality.

Armour Scholarships at Ames.

The recent short course held at Ames is said to have been the most successful in the history of the institution. Over eight hundred were enrolled for two weeks' work in the various courses. At the close of the course a contest was held for awarding seven Armour scholarships, won by the Iowa State College at the last International. There were fifty-three contestants. The competition was exceedingly keen, and the result close. These scholarships, of \$250 each, are highly prized by the young men of moderate means who are endeavoring to secure a college education. The Iowa contestants were all Iowa men.

Incorporated 1885.
THE
TRADERS BANK
OF CANADA

Capital and Surplus,
\$6,350,000.

Total Assets,
\$34,000,000.

Now is the time to open a Savings Account. Make a good beginning, add to it as the proceeds of the year's work come in, and you will have a comfortable reserve, ready for likely-looking investments or unexpected expenses. \$1 opens an account.

THE BANK
FOR THE
PEOPLE.

One of the 80 branches of this Bank is convenient to you. Your account is invited.

MARKETS.

Toronto.

LIVE STOCK.

At West Toronto, February 8th, receipts were 917 cattle, 60 hogs, 130 sheep, 20 calves. Quality of cattle fair; trade moderately good. Export steers, \$5.15 to \$5.65; bulls, \$4 to \$4.25; prime picked butchers', \$5 to \$5.15; loads of good, \$4.60 to \$4.85; medium, \$4 to \$4.40; cows, \$3 to \$4; milkers, \$30 to \$60; calves, \$3 to \$6.50; sheep, \$4 to \$4.25; lambs, \$5.50 to \$6.40. Hogs—Packers quoting \$6.60, f. o. b. cars at country points; \$6.85, fed and watered; drovers quote paying \$6.75 to farmers in country.

REVIEW OF LAST WEEK'S MARKET.

Deliveries of live stock at both of the Toronto markets were liberal, especially for the cattle.

Total receipts of live stock at the City and Union Stock-yards for last week were 364 carloads, consisting of 6,243 cattle, 4,920 hogs, 1,614 sheep and lambs, 323 calves, and 76 horses.

The quality of cattle generally was far from satisfactory. Too many light steers and heifers, that have been long enough in the stable to be in good thriving condition, but not fat, being thrown on the market. After Monday's market at the Union Yards, trade was depressed on account of the heavy receipts, and prices declined from 15c. to 25c. per cwt. in all classes of cattle.

Exporters.—Early last week steers of good quality sold as high as \$5.70, and bulls \$4 to \$4.75, and a few of choice quality brought \$5; but at the close of the week steers were quoted at \$5 to \$4.40, and bulls \$4 to \$4.25. The decline in prices for shippers is accounted for, in a measure, by prices being lower in the British markets, but principally by the scarcity of export space on the ocean steamers.

Butchers'.—Prices for butchers' also were lower. Prime picked cattle did not offer nearly so much as the medium, as they were scarce. Prime quality picked cattle sold from \$5 to \$5.10, and a very few \$5.20 and \$5.25; loads of good, \$4.50 to \$4.75; medium, \$4 to \$4.40;

common, \$3.50 to \$4; cows, \$3 to \$4.25; canners, \$1.50 to \$2.

Stockers and Feeders.—Market for stockers and feeders remains steady, with a fair demand, at following prices: Best feeders, 900 to 1,000 lbs., \$3.80 to \$4.25; best stockers, 700 to 900 lbs., \$3.40 to \$3.80; medium stockers, 600 to 900 lbs., \$3 to \$3.50.

Milkers and Springers.—There was a fair delivery of milkers and springers, for which high prices were paid, quality considered. Prices ranged from \$30 to \$60, and even \$65 was paid, but few brought the \$60 and \$65 quotations. The bulk of the best cows sold from \$45 to \$55 each.

Veal Calves.—Receipts were larger, but few of good to choice quality. Prices ranged from \$3 to \$6.75 per cwt.

Sheep and Lambs.—Receipts are growing smaller in numbers as the season advances. Prices were higher for both sheep and lambs. Export ewes, \$3.75 to \$4.25; yearlings, \$4.50; rams, \$3.50 to \$3.75 per cwt.; lambs, \$5.75 to \$6.35 per cwt.

Hogs.—Receipts moderate, and prices higher. Packers quoted \$6.90 for selects, fed and watered at the market, and \$6.65 to drovers, f. o. b. cars at country points. At several points in Ontario, drovers informed us that \$6.70 and \$6.75 was paid for hogs, f. o. b. cars, which means that hogs have again nearly reached the \$7 mark.

Horses.—At the Union Horse Exchange, there were seventy-five horses sold at auction and private sales on Monday and Wednesday's sales, which brought fair prices. One load of drafters and farm horses was bought and shipped to Montreal. Many dealers are looking for horses, but prices are not much, if any, higher. One matched team, 2,600 lbs., sold for \$330. Drafters sold at \$160 to \$190; farm horses sold at \$125 to \$165; drivers, \$125 to \$190; serviceably sound, \$45 to \$85 each.

BREADSTUFFS.

Wheat.—No. 2 white, \$1 bid, at outside points; No. 2 red, 99c. bid, outside; No. 2 mixed, 99c. bid, at outside points, with sellers at 99½c. Manitoba—No. 1 northern, \$1.11; No. 2 northern \$1.08 to \$1.08½. Bay points; all-rail routes, five cents more to Ontario points. Rye—No. 2, 66c. bid, sellers 70c., outside. Peas—No. 2, 87c., outside. Oats—No. 2 white, 42½c. offered at outside; No. 2 mixed, 39c. bid; No. 3, white, 40½c. bid, outside. Barley—No. 2, sellers, 56½c. bid; No. 3X, 57c. sellers; No. 3, 51c. sellers. Buckwheat—No. 2, 58½c. bid outside. Corn—No. 3 yellow, 69c. to 70c.; Canadian, 65c. to 65½c., Toronto freights. Bran—Market firm, \$22, in sacks, Toronto. Shorts—\$23 to \$24, in sacks. Flour—Ontario 90 per cent. patents, \$3.70 to \$3.75 bid for export; Manitoba patent, special brands, \$5.50; seconds, \$5; strong bakers', \$4.80.

COUNTRY PRODUCE.

Butter.—Receipts large. Market easy, at following quotations: Creamery pounds, 26c. to 28c.; creamery solids, 26c. to 27c.; separator dairy, 23c. to 25c.; store lots, 21c. to 23c.

Eggs.—Firm, at 32c. to 33c. for new-laid; 27c. to 29c. for cold-storage.

Cheese.—Market firm. Large, 13½c.; twins, 14c.

Honey.—Extracted, 10½c. to 11c.; combs, in dozen sections, \$2.25 to \$2.75.

Potatoes.—Market firmer on account of recent cold weather. Car lots, on track at Toronto, of Ontarios, 63c. to 65c. per bag.

Beans.—Market unchanged. Primes, \$1.75 to \$1.80; hand-picked, \$1.85 to \$1.90.

Poultry.—Receipts light, with prices firm, as follows: Turkeys, 18c. to 22c.; geese, 14c. to 15c.; ducks, 16c. to 18c.; chickens, 14c. to 16c. per lb.; fowl, 10c. to 12c.

Hay.—Baled, car lots, on track, Toronto, \$10.50 to \$11.

Straw.—Prices easier, on account of larger deliveries, at \$6.50 to \$7, for car lots, at Toronto.

FRUIT AND VEGETABLES.

Apples.—Winter varieties, \$3 to \$5 per bbl.; evaporated apples, 6c. to 7c.; cabbage, per bbl., \$2.25; onions, per sack, 90c.; turnips, 35c. per bag; parsnips, 50c. per bag; carrots, 50c. per bag.

HIDES AND WOOL.

E. T. Carter & Co., 85 Front street East, Toronto, have been paying for No.

1 inspected steers, 60 lbs. and up, 11c.; No. 2 inspected steers, 60 lbs. and up, 10c.; No. 1 inspected cows, 10½c.; No. 2 inspected cows, 9½c.; country hides, 8½c. to 9c.; calf skins, 12c.; horse hides, No. 1, \$3; horse hair, per lb., 30c. to 32c.; tallow, 5½c. to 6½c.; lamb skins, 90c. to \$1; sheep skins, each, \$1; raw furs, prices on application.

SEED MARKET.

The Wm. Rennie Seed Co. report the seed market quiet, with nearly all of last year's crop marketed, little being left in the hands of farmers or country dealers. Prices unchanged, as follows: Alsike, fancy, \$7.25 to \$7.60; No. 1, \$6.90 to \$7.20; No. 2, \$6 to \$6.50; red clover, \$4.50 to \$5.75; timothy seed, \$1.30 to \$2.00.

Montreal.

Live Stock.—London space was being offered at 25s. to 30s., Glasgow at 30s., and Manchester at 27s. 6d. per space. Shipments from Portland, Me., St. John, N. B., and Halifax, N. S., have been light, being only 5,852 for the last half of January.

The local market was fairly steady last week, notwithstanding the rather more liberal supply of cattle of the less choice grades. There was a fair demand for exporters, and prices of these were firm. There was also a good demand from outside points in Canada. Really choice stock was difficult or impossible to find, but the best on the market sold at around 5½c. per lb., fine being 5c., good 4½c. to 4½c., medium 3½c. to 4½c., common 3c. to 3½c., and inferior down to 2c.

The market for lambs showed a strong undertone, and quotations advanced fractionally, being 6c. to 6½c. per lb. for choice, and 5½c. to 5½c. for good, sheep being steady, at 2½c. to 4c. for best, and down to 3½c. for inferior.

Offerings of calves were quite light, but demand was not active, so that prices held steady, at \$3 to about \$12 each. Prices of hogs were again firmer, being about 7½c. to 7½c. per lb. for select lots, weighed off cars.

Horses.—Good demand for mares of good breeding and fair weight, ranging from \$185 to \$225 each. Heavy draft, 1,500 to 1,700 lbs., \$225 to \$300 each; light draft, 1,400 to 1,500 lbs., \$185 to \$240 each; good blocks, 1,300 to 1,400 lbs., \$175 to \$200; small or inferior, 1,000 to 1,100 lbs., \$100 to \$150; broken-down animals, \$50 to \$75 each, and choice saddle or carriage animals, \$300 to \$500 each.

Dressed Hogs and Provisions.—Abattoir fresh-killed stock, 10c. to 10½c. per lb.; Manitoba dressed, 9½c. to 9½c., and country dressed, 8½c. to 9½c. Lard, 12½c. to 13½c. for pure, and 9c. to 9½c. per lb. for compound.

Poultry.—Supply exceptionally scarce, particularly turkeys, ducks and chickens. Demand last week continued active, and prices were firm, those for ducks being higher, at 12c. to 14c. per lb., for choicest. Finest fresh-killed turkeys, 19c. to 20c. per lb., and frozen 17c. to 19c., while choicest fresh-killed chickens were 14c. to 15c., and frozen 12c. to 14c. Fowl and geese sold at 10c. to 11c. per lb.

Potatoes.—Quebec stock, whites, 75c. per 90 lbs., carloads, on track, for choicest; Green Mountains not less than 80c. to 82½c. Jobbing prices about 5c. more.

Eggs.—New-laid stock very scarce; demand good; prices very firm, ranging from 32c. to 40c. per dozen, with No. 1-limed or cold-store stock available at 26c. to 27c. per dozen, and selects at 29c. to 30c. per dozen, wholesale.

Butter.—An impression that dealers throughout the country have considerable quantities of dairy butter in stock awaiting higher prices, caused buyers to lower their limits to 22c. and 23c., according to quantity, for rolls, and 21c. to 23c. for tubs, Manitoba dairies being quoted at 20½c. to 21½c. Fresh creamery was also affected to some extent, quotations being 23½c. to 25c. per lb. Fall-made goods hold pretty firm, being scarce, at 26c. to 27c. per lb.

Cheese.—Markets somewhat quieter last week, with few cables across, yet it showed no disposition to decline, holders still demanding 12½c. to 12½c. per lb. for Quebecs or Townships, 12½c. to 12½c. for Ontario white, and 12½c. to 12½c. for Ontario colored cheese, per lb.

Grain.—No. 3 American yellow corn,

71c.; No. 2 peas, 9½c. to 95c.; No. 2 Western oats, Canadian, 47c.; No. 1 extra feed oats, 46½c.; No. 1, 45½c.; No. 2 Ontario oats, 46c.; No. 3, 45c.; No. 4, 44c.; No. 2 barley, 63½c. to 65c.; Manitoba feed barley, 55½c. to 56c., and buck-wheat, 55½c. to 56c., carloads.

Flour.—Manitoba spring wheat patent, firsts, \$5.60 per bbl., in bags; seconds, \$5.10, and strong bakers', \$4.90. Ontario winter wheat patent, \$5 to \$5.25, and straight rollers, \$4.60 to \$4.70.

Feed.—Bran, in limited supply, and firm, at \$21 to \$22, shorts being \$24 to \$24.50, to cover all grades, in bags. Oil cake quoted \$32, and cotton seed at \$33, but prices uncertain.

Hay.—\$12 to \$13 per ton for No. 1 timothy, \$9.50 to \$10.50 for No. 2, \$8 to \$9 for No. 3, and \$7.50 to \$8 for clover mixed, clover being \$7 to \$7.50.

Seeds.—Very little is going on as yet, dealers quoting \$13 to \$14 per 100 lbs. for red clover, \$16 to \$18 for alsike, and \$5.25 to \$6.50 for timothy, in bag lots.

Hides.—Market steady, at prices quoted last week.

Chicago.

Cattle.—Steers, \$4.60 to \$7.15; cows, \$3 to \$5.50; heifers, \$3 to \$5.75; bulls, \$3.40 to \$3.90; calves, \$3.50 to \$8.25; stockers and feeders, \$3 to \$5.40.

Hogs.—Choice heavy shipping, \$6.55; butchers', \$6.35 to \$6.50; light mixed, \$6 to \$6.20; choice light, \$6.10 to \$6.30; pigs, \$5 to \$6; bulk of sales, \$6.15 to \$6.45.

Sheep and Lambs.—Sheep, \$4.25 to \$5.60; lambs, \$6.75 to \$7.60; yearlings, \$5 to \$7.

Buffalo.

Cattle.—Prime steers, \$6.25 to \$7.50.

Veals.—7 to \$9.75.

Hogs.—Heavy, \$6.75 to \$6.85; mixed, \$6.70 to \$6.80; Yorkers, \$6.40 to \$6.75; pigs, \$6.25; roughs, \$5.50 to \$5.85; dairies, \$6.25 to \$6.65.

Sheep and Lambs.—Lambs, \$5 to \$7.50.

British Cattle Markets.

London cables 13c. to 13½c. per lb., dressed weight; refrigerator beef is quoted at 9½c. to 10c. per lb.

TRADE TOPIC.

STEEL SHOES FOR FARMERS.

The claim that there's nothing like leather where there's no railroad is in danger of losing its application to present-day conditions, for now comes the Steel Shoes—designed to afford foot comfort and protect the health of the farmer himself. The comfort and health of the animals on the farm have heretofore received more attention, in many respects, than that of their owners. Yet the prosperity and success of the farmer depends primarily on good health. The farmer undergoes much discomfort, and often suffers from colds and rheumatism as the result of working long hours, in wet and cold, with inadequate foot protection. All-leather shoes, no matter what they cost, become water-soaked in a comparatively short time when worn in the mud or slush. Coughs, colds, and rheumatism, or even the dread pneumonia, result from cold, wet feet. In drying out, the leather soles curl up and thus the shape of the entire shoe is ruined. Corns, callouses and bunions result from wearing such shoes. Readers of this paper who seek an easy, comfortable shoe, and perfect safety from the ills that follow cold, wet feet, should look up the advertisement in this issue of the Steel Shoe Company, Dept. 83, Racine, Wisconsin, or Toronto, Canada, and note what is claimed for Steel Shoes.

AN IMPORTANT JERSEY SALE.

On March 4th, as advertised in this issue, Mr. R. Reid, of Berlin, Ontario, Secretary of the Canadian Jersey Cattle Club, who is giving up farming, will sell at auction his entire herd of 31 head of registered Jerseys, and 19 high-grade Jerseys, at the farm, at Bridgeport, two miles from the town of Berlin. Mr. Reid has an enviable reputation as a judge and breeder of profitable-working dairy cattle, and the dispersion of this herd will afford a rare opportunity of securing good specimens of this grand dairy breed, now gaining rapidly in popularity. Note the date, and send for the catalogue.



Life, Literature and Education.

Many deaths, due to skating over rotten ice or into air-holes, have already been chronicled, seven being the record in Canada for one day. As spring approaches the danger increases. No ice is safe in mild weather, or even during the cold weather which may follow a succession of periods of mild weather, and where flooded fields or skating rinks are not near enough to be patronized, the pleasure should be foregone for the season.

Of the making of battleships, as of books, there is no end. A fortnight ago France launched her first Dreadnaught, the nucleus, no doubt, of a fleet of Dreadnaughts such as that which Britain, by whom this type of battleship was originated, is developing on British waters. At the same time comes the news that Argentina will, in the immediate future, build two cruisers, stronger than those now under construction for Brazil. . . . And so battleship is piled on battleship, and fleet on fleet.

In the meantime, the peaceful land-lubber cannot but reflect on the good that might be accomplished for humanity were the vast sums of money expended in building and maintaining the warships of the world devoted to industrial and humanitarian ends.

A year or so ago Britain broached the subject of limitation of armaments as a topic for discussion at The Hague, but the suggestion was thrown down, especially by Germany, and so the Peace Conference, eschewing from its councils consideration of the very arm and might of war itself, became, for the time, little better than a gigantic farce. Nevertheless, limitation of armaments is a question which must eventually be considered. Otherwise, it is not irrational to ask when or where the endless spending of money in such defenses shall end; or if, indeed, it can end with anything short of the bankruptcy of the people who must supply the funds.

One of the chief topics of present political interest is Senator Scott's scheme, introduced into the Senate during the last week of January, for the reorganization of that body. He suggests that two-thirds of the Senate be made permanently elective, each new Senator being given a term of service lasting for eight years; that Ontario and Quebec be divided into sixteen electoral districts each for representation in the Upper House; Nova Scotia and New Brunswick into seven each; Prince Edward Island into two; Manitoba, Saskatchewan and Alberta into three, and British Columbia into two. For the present, a member of the existing Senate would be allotted to each district, which, at his death, would be given the privilege of electing a Senator. By this plan only one-third of the Senate would be appointed by the Government.

The plan is a familiar one, and has been discussed in various forms in the past. It is a reform which would give the Senate a more permanent character, and would make it more representative of the people.

Parliament, and for that of the Senate in Canada, should have taken rise within those bodies themselves, and at almost the same time.

Time was when these bodies were great in their might. As instituted, they were designed to be "cool and deliberate" second bodies, above and apart, by reason of age and experience, from the fluctuations of the emotional public, an exaltation which of itself—seeing that Lords and Senators are, after all, only human—was bound to give good culture to a few germs of weakness. . . . But, "Autres temps autres moeurs." Presently a democracy, constantly growing both in numbers and perspicacity, was to be reckoned with, and to-day it is not remarkable that that same democracy should see in this voluntary movement for "reform" a recognition of the fact that the ever-swelling murmur of a dissatisfied public must eventually be met, rather than a burning desire of the bodies in question to become more potent factors for the good of the commonwealth.

In England, the plan brought forth by the select committee of the Upper House has been little more satisfactory on the whole than the tactics of the proverbial old man, who, in "trying to please everybody, pleased nobody." In Canada, Senator Scott's recommendations are meeting with somewhat greater favor, although they are generally looked upon as scarcely drastic enough to meet the requirements of the situation. The public is beginning to grow somewhat restive under the assumption of emotionalism laid upon it, and, even granting such a postulate, is inclined to question as to whether it requires 84 Senators, each endowed with an annual sessional allowance of \$2,500, plus a mileage, greatly augmenting that amount, to deliberate on the hot-headedness of the emotional public's emotional representatives in an emotional House of Commons. In view of the efficient work done by the Railway Commission, there are even those who dare to query as to whether a council of five or seven, simply advisory to the Commons, and not endowed with the power of veto, might not do all the work accomplished by the eighty-four Senators, and at a substantial saving to the public purse.

Whether so radical a measure be wholly advisable or not, there is no question that a movement to reduce the number of Senators would be generally popular, as would also the introduction of the elective principle in connection with it, a step which must act as a revivifier upon a body now rather generally looked upon as dead. If we are to have an Upper House at all, it should neither be a Mausoleum nor a House of Charity. It should be a useful institution, not a mere shelving place in which to stow away public servants who have outlived their usefulness, or whom, for any other reason, it is deemed expedient to put quietly out of the way. If the public men who faithfully earn the right to be regarded as knights of cool and deliberate wisdom are not getting emolument enough to pay them for their services, in Heaven's name pay them for what they are worth while they are in harness, and let them lay by for the rainy day

as other men do; but do not expose them to the indignity (which, however gracefully accepted, is, nevertheless, an indignity) of submitting, as a great majority of the Senate must needs do, to the glossed-over charity of a shelf of do-nothingness in the Senate Chamber. It might not be deemed wise by all to abolish the Senate, as proposed by Mr. E. A. Lancaster, M. P. for Lincoln and Niagara, in a Bill introduced by him at the beginning of the present session, but, if retained, the wisdom of keeping in it only men who are independent, capable, active on occasion, and of undoubted usefulness to the country, surely stands above question.

People, Books and Doings

Canada has been receiving a musical treat during the past fortnight, such artists as Josef Lhevinne, called "the real Rubenstein II," Madame Marchesi, one of the queens of song, and Miss Gertrude Huntley, pianist, having appeared in some of the leading music-halls. Gertrude Huntley is a young St. Thomas, Ont., girl, who has for some years past been a pupil of the celebrated Moscovski, of Paris.

The Carnegie Institution has awarded a contract for the construction of a vessel to be known as the magnetic survey yacht "Carnegie," which will be built without the use of iron or steel, or any other magnetic metal, the propelling engines, machinery, etc., being composed chiefly of bronze. The vessel will be used to make an accurate magnetic survey of the ocean.

Cold is now recognized as a germ disease, and inoculation is being recommended as a preventive against it by some of the leading physicians of the larger cities.

Among many sayings of Napoleon, compiled by Mr. H. F. B. Wheeler in his recently-published book, "The Mind of Napoleon," the following may be quoted as of especial interest to British subjects: "Had I had an English army, I should have conquered the universe, for I could have gone all over the world without demoralizing my troops." . . . Of Blucher, the great soldier-emperor said: "The old devil has always attacked me with the same vigor; if he was beaten, an instant afterward he was ready again for the combat."

The poet Swinburne entertains a horror of tobacco. Upon one occasion he went into the Arts Club, and found somebody smoking in every room. "James the First," he said, finally, to those within earshot, "was a knave, a tyrant, a fool, a liar, a coward; but I love him, I worship him, for he cut off the head of the blackguard Raleigh, who invented this filthy habit of smoking."

A WOMAN'S GLORY IS HER HAIR.

A very remarkable fair has just been held at Limoges, in France. It is a market which is held annually, and is frequented by large numbers of girls, with their mothers, for the sale of their hair. They come from all parts of the Limousine, Auvergne, Quercy, La Vendee, Brittany, etc., the women of these Provinces being celebrated for the length, abundance and fineness of their hair. A number

of booths are erected in the place before the church, and in these the buyers from Paris, Berlin and Vienna, attended by experts, take their places. There are always large numbers of peasant girls in attendance, and it is very pathetic to watch their faces as they go from booth to booth to see where they can obtain the best prices for that which is their chiefest pride and adornment. The hair is of all colors and shades, from the golden tresses of the Bretonne and the rich chestnut of the Auvergnaise, to the raven black of the Limousine.—[T. P.'s Weekly.]

The Passing of the Pauper

Within the past year, Australia and Great Britain have grappled more or less successfully with the old-age pension problem, and now we have the fruits of a similar attempt, here in our own Canada, which was initiated during the Parliamentary session of 1908.

The information prepared for the public on this theme, and circulated for distribution by pamphlet in the middle of January, is, on the whole, a very highly-satisfactory revelation. Dominion Government annuities will not fail to become recognized as a boon without precedent; nor will they fail to become popular with the masses of the people.

The father of this comprehensive scheme is Sir Richard Cartwright himself, and as that Knight is nothing short of an Archimedes in his own way, there is assurance to begin with that the whole idea has been conscientiously and accurately calculated before submitting it to the public.

Perhaps the first point to be recognized—and it is a vital one—is the fact of the Government assuming complete responsibility for the annuitant, in precisely the same way as it does in the case of a post-office savings-bank depositor. Such security, of course, transcends, infinitely, anything that could be offered by an incorporated trust or life-assurance company. Before passing, it might be mentioned that the interest allowed the savings depositor is not as great as that guaranteed the annuitant by one per cent.—four per cent. being the annuity-fund rate; and, also, that all savings-bank accounts at present on the Government ledgers may be constituted at any time an annuity fund, bearing, upon transfer, the extra percentage.

The annuities offered range from fifty dollars to six hundred dollars. Payments as low as twenty-five cents per week may be made to secure them, and, as in the case of life-insurance policies, it is to the advantage of the annuitant to take out his contract at as early an age as possible.

The second great point is the absolute freedom from risks, as regards lapses of payments. If the contract cannot be carried out, provision is made for the return of all deposits, together with three per cent. interest thereon.

In case the annuitant dies before completion of the term of years specified in his contract, the deposits made constitute an insurance policy, virtually payable to his heirs or estate. Forfeiture for non-payment is

entirely obviated thus, and the life-insurance idea is a valuable one.

Unlike life-insurance, the annuities may be contracted for without medical examination, and at any age in life whatsoever. Though the majority of annuitants will be young people and "small-savers," immediate annuities are procurable at the advanced age of sixty and over, and the investment will attract, per se, many a man who is already provided for.

Such annuities cannot be seized for debt, or any liability. Once the specified age is reached, no condition whatsoever is imposed whereby the annuity could possibly be forfeited. It is paid in quarterly instalments until death, whether the annuitant live one year or thirty.

Deposits towards annuity funds may be made in weekly payments, or yearly, or at any interval between the two the depositor may see fit to choose, the total cost being the same in any case.

The conditions of contract being really drawn up to meet the poorer classes with open hands at every point, the options are numerous, and suited to every conceivable condition of private finance.

In illustration of the point, the reader may glance over the plans here given. Innumerable other schedules are at the service of the public.

PRESENT AGE 20—ANNUITY AT 60.

In case of death before 60, all payments made, with 3 per cent. compound interest, will be returned to the heirs.

\$100 is the income from \$2,000 invested at 5 p.c.	
\$100 annuity will cost 3 cts. a day, \$10.01 a year, a total of	\$ 400 40
\$200 is the income from \$4,000 invested at 5 p.c.	
\$200 annuity will cost 5½ cts. a day, \$20.02 a year, or a total of	800 80
\$300 is the income from \$6,000 invested at 5 p.c.	
\$300 annuity will cost 8¼ cts. a day, \$30.03 a year, a total of	1,201 20
\$400 is the income from \$8,000 invested at 5 p.c.	
\$400 annuity will cost 11 cts. a day, \$40.04 a year, a total of	1,601 60
\$500 is the income from \$10,000 invested at 5 p.c.	
\$500 annuity will cost 13¾ cts. a day, \$50.05 a year, a total of	2,002 00
\$600 is the income from \$12,000 invested at 5 p.c.	
\$600 annuity will cost 16½ cts. a day, \$60.06 a year, a total of	2,402 40

The principal, to be invested at 5 per cent., will first have to be obtained, while the annuity may be paid for in weekly, monthly, quarterly, half-yearly or yearly instalments, spread over the whole period, and requires about one-fifth the amount of capital to be invested.

How many men at 60 do you know who have \$2,000, \$4,000, \$6,000, \$8,000, \$10,000 or \$12,000 invested at 5 per cent.?

How many men at 20 do you know who could not save 3, 5½, 8¼, 11, 13 2-3 or 16½ cents a day if he were determined to do so?

LOOK AT IT IN ANOTHER WAY.

\$400.00 gives you an annuity of	\$ 100 00
\$400.00 invested at 5 p.c. gives an income of	20 00
\$800.00 gives you an annuity of	200 00
\$800.00 invested at 5 p.c. gives an income of	40 00
\$1,200.00 gives you an annuity of	300 00
\$1,200.00 invested at 5 p.c. gives an income of	60 00
\$1,600.00 gives you an annuity of	400 00
\$1,600.00 invested at 5 p.c. gives an income of	80 00

\$2,002.00 gives you an annuity of	500 00
\$2,000.00 invested at 5 p.c. gives an income of	100 00
\$2,402.40 gives you an annuity of	600 00
\$2,400.00 invested at 5 p.c. gives an income of	120 00

It is exceedingly interesting to note that the measure passed both Commons and Senate without debate. Perhaps this could be said of no other important bill on record in many years.

In conclusion, it is well to reflect that, unlike the old-age-pension scheme of Great Britain, which is only a colossal charity, this Canadian Government annuity proposition is largely self-supporting. For a considerable time, at least, the annuitant is using only his own funds, with 4 per cent. interest, returned to him. This period covers from four to ten years of annuities, according to age of annuitant on entering. Thus, the support is, to a great extent, mutual. No one will lose the smallest tittle of self-respect, apparently, in a scheme which is so purely of a business footing, and in no sense is it a pauper-pension proposition.

THE SPARTAN.

The Quiet Hour.

Choose Whom Ye Will Serve.

If it seem evil unto you to serve the Lord, choose you this day whom ye will serve. And the people said unto Joshua, "Nay; but we will serve the Lord."—Josh. xxiv. : 15, 21.

"When soldiers take their sovereign's fee, And swear his own to be, The royal badge on forehead bold They show to young and old. Nor may we hide for fear or shame The persecuted Name."

Usually I address myself more particularly to those who, like the great Apostle to the Gentiles, glory in the high vocation of a "servant of Jesus Christ." But to-day I should like to speak especially to those who are drifting easily along, without showing their colors plainly, perhaps thinking that there is no hurry about making a definite decision. When Joshua put the great choice before his people, saying: "Choose you this day whom ye will serve," the people did not hesitate to declare:

"God forbid that we should forsake the Lord, to serve other gods."

There seemed nothing doubtful about that reply, and yet Joshua was apparently still in doubt, for he says, "Ye cannot serve the Lord: for He is an holy God."

I think he was doubtful about their decision because it was made too easily; it was taken for granted, as a matter of course, that the Lord was their choice. There is the same danger now. We grow up in a Christian country, and it seems to be a matter of course that we shall consider ourselves Christians, and it is easy to drift comfortably through life without really making a choice at all. That position is very dangerous. Each of us must make his own choice, for Christ has said that anyone who is not on His side is against Him. The call is an individual one, and each must answer for himself, with earnest determination, unless he wants to find himself fighting against Christ.

In the ninth chapter of St. Luke's gospel we see how our Lord dealt with men who, in an easy-going fashion, were willing to consider themselves His followers. The first of three would-be disciples finds his eager declaration, "Lord, I will follow Thee whithersoever Thou goest!" met with the stern warning—a warning which must have seemed almost like a repulse—"Foxes have holes, and birds of the air have nests; but the Son of Man hath not where to lay His head."

Indeed, if a man wants to choose an easy service, he must follow a less-devoted Leader, not one who walks straight to the Cross.

The second man met the Master's call, "Follow Me!" with an appeal for delay, on the ground of family claims. He also was sternly told that the service of the Master of the world must precede and outweigh all other claims.

The third disciple was willing to follow Christ, but seemed to think there was no special hurry. He was told that one who chooses that service must be thoroughly in earnest, or else he is not fit for the Kingdom of God.

So, in saying to wavering souls, "Choose you this day whom ye will serve," I don't want you to think that the grand and glorious vocation of a follower of Christ should be undertaken lightly. A grand and glorious vocation is never an easy one. So, if your ambition is to live an easy life, don't choose the service of Christ. He calls for enthusiastic followers, men who, like St. Paul, press forward in spite of many warnings that bonds and afflictions await them, echoing his eager declaration: "None of these things move me, neither count I my life dear unto myself, so that I might finish my course with joy . . . for I am ready not to be bound only, but also to die at Jerusalem for the Name of the Lord Jesus."

Do you shrink back, thinking that you would rather choose an easier service? Why, Christ is calling many, noble natures by a call that is true to their deepest instincts. Even in a game, or a race, anyone who is worth anything is disappointed if the victory is won without effort. A short time since a reader of "The Farmer's Advocate" wrote approvingly of "Songs of a Sourdough," by R. W. Service, drawing special attention to "The Law of the Yukon." The book is calculated to fire the hearts of young men with the spell of "The Magnetic North"—and why? Because it vividly describes the difficulties that would seem to block the way.

"This is the law of the Yukon, and ever she makes it plain: Send not your foolish and feeble; send me your strong and your sane. Strong for the red rage of battle; sane, for I harry them sore; Send me men girt for the combat, men who are grit to the core."

Wild and wide are my borders, stern as death is my sway, And I wait for the men who will win me and I will not be won in a day; And I will not be won by weaklings, subtle, suave and mild, But by men with the hearts of vikings, and the simple faith of a child; Desperate, strong and resistless, untroubled by fear or defeat, Them will I gild with my treasure, them will I glut with my meat."

But, though Christ's service is not easy, it is most attractive. If anyone holds back, thinking that he wants to have "a good time" before he settles down and becomes religious, he is making a great mistake. No one in the world has such a good time as a whole-hearted, enthusiastic servant of Christ. Why, the word "joy" seems to be almost the exclusive property of the servants of God. There is a great deal about joy in the Old Testament, but in the New Testament it rings out like a chime of bells all the way through. Other people have a good time when everything is going prosperously, but the joy that Christ gives shines out in the darkness as well as in the sunshine. No one who knows anything about the pleasures of sin can doubt that the pleasure soon changes to misery. You only have to look in the faces of those who have yielded themselves servants to sin to see how restlessly unhappy they are, if they step for a moment out of the whirl of excitement which drowns the steady protest of conscience. No one can be really happy if his own noblest self is constantly accusing him. The deeper he goes the more difficult is the upward climb. Dr. Davidson says that a young medical student in Paris chose to enjoy the pleasures of sin, doing it deliberately, with his eyes open to the misery ahead. He said: "I know that I can enjoy life in my own way about so many years. I shall parcel out my money to last so long a time, and no longer. When my time is up, my revolver shall end all." And it was not many years before desperate misery induced him to try to "end all" in that sad fashion. Of

course he could not "end all" with any revolver, or in any other way. God gives us life without our choice, and we cannot escape from ourselves by stepping presumptuously over the threshold of this earthly probation.

No, if you want to enjoy life, don't choose too easy a path, if your conscience points straight to a harder one. Happiness does not grow on any road but the right one, and the wages of sin must be paid sooner or later. May I quote our "Canadian Kipling" again on this point?

"Time has got a little bill—get wise while yet you may, For the debit side's increasing in a most alarming way; The things you had no right to do, the things you should have done, They're all put down: it's up to you to pay for every one. So eat, drink and be merry, have a good time if you will, But God help you when the time comes, and you foot the bill."

Perhaps you think the service of Christ would interfere with your business. I think that is another great mistake. The best man of business is one whose word is trusted as readily as his oath; the man who always acts, as the common saying is, "on the square"—even to his own loss. He is the man who keeps his promises and never cheats. His goods are always what they profess to be, and he works just as well when his employer's eye is not on him. And a true servant of Christ, feeling that he is always working under his Master's eye, must therefore make a splendid man of business. Besides, if you want to succeed, it is well to be on the winning side, and "he always wins who sides with God." It is true enough that the blessing of the Lord "maketh rich, and He addeth no sorrow unto it." One word more—don't delay your choice. You are not mean enough to offer to God the dregs of your life, when you have the chance to pour out its treasures at His feet.

"Couldst thou in vision see Thyself the man God meant, Thou never more wouldst be The man thou art, content." DORA FARNOOMB.

Dear Hope,—I have been a constant reader of your paper; am more interested in the Home Magazine, which I always read with great pleasure, especially the "Quiet Hour," which brings, I am sure, comfort to many sad ones. I am delighted, too, that you have consented once more to publish poetry, as it always is so choice. Before closing, I would like to ask a favor: Would "Quiet Hour" kindly publish "The Wayward Son"? Some of the words are, "I know that I was wayward, dad, but I won't be any more." I heard it once recited, and just thought it would interest many of your readers. Hope I have not asked too much, as this is my first letter. Thanking you for your space. N. L.

Can any of our readers supply the desired poem? D. F.

With the Flowers.

Worms in Soil.

We have flowers (Geranium, Cactus, Primula) which are wormy at the roots. These worms are quite numerous, and injure the roots so that the plant dies. They are white in appearance, and have never seen them on the surface. Kindly let me know through "The Farmer's Advocate" how I can destroy these worms without injuring the plant. GEORGE SHUPE.

Waterloo Co., Ont.

White worms in the soil are usually introduced by the use of liquid manure prepared from barnyard manure, or by using barnyard soil for potting. To eradicate them, prepare lime water as follows: Take a lump of perfectly fresh lime as large as a cup, put it in a pail of water and let it dissolve. Finally pour off the clear water and thoroughly soak the soil with it.

The Beaver Circle.

The Results of the Competition.

In our competition on "How I Spent Christmas Day," the results were as follows:

Prizes, Senior Beavers:—Charlie McLean, Mayfair, Ont., and Elizabeth M. Wilson, Lucknow, Ont.

Prizes, Junior Beavers:—Jennie Kerr, Milverton, Ont., and Lulu Gardener, Cookstown, Ont.

The Honor Roll:—Mabel Payne, Molly, Mary O'Reilly, Helena Smiley, Laura McConnell, Luella Killough, Albert Berry, C. E. Ferguson, Bessie Spolm, Lulu McKenzie, Earl Berry, May Killough, Lottie Henfryn, Helen Teepell, Mabel Haskett, Neva Haskett, Annie Miller, Laura Betzner.

Luella Killough wrote an exceptionally good essay, but she did not keep to her "text," as nearly half of her composition told about the day before Christmas. Mary O'Reilly sent the neatest letter as regards writing, spelling and punctuation, but she might improve her composition by writing more naturally, and using fewer long words. The best teachers, you know, say never to use a long word if a short one of Saxon origin will bring out the meaning as well. She prefixed her essay by a very suitable selection from Sir Walter Scott, which we are holding over for next Christmas-time.

Molly, Yarmouth Centre, is also to be highly commended for her work.

How I Spent Christmas Day.

Essay I.

At the first dawn of day on Christmas morning I arose, and having dressed myself, came down stairs to light the fire. As I was about to begin my work, I heard a pattering of feet, and looking up I saw my little brother and sister coming out in their nightgowns to see what Santa Claus had brought them.

They found just the very things they longed the most for, and they did not forget to bring me a candy and a couple of peanuts apiece before scampering back to bed. My next work was to feed the stock, and I dressed as warmly as possible and went to the barn. I first turned my attention to the horses, and found all of them in a good condition. I next went to take a load of hay to my cow, which I kept in a box stall, and as I opened the door, oh! what a Christmas present did I see awaiting there for me! You cannot guess, so I will tell you. There, cuddled in a corner, lay a group of triplet calves. I was wild with delight, and dropping the hay into the manger, I ran to the house to tell my father, who was not long in getting out to tend them. They were very small, and we were afraid that if we left them with the cow she would step on them and kill them, so we got a big box and put them in it, and carried it to the house.

Everybody could do nothing but look at them, and it was late before we sat down to breakfast. After breakfast I milked the cow, and we got all of the calves to drink.

As soon as all the morning chores were finished, I came to the house and put on my Sunday clothes, as there were some people expected to dinner. When I was properly dressed, I sat by the fire and read till I saw the expected company coming. I then went out and put in their horse, and when I came back I found dinner waiting, so I sat down to a good dinner of roast turkey, potatoes, and all sorts of good things. After dinner I was given a beautiful fur cap for a present for raising such curious calves.

CHARLIE McLEAN.

Mayfair, Ont.

Essay II.

We awoke very early, and were surprised to find no Christmas gifts, but a bunch of spools at each of our beds. I had heard mother speak of hiding a gift and then attaching a spool to it, and twisting the thread all over the house. So I went up and followed mine. I was very much surprised to encounter one of the children in the hall following hers, and she was very much surprised to see me.

be seen wandering around industriously winding thread. At last we had all our presents gathered and the breakfast bell rang, so we had to hurry down.

After breakfast we had to hurry, for we were going to our auntie's for Christmas dinner, and it was a long drive. We girls helped mother to do the work, and soon we were all ready waiting for the sleigh to come, but, of course, at the last minute some person was unable to find gloves, mitts, and various other articles. At last we were safely seated in the sleigh. The air was beautifully clear and frosty. The night before there had been a heavy white frost, so the whole universe was transformed to a seemingly beautiful fairy world. As we glided along a saucy dog barked at us, seeming to think we were some outlandish creatures. As we passed through a wood we could not help expressing our joy in Christmas songs, everything seemed so bright and cheery.

At last we reached our auntie's, cold and hungry. Dinner was all ready waiting for us, and it certainly was a jolly meal.

After dinner we sat around, told stories and ate peanuts. At last somebody proposed going to the barn for a game of hide-and-seek, so away we went, and such foolish things we did. Some of us were unfortunate enough to land into a barley mow, and of course the barley beards stuck into our stockings, coats and hair. I surely thought I would never get them



A Sunshiny Boy.

Little son of Mrs. J. N. Franklin, Ettyville, Ont.

out. Then we all were weighed, and our weight marked on the wall, so that next Christmas we can compare weights.

Tired of hide-and-seek, we went to the house, little dreaming that we would be laughed at. Our uncle teased us about not knowing a barley mow when we saw one.

When we had nicely finished our tea, we were surprised to hear the door bell ring. Uncle went to the door, and then came back to the dining-room and told us that we were all wanted in the hall. Every person rushed out, eager to see who the Christmas visitor was, and there to our astonishment stood Santa Claus. After wishing us the season's compliments, he directed us to the parlors, where he told us that every person was to contribute to a Christmas programme. Well, we certainly had fun, for no person had come prepared; but we got through the programme all right. Then Santa Claus uncurtained the Christmas tree and distributed our Christmas presents. Shortly after this we had to leave. We arrived home at a very late hour, cold and tired, but well pleased with how we had spent Christmas.

ELIZABETH M. WILSON (age 14).

Lucknow, Ont.

The Junior Beavers.

Essay I.

A few days before Christmas I received an invitation from my cousins, living a few miles from Harriston. After receiving my mother's and father's consent, feeling quite happy, I prepared for the journey.

The next day I went on the morning train, and reached my uncle's place about ten o'clock, feeling very hungry and glad to see my two cousins, Rose and Harry.

After dinner we spent the afternoon in planning what we would do on Christmas and wondering what we would get.

We arose very early Christmas morn, and went down stairs to see if the good

old Santa had remembered us. To our great delight we found many pretty gifts displayed on the table, while our stockings were filled with candies and nuts. We spent the forenoon in examining our gifts and sleighriding, till we were called for dinner, which consisted of roast turkey, plum pudding, and many other toothsome things. We spent a very enjoyable afternoon out of doors. Harry had a large handsleigh, so the three of us coasted on the long hill behind the barn. Then we went into the house and played games till supper.

After supper we played games and told stories, one being about Christ, who was born on this day. Before retiring to bed we were treated to oranges, candies and nuts, and Harry, Rose and I all declared that we had spent a joyful Christmas. JENNIE KERR (age 10).

Milverton, Ont.

Essay II.

Dear Puck:—I have never written a letter to you before. As I often read the Beaver Circle, I thought I would write and tell you how I spent Christmas day. The first thing that we did was to get up and dress and come down stairs to see what Santa Claus brought us. He brought me a pencil-box and a ring, and some nuts and candies and oranges. Then breakfast was ready, and then we had to hurry up and get ready to go to grandpapa's. When we were ready we all got in the sleigh and started off.

It is about six miles to drive. We got there before dinner was ready, and we got more presents. We had goose for dinner, and it was nice. Then I watched the bigger people play games till tea time. We had lots of good things for tea, and some more candies and some nuts. We left there about half-past ten. I have two brothers and one sister younger than myself, and we all went to sleep in the sleigh, and did not know that we were home till father went to help us out. It was 12 o'clock when we went to bed, and we were very tired, so that's how I spent my Christmas.

LULU GARDENER (age 8).

Cookstown, Ont.



A Happy Family.

Beaver Circle Notes.

Laura McConnell (age 11), Harrow-smith, Ont., wishes some boys and girls of her own age to correspond with her.

Neva Haskett wishes to know if we ever give two prizes. Certainly, but not two at once, nor one right after another. We try to give all a chance, you know.

Lottie Thomson (age 10), Henfryn, Ont., would like some girls to correspond with her. She sent us some very good little drawings. We do not wish to publish any drawings now, but will give a drawing competition before very long.

A Cat Tale.

The little old woman to town would go To buy her a Sunday gown.

But a storm came up, and the wind did blow,

And the rain came pouring down;

And the little old woman, oh, sad to see!

In a terrible fidget and fret was she—

In a terrible fret was she!

The little old man was cross and cold,
For the chimney smoked, that day,
And never a thing would he do but scold
In the most unmannerly way.

When the little old woman said: "Listen
to me!"

He answered her nothing but "fiddle-dee-dee!"

No, nothing but "fiddle-dee-dee!"

Then she whacked the puggy-wug dog,
she did,

As asleep on the mat he lay;
For a puggy was he of spirit and pride,
And howled in a dismal way.

For a puggy was he of spirit and pride,
And a slight like that he couldn't abide—
He couldn't, of course, abide.

Then Muffin, the kitten, said, "Deary
me!

What a state of affairs is this!
I must purr my very best purr, I see,
Since everything goes amiss!"

So Muffin, the kitten, she purred and
purred,

Till, at last, the little old woman she
heard—

The little old woman she heard.

And she smiled a smile at the little old
man,

And back he smiled again,
And they both agreed on a charming
plan

For a walk in the wind and rain.
Then, hand in hand, to the market town
They went to look for the Sunday gown—
For the coveted Sunday gown.

Then the chimney drew and the room
grew hot,

And the puggy-wug dog and the cat
Their old-time quarrels they quite forgot,
And snuggled up close on the mat,

While Muffin, the kitten, she purred and
purred,

And there never was trouble again, I've
heard—

No, never again, I've heard!

—Saint Nicholas.

The Ingle Nook.

A Helpful Letter from Dapple Grey

Dear Dame Durden and Chatterers,—

How mean I should have felt had I not commenced this chat before reading the interesting letter sent by Jack's Wife. I, too, would repeat her question, "Is it not strange that so many come to the Ingle Nook for advice, yet never come back to tell that they were benefited by the advice?" Although I am one who asked, and received more than I expected, yet I never lost sight of the idea that I wanted to come again to thank those who contributed so many useful hints for me re house-building. Here, let me say, that I owe the Ingle Nook and "The Farmer's Advocate" almost all the praise for the complete plan of our new house, and I assure you that it is the opinion of others that it is complete, without unnecessary. If requested, I will cheerfully furnish the plan for "The Farmer's Advocate," and, in the meantime, will give no further suggestion than to simply advise him who intends to build and install a furnace, to see that you consult the furnace-dealer before you build the cross-walls in your cellar. Experience taught us this when it was too late.

After we had our plan thoroughly to our liking, we found it most satisfactory to spend five dollars to have an architect to draw out our plan to a scale, and also to write out all specifications for the building. This we found invaluable when misunderstandings or disagreements arose.

I did not think it a mean trick of Dame Durden to introduce that new baby to us. It only created a new interest among the shades for the mothers. Now, rather than try to help you out by advice, as our good Dame suggested, I just wish, instead, I could run in on you two or three times a week and give you a helping hand, or if you would allow me, I would like ever so much to carry that precious bundle home with me for a few hours and give you a chance to "dig in." But as I can do neither, I only hope that if there are any of those girls who just stay at home in your neighborhood, that they will read this and take the hint. I sincerely wish our Canadian girls would realize that, although we live in a country so prosperous that they are not obliged to hire out for a living, yet

it is a Christian act to help the over-busy housewife and mother when hired help cannot be obtained. What say others? However, my dear, if at times you get almost overwhelmed with cares, remember, "We maun be patient." Is that right, Scottie? It is well on such occasions to count your many blessings. Every care will fly, and you will be singing as the days go by.

Now for a few hints for wash-day, and then farewell.

1. If you wish to iron immediately after folding clothes, sprinkle with warm water.

2. A little salt in the starch prevents the iron from sticking.

3. It makes table linen shine to rub it over with a slightly damp cloth before the iron.

Again thanking the Chatterers all for the many helpful hints I receive, I again disappear among the shades.

DAPPLE GREY.

Don't stay so long among the shades again, Dapple Grey. We want you right out among us; we are not willing even to "lend you to a lady many miles away." You have told us some things worth hearing this time, and we are sure you can again. I am delighted to hear that "The Farmer's Advocate" helped you so much in planning your new house, and I am sure we shall all be more than delighted to have you give us the plan and all the details. Of course, since variety is the spice of life, we would not have all the houses built to one plan—we believe that personality should be expressed in houses almost as distinctly as in faces—but at the same time we are sure that many will find "ideas" in your plan which they can well incorporate in their own, little conveniences that might not be thought of otherwise. And then, Dapple Grey, how pleased you will be to think that you have, perhaps, saved steps for tired women all our country over. I wish more people were as generous as you.

Some Experiences.

Dear Dame Durden,—It is so long since the spirit moved me to write to the Chatterers that my shade was not even visible at the Yuletide gathering, so I fear I am long since forgotten. But, if forgotten, "Holly" is not gone, and I can assure you has been thoroughly enjoying the conferences of Dame Durden and her Chatterers.

I am especially interested in all news gleaned of Women's Institute work, and before long I intend writing you something of the profit and pleasure we are deriving from our district and branch work in our county.

Will some of you write and give us your experience re packing eggs, particularly by the sodium silicate (water glass) method? I tried water glass for the first time this last fall. Into a solution of one part water glass to four of boiled and cooled water, I placed ten dozen eggs. For about two months the eggs kept perfectly. After that the albumen became very watery, and the eggs developed a very disagreeable odor. I would like to hear if others have had any greater success with this method.

By the by, Chatterers, when you are cleaning a light waist by washing in gasoline, don't forget to remove the shields before washing, or you will experience the failure I did. The gasoline dissolves a gluey substance used in the shields, which washes into the material, ruining it.

We are among the lucky number to receive the free rural mail delivery. This is one more step in solving the problem of how to keep our young people on the farm. When we have reached the stage of rural 'phones, rural mail delivery, and also parcel delivery, there are few reasons left to advance in favor of city life over country life.

HOLLY.

Oxford Co., Ont.

You very naughty Holly! We shall expect a big garland of you next Yuletide, and a few sprigs between times. What say you?

And now about those eggs—of course, we want to hear the experiences of those who have tried water glass, but in the meantime, I want to give you a hint as to how one of the best little housekeepers I know manages them. Every fall, before eggs get dear, she buys enough for the winter—good, perfectly fresh ones—rubs each carefully with lard to exclude the air, and packs the lot in boxes of

dry bran, small end down; then she sets the boxes away in a cool, dry place, and that is all there is to it. When fresh eggs were 35 cents a dozen this winter, I ate one of those lard-smearing specimens and did not dream, until told afterwards, that it was not one of the precious thirty-five-centers. Really, when the thing may be done so easily, I see little use of fussing with water glass, do you?

Meat Pie.

Contributed by "Joe's Partner," who also wishes to thank the Chatterers for all the help they have given her:

Use cooked meat of any kind. Take the same quantity of meat and potatoes, chop with the chopper, and boil in gravy. Season with salt, pepper, and any other seasoning desired. Make short-cake dough and roll thin, then make pies in pie plates. These are real nice for supper or Sunday dinner.

"JOE'S PARTNER."

Huron Co., Ont.

The "Farmer's Advocate" Fashions.



6236 Teddy Bear Night D-wers. 2 to 8 years.



6239 Infant's Bag Night Gown. One Size.



6235 Blouse or Shirt. Waist, 32 to 42 bust.

The above patterns will be sent to any subscriber at the very low price of ten cents per pattern. Be careful to give Correct Number and Size of Patterns Wanted. When the Pattern is Bust Measure, you need only mark 32, 34, 36, or whatever it may be. When Waist Measure, 22, 24, 26, or whatever it may be. When Misses' or Child's pattern, write only the figure representing the age. Allow from one to two weeks in which to fill order, and where two numbers appear, as for waist and skirt, enclose ten cents for each number. If only one number appears, ten cents will be sufficient.

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"I am so filled with enthusiasm over Diamond Dyes and the help they have been in keeping my children, Dorothy and Edna, well dressed, that I want other mothers to know the real pleasure found in using them, as well as the saving. I have never had a failure, and have colored wool, silk, cotton and mixed materials—using, of course, the Diamond Dyes for wool or Diamond Dyes for cotton, according to the material I was coloring. I have just colored some little dresses and suits for the children, and the things look as well as if they were newly bought.

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The problem of dressing well is simple and inexpensive with the help of Diamond Dyes.

Old dresses can be made bright and new and up-to-date again.

Waists can be recolored and made over into new stylish creations.

Partly-worn clothes can be ripped up, dyed and made into skirts, waists, or something for the children.

Faded curtains or portieres can be colored some pretty shade and made to look like new.

Old spotted or faded ribbons can be colored and made bright and beautiful.

Laces, trimmings, etc., can be dyed to match your dresses.

Rugs and carpets can be made to look like new.

Hundreds of other things can be done with Diamond Dyes to solve the dressing problems and brighten the home.

The New Diamond Dye Annual tells of these things and many more Diamond Dye secrets.

Important Facts About Goods to be Dyed:

Diamond Dyes are the Standard of the World, and always give perfect results. You must be sure that you get the real Diamond Dyes, and the kind of Diamond Dyes adapted to the article you intend to dye.

Beware of imitations of Diamond Dyes. Imitators who make only one kind of dye, claim that their imitations will color Wool, Silk or Cotton ("all fabrics") equally well. This claim is false, because no dye that will give the finest results on Wool, Silk, or other animal fibres, can be used as successfully for dyeing Cotton, Linen, or other vegetable fibres. For this reason we make two kinds of Diamond Dyes, namely: Diamond Dyes for Wool, and Diamond Dyes for Cotton.

Diamond Dyes for Wool cannot be used for coloring Cotton, Linen, or Mixed Goods, but are especially adapted for Wool, Silk, or other animal fibres, which take up the dye quickly.

Diamond Dyes for Cotton are especially adapted for Cotton, Linen, or other vegetable fibres, which take up the dye slowly.

"Mixed Goods," also known as "Union Goods," are made chiefly of either Cotton, Linen, or other vegetable fibres. For this reason our Diamond Dyes for Cotton are the best dyes made for these goods.

Diamond Dye Annual—Free. Send us your name and address (be sure to mention your dealer's name, and tell us whether he sells Diamond Dyes), and we will send you a copy of the New Diamond Dye Annual, a copy of the Direction Book, and samples of dyed cloth, all FREE.

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MEDICATED EAR DRUM.

Pat. July 15, 1909.

The Golden Dog

(Le Chien D'Or.)

A Canadian Historical Romance.

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CHAPTER VII.—Continued.

The Intendant in great voice led off a macaronic verse of Moliere, that had often made merry the orgies of Versailles:

“Bene, bene, bene, respondere!
Dignus, dignus es, entrare
In nostro læto corpore.”

A tintamarre of voices and a jingle of glasses accompanied the violins and tambours de Basque as the company stood up and sang the song, winding up with a grand burst at the chorus:

“Vivat! vivat! vivat! cent fois vivat!

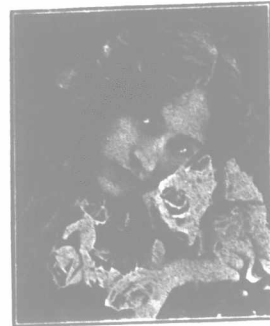
Novus socius qui tam bene parlat!
Mille mille annis et manget et bibit,
Fripet et friponnat!”

Hands were shaken all round, congratulations, embracings, and filthy kisses showered upon Le Gardeur to honor his admission as a partner of the Grand Company.

“And now,” continued Bigot, “we will drink a draught long as the bell rope of Notre Dame. Fill up brimmers of the quintessence of the grape, and drain them dry in honor of the Friponne!”

The name was electric. It was, in the country, a word of opprobrium, but at Beaumanoir it was laughed at with true Gallic nonchalance. Indeed, to show their scorn of public opinion, the Grand Company had lately launched a new ship upon the Great Lakes to carry on the fur trade, and had appropriately and mockingly named her “La Friponne.”

The toast of La Friponne was drunk with applause, followed by a wild bacchanalian song.



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SUPERFLUOUS HAIR. Moles, Warts, etc., always eradicated forever by our reliable method of Electrolysis. Satisfaction assured.

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Send stamp for descriptive booklet “F,” and ask us for any information desired regarding your skin, etc. Established 1892.

HISCOTT DERMATOLOGICAL INSTITUTE, 61 College Street, 1 Toronto Ontario.

A Woman's Sympathy

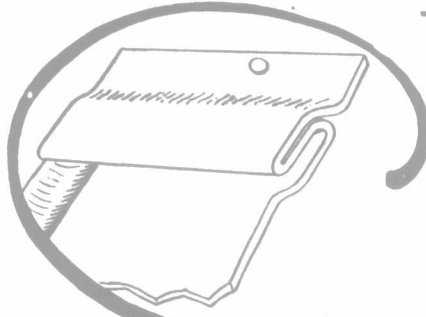
Are you discouraged? Is your doctor's bill a heavy financial load? Is your pain a heavy physical burden? I know what these mean to delicate women—I have been discouraged, too; but learned how to cure myself. I want to relieve your burdens. Why not end the pain and stop the doctor's bill? I can do this for you and will if you will assist me.

All you need do is to write for a free box of the remedy which has been placed in my hands to be given away. Perhaps this one box will cure you—it has done so for others. If so, I shall be happy and you will be cured for 2c (the cost of a postage stamp). Your letters held confidentially. Write to-day for my free treatment. MRS. F. E. CURRAH, Windsor, Ont.

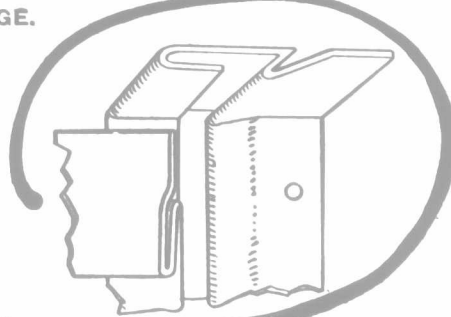
PLEASE MENTION THIS PAPER.

“Galt” Shingles

THIS IS THE SHEET METAL AGE.



To have been first shows antiquity—to have become first proves merit. The new “Galt” Shingle owes its enormous popularity and sales—not to the age, but to the brains of its inventors and makers.

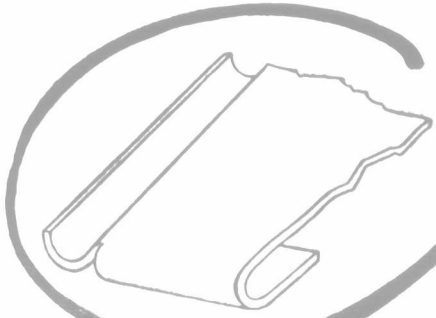


Our claims for the “Galt” Shingle are firmly based on the superiority of its constructional features here illustrated.

We originated the Gale-proof, Closed-end side lock. We perfected the continuous interlocking, over-lapping, easy-fitting and invisible top lock.

We use only the Best British Galvanized Steel Plates—there are none better. Our bold Gothic Tile pattern is very handsome in appearance.

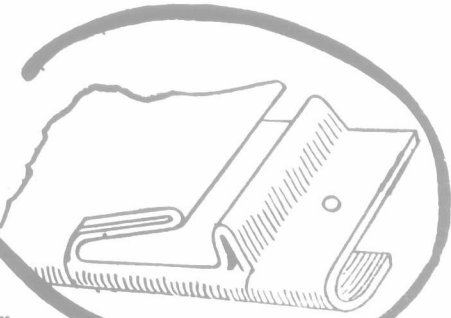
“Galt” Shingles are accurately made, which insures quick and easy application. Covered nailing flanges at both top and sides insures strength and rigidity.



Pronounced by roofing experts to be the most perfect shingle ever made.

They cost no more than the others.

We have a lot more to tell you about them in Catalog “B-3”—ask for it.



THE GALT ART METAL CO., LIMITED, GALT, ONT.

Sales and Distributing Agents: Dunn Bros., Winnipeg and Regina.

The Sieur Morin had been a merchant in Bordeaux, whose bond was held in as little value as his word. He had lately removed to New France, transferred the bulk of his merchandise to the Friponne, and become an active agent of the Grand Company.

“La Friponne!” cried he; “I have drunk success to her with all my heart and throat; but I say she will never wear a night-cap and sleep quietly in our arms until we muzzle the Golden Dog that barks by night and by day in the Rue Buade.”

“That is true, Morin!” interrupted Varin. “The Grand Company will never know peace until we send the Bourgeois, his master, back to the Bastille. The Golden Dog is—”

“Damn the Golden Dog!” exclaimed Bigot, passionately. “Why do you utter his name, Varin, to sour our wine? I hope one day to pull down the Dog, as well as the whole kennel of the insolent Bourgeois.” Then, as was his wont, concealing his feelings under a mocking gibe, “Varin,” said he, “they say that it is your marrow bone the Golden Dog is gnawing—ha! ha! ha!”

“More people believe it is your Excellency's!” Varin knew he was right, but aware of Bigot's touchiness on that point, added, as is the wont of panders to great men, “it is either yours or the Cardinal's.”

“Let it be the Cardinal's, then! He is still in purgatory, and there will wait the arrival of the Bourgeois, to balance accounts with him.”

Bigot hated the Bourgeois Philibert as one hates the man he has injured. Bigot had been instrumental in his banishment years ago from France, when the bold Norman count defended the persecuted Jansenists in the Parliament of Rouen. The Intendant hated him now for his wealth and prosperity in New France. But his wrath turned to fury when he saw the tablet of the Golden Dog, with its taunting inscription, glaring upon the front of the magazine in the Rue Buade. Bigot felt the full meaning and significance of the words that burned into his soul, and for which he hoped one day to be revenged.

“Confusion to the whole litter of the Golden Dog, and that is the party of the Honnetes Gens!” cried he. “But for that canting savant who plays the Governor here, I would pull down the sign and hang its master up in its stead to-morrow!”

The company now grew still more hilarious and noisy in their cups. Few paid attention to what the Intendant was saying. But De Repentigny heard him utter the words, “Oh, for men who dare do men's deeds!” He caught the eye of De Repentigny, and added, “But we are all cowards in the Grand Company, and are afraid of the Bourgeois.”

The wine was bubbling in the brain of Le Gardeur. He scarcely knew what the Intendant said, but he caught the last words.

“Whom do you call cowards, Chevalier? I have joined the Grand Company. If the rest are cowards, I am not; I stand ready to pluck the peruke off the head of any man in New France, and carry it on my sword to the Place d'Armes, where I will challenge all the world to come and take it!”

“Pish! that is nothing! give me man's work. I want to see the partner in the Grand Company who dare pull down the Golden Dog.”

“I dare! and I dare!” exclaimed a dozen voices at once in response to the appeal of the Intendant, who craftily meant his challenge to ensnare only Le Gardeur.

“And I dare; and I will, too, if you wish it, Chevalier!” shouted Le Gardeur, mad with wine, and quite oblivious of the thousand claims of the father of his friend, Pierre Philibert, upon him.

“I take you at your word, Le Gardeur! and bind your honor to it in the presence of all these gentle-

men," said Bigot, with a look of intense satisfaction.

"When shall it be done—to-day?" Le Gardeur seemed ready to pluck the moon from the sky in his present state of ecstasy.

"Why, no, not to-day; not before the pear is ripe will we pluck it! Your word of honor will keep till then?"

Bigot was in great glee over the success of his stratagem to entrap De Repentigny.

"It will keep a thousand years!" replied Le Gardeur, amid a fresh outburst of merriment round the board, which culminated in a shameless song, fit only for a revel of satyrs.

The Sieur Cadet lolled lazily in his chair, his eyes blinking with a sleepy leer. "We are getting stupidly drunk, Bigot," said he; we want something new to rouse us all to fresh life. Will you let me offer a toast?"

"Go on, Cadet! offer what toast you please. There is nothing in heaven, hell, or upon earth that I won't drink to for your sake."

"I want you to drink it on your knees, Bigot! pledge me that, and fill your biggest cup."

"We will drink it on all fours if you like! come, out with your toast, Cadet; you are as long over it as Father Glapion's sermon in Lent! and it will be as interesting, I dare say!"

"Well, Chevalier, the Grand Company, after toasting all the beauties of Quebec, desire to drink the health of the fair mistress of Beaumanoir, and in her presence, too!" said Cadet, with owlish gravity.

Bigot started; drunk and reckless as he was, he did not like his secret to be divulged. He was angry with Cadet for referring to it in the presence of so many who knew not that a strange lady was residing at Beaumanoir. He was too thoroughly a libertine of the period to feel any moral compunction for any excess he committed. He was habitually more ready to glory over his conquests than to deny or extenuate them. But in this case he had, to the surprise of Cadet, been very reticent, and shy of speaking of this lady even to him.

"They say she is a miracle of beauty, Bigot!" continued Cadet, "and that you are so jealous of the charms of your belle Gabrielle that you are afraid to show her to your best friends."

"My belle Gabrielle is at liberty to go where she pleases, Cadet!" Bigot saw the absurdity of anger, but he felt it, nevertheless. "She chooses not to leave her bower, to look even on you, Cadet! I warrant you she has not slept all night, listening to your infernal din."

"Then I hope you will allow us to go and beg pardon on our knees for disturbing her rest. What say the good company?"

"Agreed, agreed!" was the general response, and all pressed the Intendant vociferously to allow them to see the fair mistress of Beaumanoir.

Varin, however, proposed that she should be brought into the hall. "Send her to us, O King," cried he; "we are nobles of Persia, and this is Shushan the palace, where we carouse according to the law of the Medes, seven days at a stretch. Let the King bring in Queen Vashti, to show her beauty to the princes and nobles of his court!"

Bigot, too full of wine to weigh scruples, yielded to the wish of his boon companions. He rose from his chair, which in his absence was taken by Cadet. "Mind," said he, "if I bring her in, you shall show her every respect."

"We will kiss the dust of her feet," answered Cadet, "and consider you the greatest king of a feast in New France or Old."

Bigot, without further parley, passed out of the hall, traversed a long corridor, and entered an ante-room, where he found Dame Tremblay the old housekeeper, dozing on her chair. He roused her up, and

bade her go to the inner chamber to summon her mistress.

The housekeeper rose in a moment at the voice of the Intendant. She was a comely dame, with a ruddy cheek, and an eye in her head that looked inquisitively at her master as she arranged her cap and threw back her rather gay ribbons.

"I want your mistress up in the great hall! Go summon her at once," repeated the Intendant.

The housekeeper courtesied, but pressed her lips together as if to prevent them from speaking in remonstrance. She went at once on her ungracious errand.

CHAPTER VIII.

Caroline de St. Castin.

Dame Tremblay entered the suite of apartments and returned in a few moments, saying that her lady was not there, but had gone down to the secret chamber, to be, she supposed, more out of hearing of the noise, which had disturbed her so much.

"I will go find her, then," replied the Intendant; "you may return to your own room, dame."

He walked across the drawing-room to one of the gorgeous panels that decorated the wall, and touched a hidden spring. A door flew open, disclosing a stair heavily carpeted that led down to the huge, vaulted foundations of the Chateau.

He descended the stair with hasty though unsteady steps. It led to a spacious room, lighted with a gorgeous lamp that hung pendant in silver chains from the frescoed ceiling. The walls were richly tapestried with products of the looms of the Gobelins, representing the plains of Italy filled with sunshine, where groves, temples, and colonnades were pictured in endless vistas of beauty. The furniture of the chamber was of regal magnificence. Nothing that luxury could desire, or art furnish, had been spared in its adornment. On a sofa lay a guitar, and beside it a scarf and a dainty glove fit for the hand of the fairy queen.

The Intendant looked eagerly round as he entered this bright chamber of his fancy, but saw not its expected occupant. A recess in the deep wall at the farthest side of the room contained an oratory with an altar and a crucifix upon it. The recess was partly in the shade. But the eyes of the Intendant discerned clearly enough the kneeling, or rather the prostrate, figure of Caroline de St. Castin. Her hands were clasped beneath her head, which was bowed to the ground. Her long, black hair lay dishevelled over her back, as she lay in her white robe, like the Angel of Sorrow, weeping and crying from the depths of her broken heart. "Lamb of God, that taketh away the sins of the world, have mercy upon me!" She was so absorbed in her grief that she did not notice the entrance of the Intendant.

Bigot stood still for a moment, stricken with awe at the spectacle of this lovely woman weeping by herself in the secret chamber. A look of something like pity stole into his eyes; he called her by name, ran to her, assisted her to rise, which she did, slowly turning towards him that weeping, Madonna-like face which haunts the ruins of Beaumanoir to this day.

She was of medium stature, slender and lissome, looking taller than she really was. Her features were chiselled with exquisite delicacy; her hair of a raven blackness, and eyes of that dark lustre which reappears for generations in the descendants of Europeans who have mingled their blood with that of the aborigines of the forest. The Indian eye is preserved as an heirloom, long after all memory of the red stain has vanished from the traditions of the family. Her complexion was pale, naturally of a rich olive, but now, through sorrow, of a wan and bloodless hue—still very beautiful, and more appealing than the rosiest complexion.

Caroline de St. Castin was an Acadienne of ancient and noble

family, whose head and founder, the Baron de St. Castin, had married the beautiful daughter of the high chief of the Abenaguais.

Her father's house, one of the most considerable in the Colony, had been the resort of the royal officers, civil and military, serving in Acadia. Caroline, the only daughter of the noble house, had been reared in all the refinements and luxuries of the period, as became her rank and position both in France and her native Province.

In an evil hour for her happiness this beautiful and accomplished girl met the Chevalier Bigot, who, as Chief Commissary of the Army, was one of the foremost of the royal officers in Acadia.

His ready wit and graceful manners pleased and flattered the susceptible girl, not used to the seductions of the polished courtesies of the motherland of France. She was of a joyous temper—gay, frank and confiding. Her father, immersed in public affairs, left her much to herself, nor, had he known it, would he have disapproved of the gallant courtesies of the Chevalier Bigot. For the Baron had the soul of honor, and dreamt every gentleman as well as himself possessed it.

(To be continued.)

Tommy—Pa, what is an equinox. Pa—Why, er—it is—ahem! For goodness sake, Tommy, don't you know anything about mythology at all? An equinox was a fabled animal, half horse, half cow. Its name is derived from the words "equine" and "ox." It does seem as if these public schools don't teach children anything nowadays!

The Value and Economy of Bovril

In BOVRIL is concentrated all the stimulating and flavoring qualities of beef plus the Fibrin and Albumen.

These elements give to BOVRIL its high nutritive value and make it different from meat extracts.

A 1-lb. bottle will make 50 cups of nourishing bouillon at a cost of 3/4 cts. each.

ORDER BOVRIL NOW. 97

TOWER'S FISH BRAND WATERPROOF OILED GARMENTS

are cut on large patterns—designed to give the wearer the utmost comfort

LIGHT-DURABLE CLEAN AND GUARANTEED WATERPROOF

SEE THE GARMENT YOU WISELY CHOOSE THE SIGN OF THE FISH

TOWER CANADIAN CO. TORONTO CAN.



More bread and Better bread —And the Reason for it

A STRONG FLOUR can only be made from strong wheat. Manitoba hard wheat is acknowledged the strongest in the world—and that is the kind used for Purity Flour.

Of course this special process is more expensive to operate but it means a lot to Purity flour users—that's why we use it.

But that's not all. Every grain of this wheat contains both high-grade and low-grade properties. In separating the high-grade parts from the low-grade the Western Canada Flour Mills put the hard wheat through a process so exacting that not a single low-grade part has the remotest chance of getting in with the high-grade.

It means that Purity Flour is made entirely of the highest-grade flour parts of the strongest wheat in the world.

It means a high-class, strong flour and therefore yields "more bread and better bread."

Purity may cost a little more than some flours, but results prove it the cheapest and most economical after all.

PURITY FLOUR

WESTERN CANADA FLOUR MILLS COMPANY, LIMITED
MILLS AT WINNIPEG, GODERICH, BRANDON




DISPERSION SALE!

31 Head Registered Jersey Cattle
19 Head High-grade Jersey Cattle

AT BRIDGEPORT, TWO MILES FROM BERLIN, ONTARIO.

THURSDAY, MARCH 4TH

Sale of cattle commences at 1 o'clock. All will be sold without reserve, as the proprietor is giving up farming. Farm implements, dairy utensils, etc., will be sold in the forenoon. Terms: All sums of \$10 and under, cash; above that sum, 6 months' credit on approved security. Catalogues ready Feb. 15th. Cars on the Bridgeport and Berlin R. R. leave Berlin every hour

Jas. McDonald, Guelph.
J. W. Davey, Berlin.
H. B. Doehring, Waterloo.

Aucts. R. Reid, Prop., Berlin, Ont.

"Leader" Fence

Has the Double Grip Lock

Don't buy wire fence until you've seen our new woven fence which is so vastly superior that we have appropriately named it the Leader. It is a hard steel wire fence, heavily galvanized—both laterals and stays No. 9.

But the "Leader" Lock—that is the really great improvement. It has the double grip—makes twice as strong a binding—twice as strong and durable a fence. Of

Frame & Hay Fence Co., Ltd., Stratford, Canada

course, it takes more wire, but it makes a fence so much better that it will be that much easier to sell. Will give such genuine satisfaction that we are certain of repeat orders from all purchasers

Will You Sell "Leader" Fence For Us

in your locality? Also act as our representative for our complete line of farm and ornamental fence and gates? Write to-day for our money-making proposition.

RAW FURS

100,000 MUSKRAT
5,000 RED FOXES

50,000 COON
20,000 SKUNK

WANTED IMMEDIATELY. WE ALSO BUY OTHER FURS. Ship to us at once and satisfy yourself that WE are the VERY BEST buyers of Raw Furs in Canada.

THE MONTEITH, STROTHER FUR CO., 11 & 13 CHURCH ST. TORONTO



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.

CHOICE farm for sale, County of Welland. 117 acres; 25 acres in bush. Brick house (eleven rooms) and outbuildings in good condition. Well watered. Possession arranged. A bargain. R. F. Argles & Co. 6 King St., West, Toronto.

FOR SALE—Cedar posts and shingles, hemlock boards and joists. Can quote close figures delivered on cars at railway stations. Bradley Company, Hamilton, Ont.

FOR SALE—One of the best farms in Elgin Co. 100 acres. 20 acres hardwood timber. 5 miles from St. Thomas. All conveniences. For all particulars apply to Box 79, Fingal, Ont.

FOR SALE—275 acres in the County of Oxford, Township of Blenheim. This farm is one of the best in the Township. Fine stone house. Large barn. Silo. Everything up-to-date. Forty acres wheat. Come and see it. Walter Hall, Washington, Ont.

TO RENT—200 acres. Dairy and grain farm. Good buildngs. Spring water. 5 miles to Ingersoll Condenser. Apply: A. J. Montague, McWilliams, Ont.

WANTED—Hard maple logs, 22 inches and over diameter small end, 10 to 16 feet long. Will inspect, pay cash at railway track. Bradley Company, Hamilton, Ont.

WANTED—Married man for a farm near London. Experienced; good with stock. Free house. Apply, stating age, wages, etc., to: McFarmer's Advocate, London.

WANTED—A situation by a married man on a stock farm. Good milker. References if required. State wages and privileges. John Bellis, Byron, Ont.

WANTED—To hire with farmer as experienced help by highly respectable single man; willing to go any distance. Disengaged as soon as wanted. Apply first by letter to: A. P. O. Box 336, Brampton Ont.

WANTED A THE DELHI TANNERY Hides, Skins and Furs to tan for Robes, Coats and Gauntlets Mitts, etc. Tanned soft and pliable. Never get hard. B. F. BELL, DELHI, ONTARIO

MR. A. I. HICKMAN Court Judge, Egerton, Kent, England, exports to all parts of the world every description of live stock of every description to all parts of the world. During the spring months the export of heavy horses will be a special feature. For more particulars and to learn how to get to the King's Head Hotel, Egerton, will be at the Bell Hotel, Egerton, during the week of the King's Head Hotel, Egerton, to meet all foreign orders.

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 50 cents.

BELL'S Rose-comb White Leghorns have won the silver cup for the best collection at the Provincial Winter Fairs, Guelph, 1906, 1907 and 1908. Some choice birds for sale in cockerels and hens. Eggs in season, \$2 per 15; \$5 per 45. Incubator lots a specialty. All birds have free farm range. W. I. Bell, Angus, Ont.

BREEDER of high-class Barred Plymouth Rocks. Choice stock for sale at times. Eggs in season. Leslie Kerns, Freeman, Ont.

BEAUTIFUL White Leghorn cockerels, S-comb laying strain, \$1.25 each. Satisfaction guaranteed. A. E. Donagh, Colborne, Ont.

CHOICE White Wyandotte cockerels and pullets at reasonable prices. W. D. Monkman, Bond Head, Ont.

EGGS—S-C. Black Minorcas. They are winners of three silver cups and specials at late shows. They are true sitting kind. Eggs per 13. \$2. A. Goebel, Mitchell, Ont.

EGGS—High class S-C. Pure White Leghorns; winners every time shown. Winners of silver cups of the late shows. \$2.50 per 15. Young stock for sale. 200 to choose from. Address: Wm. Jacob, Mitchell, Ont.

FOR SALE—Some choice White Wyandotte cockerels. Apply: Wm. E. Robertson, Eveston, Ont.

FREE 1909 poultry catalogue. Describes and prices 45 varieties land and water fowl. S. A. Hummel, Box 23, Freeport, Illinois.

MAMMOTH Bronze turkeys. Show birds. Bred from prizewinning heavyweight stock. Young toms 22 to 27 lbs. Pairs not akin. R. G. Rose, Glanworth, Ont.

ROSE and Single-comb Black Minorcas. Barred Plymouth Rocks and Brown Leghorns. All of excellent quality. Order your eggs now, or send for circular free. A few cockerels left. Mrs. C. Day, Highgate, Ont.

WHITE Wyandottes for sale. A few pullets from prizewinning stock. Eggs in season. Also Partridge Wyandotte eggs. A. Mutton & Son, Mitchell, Ont.

WANTED—Poultry, all varieties. Correspondence solicited. Address: C. W. Lee, Onondaga, N. Y.

WHITE Rock eggs for sale, also a few cockerels. Apply to Howard Smith, Winona, Ont.

WHITE Plymouth Rock cockerels. Satisfaction guaranteed or your money refunded. J. R. Davis, Alton, Ont.

SUBSCRIBE FOR "THE FARMER'S ADVOCATE AND HOME MAGAZINE."

QUESTIONS AND ANSWERS.

- 1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.
- 2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
- 3rd.—In Veterinary questions the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.
- 4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

MAMMITS, ETC.

Cow's udder is badly swollen, and she does not give her milk freely, and if we do not milk her, the milk runs from her. What is the cause? A. B. McK.

Ans.—Give her a purgative of 2 lbs. Epsom salts and 1 oz. ginger. Bathe the udder well four or five times daily with hot water, and, after bathing, rub well with camphorated oil. Milk her three times daily. The cause of the escape of milk when milking is neglected, is the pressure of the milk overcoming the resistance of the sphincter muscles at the point of the teat. It is well the milk escapes under such conditions, as, if it did not, it would produce inflammation of the udder. It is quite probable the neglect mentioned is the cause of the inflammation and swelling now present.

MISCELLANEOUS.

1. Yearling draft colt's legs swell. I gave him a ball, but it did not reduce the swelling. I am feeding cut oat sheaves.
2. In what proportions should crude carbolic acid and salt be used for abortion in cows?
3. What mixture of acids or other drugs will turn the hair on a horse's face white?
4. Do rusty oats affect a horse's kidneys?

Ans.—1. Give him another purgative ball, and follow up with 40 grains iodide of potassium, twice daily. Feed on good hay, a little rolled oats and bran, and a few raw roots, daily, and see that he gets considerable exercise daily.

2. It depends upon the amount of salt a cow will take. She should have about 1 1/4 drams, or 90 drops, twice daily. I should think the proper proportions would be about 1 dram of carbolic to an ounce of salt, or 1 to 8. This assumes that the cow will take three ounces of salt daily. The better way is to give 40 drops of the refined carbolic acid, in a pint of cold water, as a drench, or sprinkled on her food twice daily.

3. I know of no mixture that will have this effect.

4. They have no special action on the kidneys, but are very liable to cause digestive derangement.

TRADE TOPIC.

BOVRIL, LTD.—Flotations of Subsidiary Company. It is reported by cable from London, Eng., that Bovril, Ltd., the large and widely-known manufacturers of concentrated beef preparations, have acquired control of large estates in the Argentine Republic, and that a company has been formed under the name of "The Argentine Estates of Bovril, Ltd.," with a capital of \$3,405,000 (700,000 pounds sterling). This company is organized in order to guarantee an unfailing source, and to insure an ample supply of highly-bred cattle for use in the manufacture of their well-known beef preparation, "Bovril." The estates are said to be among the finest grazing grounds in the world, comprising 438,082 acres, with 100,000 head of horned cattle, and two large factories, fitted with all the latest appliances for the preparation of the raw material used in the manufacture of Bovril. It is further stated that the parent company (Bovril, Ltd.) has engaged to take, as a minimum quantity, 30,000 head of cattle annually. This is supplementary to the large supplies already coming from the British Colonies. It is expected that this number will be greatly increased as the resources of the new company are developed.

The safest rule is never to take a horse away from the stables without taking along a blanket, as there is no telling when one will be needed.

Our Spring STYLE BOOK Will Be Sent Free on Request



WE WILL MAKE any garment shown in our catalogue to your own measurements, and forward free of all express charges, no matter in what part of Canada you may live. If, on receipt of your purchase you are not thoroughly satisfied, return to us at our expense and we will refund your money.

Our catalogue contains the very latest styles in Costumes, Dresses, Waists, Skirts, Raincoats, etc., and is sent free. Write for your copy to-day, and if you desire samples of materials, state colors preferred.

National Cloak & Costume Co. DEPT. A, St. Catherine and University Sts., MONTREAL, CAN.

Mail orders only. No agents or branches.



THE WONDERBERRY

A Luscious Berry Ripening in Three Months from Seed. Luther Burbank's Greatest Creation. PLUM blue-black like an enormous rich blue berry in looks and taste. Unsurpassed for eating raw, cooked, canned or preserved in any form. The greatest garden fruit ever introduced and equally valuable in hot, dry, cold or wet climates. Earliest plant in the world to grow successfully anywhere and yielding great masses of rich fruit all summer and fall and all winter in pots—(As a pot plant it is both ornamental and useful.) The greatest boon to the family garden ever known. Everybody can and will grow it. We are the sole introducers in all parts of the world and offer thousands of dollars in cash prizes for which see Catalogue.

Seed 20c. per packet, 3 packets for 50c.—Also our Great Catalogue of Seeds, Bulbs, Plants and New Fruits for 1909, free.

JOHN LEWIS CHILDS, Floral Park, N. Y.

QUESTIONS AND ANSWERS. Miscellaneous.

GESTATION PERIOD OF GOATS.

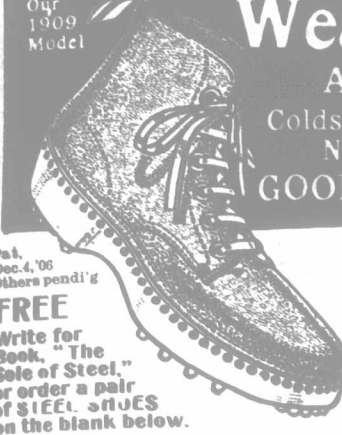
How long does a she goat take to come in after service? And how long before the kid can be weaned? How long can a goat be milked after the young ones are weaned, and how soon can she be bred again? Please oblige with particulars about goats. W. D. B.

Ans.—The period of gestation in goats is about 150 days, or 5 months. It is a good goat that will yield two quarts of milk for seven or eight months in a year. The kids may be weaned at two to three months old, or earlier, if fed from a bottle a portion of their mother's milk, and substituting a little bran, oats, oil meal, and good clover hay. As to amount of feed required, it is said that eight goats require about the same amount of food as one cow. Milch goats are very prolific, having many twins and triplets. They may be bred again first time in season after weaning the young.

Our 1909 Model

Wear STEEL SHOES

Absolute Protection Against
Colds, Rheumatism, Stiffness, Discomfort
No More Blistered, Aching Feet
GOOD-BYE to CORNS and BUNIONS!



Pat. Dec. 4, '06
Others pending

FREE
Write for Book, "The Sale of Steel," or order a pair of STEEL SHOES on the blank below.

shoe tops. Steel Shoes are shaped to fit the foot, and the rigid steel bottoms and sides force them to keep their shape. No warping, no twisting, no leaking possible. And they are light shoes, too.

HOW OUR 1909 MODEL STEEL SHOES ARE MADE. THE WONDERFUL STEEL BOTTOMS.

Steel Shoes solve the problem of the Perfect Work Shoe for all time to come.

The soles of Steel Shoes and an inch above the soles are stamped out of a special light, thin, rust-resisting steel. One piece of seamless steel from toe to heel. As a further protection from wear, and a means of giving a firm foothold, the bottoms are studded with adjustable steel rivets.

The adjustable steel rivets of the 1909 model Steel Shoes add the finishing touch of perfection. Practically all the wear comes on these steel rivets. When steel rivets wear down, you can instantly replace them with new rivets. And the rivets at the tip of toe and ball of foot are the only ones that wear. Steel Shoes never go to the Repair Shop, for there's nothing to wear but the rivets. And the Steel Shoes shed mud almost as easily as they shed water. The cost is only 30 cents for 50 extra steel rivets. No other repairs are ever needed.

The uppers are made of the very best quality of pliable waterproof leather, and firmly riveted to soles. There is greater strength and longer service and more foot comfort in steel shoes than in any other working shoes in existence. It's in the steel and the pliable leather, and the way they are put together.

Throw Away Rubber Boots, Felt Boots and "Arctics"!

Rubber or felt boots heat the feet and make them sweaty and tender. Nothing more uncomfortable or more harmful to the feet. One pair of Steel Shoes will outlast at least three pairs of felt or rubber boots.

A man who wears Steel Shoes doesn't have to own three different styles of working shoes. No arctics or felt boots necessary.

Secret of Steel Shoe Elasticity

Steel Shoes have thick, springy Hair Cushion Insoles, which are easily removable for cleansing and airing. They absorb perspiration and foot odors—absorb the jar and shock when you walk on hard or stony ground. They keep your feet free from callouses, blisters and soreness.

Steel Shoes Save Doctor Bills

Wear Steel Shoes and you need not suffer from Colds, Rheumatism, Neuralgia, Lumbago, Stiffness of the joints and other troubles and discomforts caused by cold wet feet. Keep your feet always warm, dry and comfortable in Steel Shoes. They protect your health and save doctor bills, while adding to your comfort.

Off With the Old, Rough, Wrinkled Leathers! On With the Comfortable STEEL SHOES!

There's more good wear in one pair of Steel Shoes than in three to six pairs of the best All-Leather Shoes. And comfort! The very first time you slip your feet into Steel Shoes, they feel fine. They need no "breaking in." And the longer you wear Steel Shoes the better you like them, for they keep your feet warm, dry and comfortable—though you work in mud or slush up to your feet, and the rigid steel bottoms and sides force them to "break in." And they are light shoes, too.

Low Prices on Steel Shoes

Sizes, 5 to 12. 6 inches, 9 inches, 12 inches and 16 inches high.

Steel Shoes, 6 inches high, \$2.50 a pair, are better than best all-leather \$3.50 shoes.

Steel Shoes, 6 inches high, extra fine grade of leather, \$3.00 a pair, excel any \$4.50 all-leather shoes.

Steel Shoes, 9 inches high, \$3.50 a pair, are better than the best all-leather \$5.00 shoes.

Steel Shoes, 12 inches high, \$5.00 a pair, are better than the best all-leather \$6.00 shoes.

Steel Shoes, 16 inches high, \$6.00 a pair, are better than the best all-leather shoes, regardless of cost.

One Pair of "Steels" Will Outwear 3 to 6 Pairs of Leather Shoes

The comfort of Steel Shoes is remarkable. Their economy is simply astounding! Practically all the wear comes on the rivets in the bottoms, and the rivets can be replaced very easily. Don't sweat your feet in rubber boots or torture them in rough, hard, twisted, shapeless leather shoes. Order a pair of Steel Shoes to-day. Sizes, 5 to 12.

Satisfaction or Money Back

We strongly recommend the 6-inch high, at \$3 a pair, or 9 inches, at \$3.50, as they give best satisfaction for general service.

In ordering, state size shoe you wear. Enclose \$3 a pair for 6-inch size, and the best and most comfortable working shoes you ever wore will promptly be shipped to you. Your money refunded if you are not delighted when you see the Steel Shoes. Send to-day.

Steel Shoe Co., Dept. 83, Racine, Wis.
Canadian Branch: Toronto, Can.

Order Blank for Steel Shoes

Steel Shoe Co., Dept. 83, Racine, Wis.

Gentlemen,—

I enclose..... for \$.....

in payment for..... pair Steel Shoes.

Size.....

Name.....

Town..... State.....

County..... R.F.D.....

TO FARMERS!

I am offering for seed, in limited quantities, as follows: 20th Century Oats, Six-rowed Barley, Mandscheuri Barley, Golden Vine Peas, No. 29 Field Peas. The No. 29 peas are good length of straw, very prolific, and mature about 10 days earlier than common field peas. Address:

W. P. Niles, Wellington, Ont.
Grower of Seed Peas and Beans.

GOSSIP.

Mr. Geo. D. Fletcher, of Green Grove Stock Farm, Binkham, Ont., in ordering change of advertisement, writes: "Our Shorthorns and Yorkshires are wintering nicely. I think we never had a better lot of calves, some of which are sired by our former stock bull, Imp. Joy of Morning, and some by our present stock bull, Imp. Benachie, which, I think, has the right quality and breeding to suit on the Joy of Morning heifers. Sales have been very good in Shorthorns this season, a few of which I wish to report. To Mr. A. M. Sawyer, Ancaster, a choicely-bred Nonpoint heifer, sired by Joy of Morning (Ont.). To J. E. Dyer, Garafraxa, the young imported Mount Royal, which has developed into a good show bull. To Messrs. John McFarlane and W. H. Ford, Sutton, Ont., the richly-bred Orange Blossom bull calf, sired by the

Duthie-bred bull, Imp. Joy of Morning, whose reputation is so well known as to need no comment; dam Blossom 2nd (imp.), which sold at the Markham sale for \$650. This bull calf is a sappy, growthy, straight-lined, even-fleshed, mellow-handling fellow, and with such choice breeding should make a valuable herd-head. We have a number of choice Yorkshires, either sex, of breeding age, for sale.

W. E. Leeson, Secretary of the East Elgin Horse-breeders' Association, Aylmer, Ont., announces in our advertising columns, that tenders will be received by him for the purchase of a Hackney stallion, Guelph Performer No. 89. For description see advertisement.

Never whip a horse while he is badly frightened.

The advertisement of Mr. W. E. Wright, of Glanworth, Ont., in this paper, offering Mammoth Bronze turkeys for sale, has brought him so many orders that he, too late for last week's issue, wrote us to cancel the ad., as he had then received orders for fourteen more birds than he could supply. He is now advertising Chester White pigs of various ages from his noted herd.

No matter how perfect the self-propelled vehicles may become, there will never be a time when a large proportion of the men on this globe will not take more pleasure in breeding horses and watching them develop than could be gotten by anyone from an inanimate machine, except in the occasional instance of a man whose mind has no room for the sentiment which causes most normally-balanced persons to love animals, particularly horses.

A richly-bred imported Clydesdale stallion, rising five years old, son of Pride of Blacon, and gr.-son of Baron's Pride, is advertised in this paper to rent for the season, by T. B. McCauley, Hudson Heights, Que., on easy terms. Mr. McCauley is importing Clydesdales and Hackneys, of which he has a number of typical representatives on hand, of most approved breeding, and his plan of renting any horses he has unsold is perhaps the nearest approach to a beginning of the British practice yet adopted in this country.

QUESTIONS AND ANSWERS. Miscellaneous.

WEAK STIFLES.

Recently I purchased a colt whose stifles appear to be weak. He is a very tall colt, standing over sixteen hands, and I think one reason they are weak is because of his rapid growth. He is coming three years old. Aside from a cracking noise when he travels, it apparently is all right. They do not appear to hurt him in the least. On one occasion he was ridden fifteen miles, which never affected him in the least. Please tell me if there is anything I can do for him.

R. W. T.

Ans.—Take 1½ drams each biniodide of mercury and cantharides and mix with 2 ozs. vaseline. Clip the hair off front and inside of joints and rub the blister well in. Tie so he cannot bite the parts. In 24 hours rub well again with the blister, and 24 hours later wash off with warm water and apply sweet oil. Let him loose in a well-bedded box stall. Keep as quiet as possible, and apply sweet oil every day. Blister every month in this way four or five times.

SPENT CARBIDE AS FERTILIZER.

Of what value per bushel, or ton, as a fertilizer, is the refuse from the manufacture of acetylene gas from calcium carbide? To what crops or soils is it suited, and how can it be most advantageously applied. Considerable quantities of this substance are now to be found at lighting plants in many localities, and information on the subject, through "The Farmer's Advocate," would be appreciated.

Middlesex Co., Ont.

Ans.—Calcium, or spent carbide, has about the same fertilizing value as has lime, and it is suitable for application to soils upon which lime would have a beneficial effect. Lime has a beneficial effect on the physical condition of the soil. Heavy clays, which are rich in insoluble forms of potash, and soils containing large quantities of humus, are those most benefited by lime. It is important to bear in mind that these indirect fertilizers do not add any of the three important elements of plant food to the soil, but that their chief value lies in the fact that they liberate plant food from insoluble forms of combination. Hence, if crops are not growing on the land to make use of the liberated food, or if the soil has been over-stimulated by a large and frequent application of lime, loss of nitrogen, potash and phosphoric acid will occur. Consequently these stimulants should be used in moderation. On soils not acid in nature, one to one and a half tons per acre, at intervals of five or six years, would be a safe application.

W. P. GAMBLE.
O. A. C., Guelph.

MANY DON'T KNOW HEART AFFECTED.

More People Than are Aware of It Have Heart Disease.

"If examinations were made of everyone, people would be surprised at the number of persons walking about suffering from heart disease."

This startling statement was made by a doctor at a recent inquest. "I should not like to say that heart disease is as common as this would imply," said the expert, "but I am sure that the number of persons going about with weak hearts must be very large."

"Hundreds of people go about their daily work on the verge of death, and yet do not know it. It is only when the shock comes that kills them that the unsuspected weakness of the heart is made apparent."

"But undoubtedly heart weakness, not disease, is more prevalent nowadays. I should think that the stress of living, the wear and rush of modern business life, have a lot to do with heart trouble."

There is no doubt but that this is correct, and we would strongly advise any one suffering in any way from heart trouble to try a course of **MILBURN'S HEART AND NERVE PILLS**.

Price 50 cts. per box or 3 boxes for \$1.25, at all dealers or will be mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Free to Women.

A book that tells how to escape the drudgery of wash day. It's just a little book—but one of those books with a message. A man might skim through its pages and miss the message. But any woman who reads the simple story, "Washing a Tubful in Six Minutes," will fully comprehend what it means. To her it means good-bye to the washboard forever. Good-bye to the old back-breaking, nerve-straining method of washing clothes by hand rubbing. For it tells of a new and better way of doing the weekly washing. More tempers have been ruined, more complexions spoiled, more womankind by the old way of washing than by any other kind of housework. The women of America expend enough energy over the washtub every week to move the machinery in a thousand mills and factories! Why this terrific waste of strength? Simply because, until very recently, inventive genius has been too busy devising labor-saving machines for men. Now, at last, a machine for woman's use has been perfected that almost runs itself. It is known as the 1900 Gravity Washer. Thousands upon thousands of these wonderful washers have been sold. They are doing the laundry work in homes all over the country. One of these 1900 Gravity Washers will wash a tubful of dirty clothes spotlessly clean in six minutes. The little book above mentioned tells all about them. It should be read by every woman, whether she does the washing herself or hires it done. A copy will be sent to any lady in Canada if she will send her address to F. A. N. Bach, Manager 1900 Washer Company, 357 Yonge Street, Toronto, Canada. 1480

A member of the Union League, of New York, was praising the character of the late Oliver Hazard Perry. He said:

"Here was a man of sincerity. He was talking one day, I remember, of a maid-servant who had got religion; and it seemed to me, as I listened, that his own character was of the same thorough-going sort as that which followed the maid's change of heart."

"So you are converted, Maggie?" this maid's mistress said to her.

"I don't know, ma'am," said the maid, seriously, "but I seem to be. A great change has come over me."

"How great a change?" said the lady.

"Well, ma'am," replied the maid, "since that there revival I always sweep under the mats now."

Herbageum

Herbageum is not a stock food. An analysis will show little food value, but when fed with ordinary food, grown on the farm, it makes the food easily digestible, and thus adds greatly to its value. Impure blood, and nearly all the ills of animals, arise from improper digestion and assimilation of the food. Herbageum makes animals healthy by assisting them to digest and assimilate their food. As a blood-purifier and tonic for all classes of live stock, it has been used by farmers throughout Canada for twenty-three years. It contains no drugs, and cannot injure any animal.

IMP. STALLION FOR SALE

The Oro and Vespra Clydesdale Horse Association offer for sale a bargain: Their imp. Clydesdale stallion, Sir Lachlan (6147) (10460). For particulars apply to **Geo. Raikes, Sec., Barrie P. O., Ont.**

INCORPORATED 1866

The TRADERS BANK

of Canada

Capital and Surplus Total Assets
\$6,350,000 \$34,000,000

Proceedings of the Twenty-fourth Annual General Meeting of Shareholders.

HELD AT THE BANKING HOUSE IN TORONTO.

Among those present were: Messrs. C. D. Warren, Hon. J. R. Stratton, C. Kloepfer, W. J. Sheppard, Alex. Stewart, Seneca Jones, W. J. McAllister, Geo. Watson, E. Galley, H. R. Playtner, J. S. Williamson, L. Bauer, H. H. Strathy, K.O.; Frank Hansel, Jas. Young, J. P. Steedman, A. M. Scott, Geo. Mair, Harry G. Horton, J. B. Fairgrieve, Dr. Garrique, J. L. McMurray, A. T. Lowe, J. A. M. Alley, A. D. Robertson, F. W. Bain, R. P. Sherris, C. S. Wilcox, E. F. B. Johnston, K.C.; H. S. Strathy, Jas. Linton, A. H. Brown, Geo. LeRiche, Archibald Filshie, R. M. Gilkison, Thos. R. Parker, Albert Kleiser, S. Dillon Mills, J. A. Halbhaus, Joseph Morris, J. K. Niven, J. Wallace, M.D.; J. P. Hodgins, A. G. Knowles, F. J. Winlow, M. Garvin, G. Reid Simpson, E. Cork, N. Ross, J. A. Laird, N. Hillary, Lt. W. A. P. Durie, A. B. Ord, and Frank W. Strathy.

Moved by Mr. Seneca Jones, seconded by Mr. J. S. Williamson, that Messrs. E. Galley and J. K. Niven be appointed Scrutineers.—Carried.

The Chair was taken by the President, Mr. C. D. Warren, and Mr. Stuart Strathy was requested to act as Secretary.

The General Manager then read the following Statement:

Statement of the Result of the Business of the Bank for the Twelve Months Ending 31st December, 1908.

The net profits for the twelve months, after making provision for bad and doubtful debts, and reserving accrued interest, amounting to	\$ 500,217 60
Premium on New Stock	100 00
Balance at credit of Profit and Loss last year	25,364 39
	\$ 525,681 99

Appropriated as follows, viz.:

Dividend No. 48, quarterly, at the rate of 7 p.c. per annum.....	\$ 76,168 29
Dividend No. 49, quarterly, at the rate of 7 p.c. per annum.....	76,174 11
Dividend No. 50, quarterly, at the rate of 7 p.c. per annum.....	76,178 44
Dividend No. 51, quarterly, at the rate of 7 p.c. per annum.....	76,178 66
Written off Bank Premises and Furniture	20,000 00
Transferred to Officers' Guarantee Fund	5,000 00
Transferred to Officers' Pension Fund	5,000 00
Balance at credit of Profit and Loss new account	190,982 49
	\$ 525,681 99

General Statement, 31st December, 1908.

LIABILITIES.

Capital Stock paid up	\$ 4,353,592 00
Rest Account	2,000,000 00
Dividend No. 51, payable 2nd January.....	76,178 66
Former Dividends unpaid	406 27
Interest accrued on Deposit Receipts	8,786 80
Balance of Profits carried forward	190,982 49
	\$ 6,629,946 22
Notes of the Bank in circulation	\$ 2,600,905 00
Deposits bearing interest, including interest accrued to date	\$21,285,685 00
Deposits not bearing interest.....	4,099,432 02
	\$25,385,117 02
Balance due to other Banks in Canada.....	14,021 88
Deposits from Banks in U. S.	229,600 21
	\$28,229,644 11
	\$34,859,590 33

ASSETS.

Gold and Silver Coin current	\$ 400,327 00
Dominion Government Demand Notes.....	2,632,234 00
Notes of, and Cheques on, other Banks	771,818 85
Balance due from other Banks	685,202 46
Balance due from Foreign Agents	1,219,465 06
Dominion and Provincial Government Securities	614,084 03
Railway and other Bonds, Debentures and Stocks	955,937 84
Call and Short Loans on Stocks, Bonds, and other Securities	1,871,773 93
	\$ 9,150,843 17
Bills discounted current	\$23,512,673 63
Notes discounted overdue (estimated loss provided for)	23,532 83
Loans to other Banks secured	23,532 66
Deposit with Dominion Government for security of general Bank Note Circulation	148,270 49
Real estate, the property of the Bank (other than the Bank premises)	5,928 66
Real estate, the property of the Bank (including the Bank premises)	1,991,808 89
Real estate, the property of the Bank (including the Bank premises)	3,000 00
	\$25,708,747 16
	\$34,859,590 33

STUART STRATHY, General Manager.

The General Manager, having read the foregoing report, made the following comments:

From the statement submitted, it will be observed that the results of the year's operations have been satisfactory, notwithstanding the severe financial disturbance, which was felt, more or less, throughout the world during the period under review. The wave of depression is apparently lifting, and we face another year with good prospects of a general return to normal conditions in several lines of business. A brief consideration of the yearly statement will readily show how successful the Bank's business has been during the past year. The net profits, after making allowance for all probable contingencies, and crediting interest to all interest-bearing accounts, amount to \$500,217.60. Adding to this the balance carried forward from Profit and Loss the previous year, with one or two small additional items, makes the sum of \$525,681.99, which was available for distribution. This amount was apportioned to pay four quarterly dividends at the rate of seven per cent. per annum, amounting to \$304,699.50. Twenty thousand dollars has been written off Bank Premises and Furniture Accounts, and \$10,000 has been added to the Officers' Guarantee and Pension Fund, leaving the substantial sum of \$190,982.49 to be carried forward at the credit of Profit and Loss new account.

The paid-up Capital Stock of the Bank amounts to\$4,353,592, and the Rest Account\$2,000,000, nearly one-half of the Paid-up Capital.

The total deposits of the Bank now amount to over\$25,000,000. Of this sum over \$4,000,000 is non-interest bearing, and the total deposits of the Bank have increased \$2,000,000 during the year.

The Assets, which are immediately available, amount to over nine millions of dollars, being about thirty per cent. of the liabilities to the public; a condition which places the Bank in a very strong position.

Attention should be called to the excellent character generally of the assets of the Bank, as set forth in the statement.

During the year seven new Branches were opened and two were closed, making a total of eighty-one Branches open at the end of the year.

The Bank continued throughout the year to increase both in volume and character of its business. It is interesting to note its growth by comparison with the figures ten years ago:

	1898.	1908.
Paid-up Capital	\$ 700,000	\$ 4,353,592
Surplus	50,000	2,000,000
Deposits	4,930,817	25,385,117
Circulation	697,680	2,600,905

The general depression of a year ago has resulted in a contraction of business throughout the country. Now that it would appear that the period of depression is passing away, and provided the incoming year is a prosperous one, it is natural to infer that more activity in commercial lines will ensue, followed by a more active demand for money. We find again this year a considerably larger acreage will be ready for early seeding in the Northwest, consequent upon the continued flow into those lands of a most desirable class of settlers, principally from the country to the South of us, the effect of which must benefit this country at large. The greatly-increased transportation facilities will also prove an important factor, not alone in the temporary large expenditure which continues to be made on this account, but by this very large extension of our Railway System, making it possible to bring to the Seaboard the steadily-increasing crops of our great Northwest with the least possible delay. We have established several important Branches in this field, and, as the country develops, extension in this direction, no doubt, will meet with your approval.

Before concluding, I wish to express my appreciation of the cordial co-operation of all the officials of the Bank in the work of the year. All the books and documents of the Bank have been carefully examined, and the affairs of all the Branches have been looked into and reported upon in a manner permitting the Board to deal intelligently with all the assets of the Bank.

Mr. C. D. Warren, President, in moving the adoption of the Report, said:

I have much pleasure in moving the adoption of the Report which has been presented. The Management and Shareholders may well congratulate themselves on the result of the year's business. The Report affords strong evidence of the prosperous condition of the Bank, and of a satisfactory increase in the general volume of business. The period of prosperity which Canada enjoyed until about a year ago led to extensive, and in some cases unsuccessful, expansion on the part of many capitalists and business men, and the resources of all financial institutions were taxed to the limit of their capacity to meet the demands of this abnormal enterprise. Depression followed, bringing about conditions that caused a restriction of all financial enterprises, thereby resulting in a withdrawal of capital from business undertakings, and an increase in the amount of comparatively idle money not yielding the average return of profits. Last year was, therefore, not to be regarded as one favorable to profitable financial operation, but the results have nevertheless been very satisfactory.

A growing country like Canada, with unbounded resources, naturally has great power of recuperation. Trade depression consequently affected Canada less than almost any other country, and as a result commercial and manufacturing interests are rapidly recovering from the embarrassment which retarded their progress for the past twelve months. The probability is that in the immediate future the limit of the available resources of our financial institutions will be reached by the requirements of various legitimate undertakings, which are already beginning to show renewed vigor and vitality.

The agricultural returns from the Dominion for 1908 indicate a large yield of grain and other crops, and this condition tends materially to create business confidence. With the prospect of fair prices and an increase in the wealth of the country from its natural products, commercial undertakings must receive a great impetus, and manufacturing and all its branches will be greatly extended. The distribution of this increased wealth rests largely with Banking Institutions, and whilst the rate of interest may be somewhat lower than it has been for a year or two, the increased volume of business will, it is believed, maintain the earning power at the same level.

The lumber industry, one of the great National sources of wealth, is rapidly reviving, and increased activity in railway extension and incidental enterprises has given a new impetus in our iron and steel works. Our mining interests now call for large outlays for operation, and our trade, increasing at home and abroad, gives good ground for the hope that Canada in a short time will more than make up for the temporary delay in her course towards the highest point of commercial greatness.

The employment of money is absolutely necessary for current operations, and as these are now extending in all directions, it is not unreasonable to look forward to several years of prosperous development of a substantial character.

To meet the demands involved in the interests I have briefly mentioned, as well as others that readily suggest themselves, our Banking and Financial Institutions may expect a large increased volume of business and a ready and safe outlet for all their surplus funds during the present year.

The Northwest is extending its cultivated area, and is being opened to the people by means of great trunk railway lines, and many local extensions. Here we have the true source of wealth. The mere interchange or investment of money does not add materially to the general wealth of the country, but the products of the soil, the forest and the mine create new and additional capital, most of which finds its way into Banks, Loan and Insurance corporations, and other similar Institutions. By keeping a constant and energetic lookout, we hope to obtain a fair share of the handling of this increased wealth, and with this object in view, we have already established Agencies in some of the more important Western points. Yet, without unduly extending the Bank operations, there is still room for other openings, and advantage of this fact should be taken as occasion arises and circumstances permit.

Whilst the value of money chiefly depends on the conditions of the great financial centers of the world, there are many local demands which affect the money market here. It is true that municipal debentures principally find a market in Great Britain. Corporation bonds, such as railway, electric, etc., are largely sold abroad, but much of the cash resulting therefrom reaches our Banks eventually. To show the practical situation more forcibly, I might state that the value of Municipal and Corporation Bonds of this country sold in Great Britain in 1908 was over Nineteen Million Dollars, and the Canadian investors bought only Twenty-one Million Dollars' worth, but the total of over One Hundred and Ten Millions is likely to find its way here, to be used for Local and National development. In view, therefore, of the growth of our transportation and transmission lines, and the development of Municipal works in every town and city in the Dominion, and the large foreign capital which will be brought into this country for these purposes, our Banks may anticipate, not only a large amount of money in circulation and on deposit, but a greater demand for those local needs which cannot be supplied through foreign Agencies. The great industries of the country must be carried on, and these look to our Banking facilities for assistance, and with the return of prosperity the avenues of investment will materially increase. Your Directors have availed themselves of every favorable opportunity to meet this demand, but always having in mind that prosperous times demand greater care and watchfulness than periods of depression.

Instead of increasing a sufficiently strong reserve to meet all probable demands and thereby locking up a large amount of unproductive money in the treasury, we have invested considerable sums in high-class municipal debentures and other bonds, yielding the Bank a profitable return, and being almost as available as cash, if occasion should arise in the future. The price of these securities is not much affected by the local market, the purchasers in Great Britain practically controlling values, and it was felt that no better or safer investment could be made with surplus or reserve funds which must be constantly and immediately available in every well-managed banking institution.

In call loans we pursue a very conservative policy, so that no large amount of any particular stock shall be held as security by the Bank at any one time. The margin of safety is always large, and the fluctuations of the ordinary market do not affect the security.

Your Directors examine practically all credits and accounts in the books of the Bank. No advance of any moment is made without their sanction, and whilst this method entails a large amount of work, we feel it to be the only safe way to discharge our duty. The various agencies have been carefully inspected, the returns scrutinized, and the state and nature of investments thoroughly considered. In this work we find the services of the Directors' Auditor, Mr. Willis, most valuable, and through him important information regarding the Bank's transactions is readily available to the Board.

Our inspectors are competent and efficient officers, and it affords me much pleasure in being able to testify to the great care and ability which they bring to bear in the performance of their duties.

I am glad to be able to state that every part of the Head Office building is rented, yielding a good return, and there does not appear to be any doubt as to this condition being continuous. The same satisfactory state of affairs exists in regard to the Yonge and Bloor Streets Office.

We hope that before long the result of the careful attention and efforts of your Directors and the Management may reach the Shareholders in a substantial and gratifying manner.

I move that the Report be adopted.

The Vice-President, Hon. J. R. Stratton, seconded the motion and said: The ground has been pretty thoroughly covered by the remarks of the General Manager and the President; but I can at least re-echo the congratulation and repeat the expression of pleasure which the report warrants.

I have personal knowledge that the directors have all devoted themselves faithfully to the service of the Bank during their tenure of office. This was to be expected from their high standing, high sense of duty and ability. Besides, they are among the largest holders of stock, and are, therefore, the most directly and largely interested. Any indifferent or perfunctory performance of service or duty on their part would naturally more prejudicially affect them than shareholders with less interest at stake. It is certain, therefore, that when the responsible officers of the Bank are so directly and personally interested, there exists a guarantee of careful and effective administration. The Bank has more than 1,800 shareholders, many of whom are prominently associated with important and industrial enterprises. The character of these shareholders, associated with the rapid increase of the paid-up capital of the Bank, testifies to the confidence which its stability and excellent management inspire.

The business of the Bank is expanding in every direction; and it is the aim of the Directors to keep the Traders Bank abreast of the great progress this Dominion is making. Of this, its past is a guarantee, which the year just closed strengthens. To see gratifying results achieved, to see business and profits satisfactory, to see securities strengthened and assets increased, in the face of conditions such as have prevailed during the greater part of the year, seem to be indications of good and efficient management. A financial institution which comes so creditably through a difficult year can, with improved conditions in every important national interest, reasonably anticipate a prosperous future.

It affords me great pleasure to second the motion for the adoption of the report.

The motion for the adoption of the report was carried unanimously.

The Scrutineers reported the following gentlemen duly elected to act as Directors for the ensuing year, viz: C. D. Warren, Hon. J. R. Stratton, C. Kloefer (Guelph), W. J. Sheppard (Waubesahe), C. S. Wilcox (Hamilton), E. F. B. Johnston, K.C.; H. S. Strathy.

The meeting then adjourned.

At a subsequent meeting of the newly-elected Directors, Mr. C. D. Warren was re-elected President, and Hon. J. R. Stratton, Vice-President, by a unanimous vote.

STUART STRATHY, General Manager.

The Traders Bank of Canada, Toronto, 26th January, 1909.

QUESTIONS AND ANSWERS.
Miscellaneous.

LUMP JAW.

Please state cause and remedy for a milk cow which is swollen under the lower jaw, slobbers considerably when eating or chewing her cud, grunts when breathing while lying down, has lost slightly in her milk, but otherwise seems quite healthy. Appetite fairly good; has been this way for about six weeks.

NEW SUBSCRIBER.

Ans.—This is a form of actinomycosis, (lump jaw). The iodide of potassium treatment usually effects a cure, except in advanced cases. Give one dram iodide of potassium as a drench in a pint of cold water, three times daily. Gradually increase the dose until appetite fails, cow refuses to drink much, or tears run from her eyes. When any of these symptoms appear, cease giving the drug for two weeks, after which, if necessary, treat again.

STARK, BISMARCK, ONTARIO.
I would like to know, through "The Farmer's Advocate," if the variety of apples known as the Stark, Bismarck, and Ontario, are good winter varieties, and good keepers?

G. W.
Ans.—A great deal will depend on the locality in which the varieties are grown. Generally speaking, apples keep better when grown in northerly sections than when grown in the southern part of the Province. Stark is an excellent keeper, almost as good as Ben Davis, and greatly superior in quality, but not a high-class variety for export, because of its dull color. Bismarck is not a common variety. It belongs to what is known as the Alexander group, and is not, strictly speaking, a winter variety. Ontario is similar to Spy in color and appearance, but it does not possess as good keeping qualities. Its season runs from November to April, while Spy runs from January to May. Stark will remain sound as late in the spring as Spy.

ODERBRUCKER BARLEY.

Can you give me any information regarding Oderbrucker barley? Has it been grown in Ontario? How does it compare with Mandscheuri as to yield and length of straw?

G. W. B.
Ans.—The 1907 report of Ontario Agricultural College places Mandscheuri barley first, with an average yield of 70.9 bushels, and Oderbrucker second, with 64.8 bushels, for tests covering 18 years. Last year's experiments at Guelph resulted in Mandscheuri 83.53 bushels, and Oderbrucker 81.60 bushels. The C. E. F. Report, Ottawa, for 1906, shows Mandscheuri to yield 70 bushels, and Oderbrucker less than 43 bushels per acre. The 1905 report, however, places Mandscheuri slightly over 61 bushels, and Oderbrucker over 68 bushels. From this it can be seen that the nature of the season has some effect on yield. As a rule, Mandscheuri is slightly longer in straw than Oderbrucker, both being of medium length.

COW EATS WOOD—SCRATCHES.

1. I have a cow, when outside, is chewing and eating rotten wood. Eats very little hay. Roots and chop are nearly all she will eat. What is the cause and remedy, if any.
2. Also have a horse which has had scratches quite bad; not broken out just now, but leg is swelled and quite hard. Please tell me how to treat.

OLD SUBSCRIBER.

Ans.—1. This is a depraved appetite, generally induced by the lack of some essential constituent in the feed, and subsequently becoming a habit. Feed a balanced ration, containing some bran and clover hay. Keep salt within her reach at all times. A small, closed handful of sifted wood ashes in her feed, twice a week, may be helpful.

2. When the legs swell, it is good practice first to purge with a ball consisting of 8 drams aloes and 2 drams ginger, feeding bran mashes for a day or two before and after. When purging ceases, follow up with one and a half ounces of Fowler's Solution of Arsenic, twice daily, for a week. Local treatment consists in applying warm poultices of linseed meal, with a little powdered charcoal, every six or seven hours daily for two days and nights, and then apply three times daily the oxide of zinc ointment, to which is added 20 drops carbolic acid, which a druggist will prepare.

Nitrate of Soda

NITRATE SOLD IN ORIGINAL BAGS

The Nitrate Agencies Company

Toronto, Canada

Orders for All Quantities Promptly Filled—Write for Quotations

THE QUESTION OF

"Quality"

IN

SEEDS

Nothing But the Best FOR YOU.

Present Prices for Our Best

"Sun" Brand Red Clover,	\$ 7.75 bush.
Ocean " Alsike "	11.00 "
Gold " Alfalfa "	13.00 "
Diamond " Timothy,	3.25 "

PURE. CLEAN. THE BEST.

ASK FOR SAMPLES.

Seeds For the Farm For the Garden

SEND FOR CATALOGUE.

Geo. Keith & Sons

124 King St., East,

TORONTO,

ONTARIO.



Acadian Pride Homespun Pants A.P.H.

Is pure Nova Scotia sheep's wool, dark in color, neat appearance. There is nothing so durable.

A. P. H. PANTS are well and strongly made, and have four pockets. Try a pair, and see the difference in wear between pure wool and shoddy. Enclose \$3.00, with leg and waist measure, and we will deliver a sample pair, charges prepaid, to any address in Canada.

Clayton & Sons HALIFAX.

For Sale by Tender

Tenders will be received by the undersigned for the purchase of one Hackney stallion named Guelph Performer No. 89.

A beautiful black; 16 hands high; sound; kind disposition; well muscled; high action; and eight years old.

He was sired by Square Shot 27, 3294 (imported), grandsire Great Shot 1490, g. g. sire Great Shot 329, and g. g. sire Great Gun 325. Dam Miss Baker (imported) 16, by Ruby 1342, etc.

He is a sure foal-getter and a money maker. Tenders to be opened on 20th February, 1909. No tender necessarily accepted.

Guelph Performer can be seen at Aylmer. For extended pedigree or further particulars, address:

W. E. LEESON,

Sec'y E. Elgin Horse-breeders' Association. Aylmer, Ont., January 26, '09.

"New Century" Washing Machine

The "New Century" washes a tub of clothes in five minutes—without boiling or rubbing.

It washes heavy clothes thoroughly—and soft, thin things without the least injury.

The "New Century" enables you to do the biggest kind of a wash in an hour, that would take the whole day with an ordinary wash-tub.

It saves your hands, your back, your time, your nerves—to say nothing of the clothes. The ball bearings and powerful oil-tempered steel springs make it run so easy that a child can do the family washing.



It is the cheapest machine ever sold, for value given. The Wringer Stand is one of the many improvements the "New Century" has. It is as rigid and strong as a bar of steel—in just the right position for quick, easy wringing—the wringer is always on stand—and the water drains right into the tub.

Twenty-five years of "knowing how" are built right into every part of it.

Some people buy them because they run "so easy," others because they do such perfect work in so short a time—all of them because there is no other "just as good."

Price \$9.50 without wringer, delivered to any railroad station in Ontario or Quebec.

Write us for free booklets.

The Dowsell Mfg. Co. Limited
HAMILTON, Ont. 45

TRADE TOPICS.

HORSE MARKET IN ST. PAUL, MINN.—Horse markets are being found a great convenience nowadays for effecting sales or purchases of equine stock. Barrett & Zimmerman, Midway Horse Market, St. Paul, Minn., hold a grand auction sale every Wednesday, besides private sales daily. At each sale they undertake to sell over 600 head of horses of all classes, without reserve. See advertisement in this issue.

THE DOMINION BANK.—The reports presented at the thirty-eighth annual general meeting of the Dominion Bank, recently held in Toronto, full details of which will be found elsewhere in this issue, affords striking evidence of the strong position and capable management of this prominent financial institution. For the year ending December 31st last, after deducting charges of management, etc., and making provision for bad and doubtful debts, the profit was \$641,318.11, which, with a balance of \$235,140.61 carried from the previous year, and \$148,274.75 premium received on the new capital stock, made the splendid aggregate of \$1,024,733.47. In dividends at the rate of 12 per cent. per annum, there was paid \$473,462.64, there was written off the bank premises \$100,000, and transferred to the reserve fund \$148,274.75, leaving to be carried forward the handsome balance of \$302,996.08. The reserve fund, it was announced, now totals \$4,981,731.62. It is gratifying to be able to record that the issue of \$1,000,000 of new capital stock in 1907, was not only subscribed, but paid for in full, another strong proof of the manner in which investors rate the standing of the bank.

MR. L. A. ASPINWALL, President of the Aspinwall Manufacturing Company, Jackson, Michigan, built his first potato planter some thirty years ago, and it was a success. The improvement of that machine to keep pace, or rather a little ahead of the times, and the invention and manufacture of other implements for handling the potato crop, has been Mr. Aspinwall's life study; and the enviable reputation which the Aspinwall Company now possesses the world over, is ample evidence that his life-work will always stand for much in the world of invention, as well as among implement manufacturers. He still spends a portion of nearly every day at the factory, giving his personal attention to the building and improving of his machines.

In the Aspinwall Potato Planter No. 3, with Sack Hopper, it seems as though the machine almost reached the acme of perfection. This machine plants a greater crop of seed than any other, and no special skill is required for changing the distance of planting, or different size of seed. The canvas hopper prevents the clogging of the machine. Both feed and cover boards are regulated from the

seat. Like all previous styles of Aspinwall Planters, it requires but one man in its operation. The Aspinwall Planter is advertised in this paper.

Acadian Pride, homespun pants, ready made, of pure Nova Scotia wool, advertised by Clayton & Sons, Halifax, are claimed to be strongly made, durable, suitable for outdoor work, giving entire satisfaction, having been ordered from nearly every Province in the Dominion and several States. See the advt.

"THE FENCE THAT SAVES EXPENSE."—This is the phrase being used by the Banwell, Hoxie Wire Fence Co., Ltd., Hamilton, Ont., and Winnipeg, Man., to advertise the famous "Peerless Fencing." The fact that Peerless fencing is made of all No. 9 wire, heavily galvanized, and seldom, if ever, needs repairs, makes the above phrase fit remarkably to the fence itself. There's a trick in making good fencing, and the Banwell, Hoxie Co. know the trick. That's why farmers all over the Dominion like to say they have Peerless on their farm. It's a good stroke for you to see your fence dealer, or write to the Banwell, Hoxie Co. for their booklets. See their advertisement on another page.

GOSSIP.

Official records of 152 Holstein-Friesian cows were accepted by the American Holstein Association, from December 31st, 1908, to January 11th, 1909, seventeen of which were begun not less than eight months after calving. Of the 135 ordinary records, three were extended to 14 days, one to 15 days, and six to 30 days. Considered as a herd of 135 animals, of which somewhat less than one-half were heifers, with first or second calves, the herd produced in seven consecutive days, 54,687.7 lbs. of milk, containing 1,863.463 lbs. of fat; thus showing an average of 3.41 per cent. fat. The average production for each animal was 405.1 lbs. milk, containing 13.803 lbs. fat; equivalent to 57.9 lbs., or nearly 28 quarts milk per day, and 16.1 lbs. of the best commercial butter per week. In this issue of the official reports, Neta Clothilde Perfection, 21,316 lbs. fat, from 535.7 lbs. milk, heads the full aged cows, with Diona Pauline Paul De Kol, 21,061 lbs. fat, from 566.2 lbs. milk, a close second.

MALLORY BROS.' HOLSTEINS.

Among the many high-class herds of Holstein cattle of Eastern Ontario, the Grove Hill herd, the property of E. & F. Mallory, of Frankford, Ont., holds a place second to none, numbering about 75 head, bred and selected for production; first, last, and all the time. Twelve of them qualified for the A. R. as two-year-olds, with official records ranging from 10 to 14 lbs. each; three went in the Record of Performance in 1908, one with a record of 15,000 lbs.; another, a three-year-old, with over 12,000 lbs.; the other, a half-sister, with 11,500 lbs. There are now nine more in the test, and all doing exceedingly well; one of them, in five months, has already 6,000 lbs. A look over the herd is sufficient to convince one that, if ideal type, big, well-balanced udders and abundant capacity count for anything, they certainly are a herd that should pay big dividends. The stock bulls show by their rich official backing, especial care in selection also. One of them, Count Gerbin, is a son of De Kol 2nd's Butter Boy 3rd, who has 43 daughters in the A. R., and his dam has a record of 26.58 lbs. in seven days. The dam of Count Gerbin is Shadybrook Gerbin, whose record is 16.16 lbs., and her dam has a record of 26.11 lbs. The other stock bull is Inka Sylvia Beets Posch, whose dam and granddam have official records of 25 and 26 lbs., respectively. With such breeding as this, the results cannot fail to be eminently satisfactory. The Messrs. Mallory report 1909 as away the best year they ever had in the matter of sales. They are now booking orders for young bulls, of which they have a number, from two to five months of age, an extra nice, straight lot, sired by the stock bulls, and out of A. R. and R. of P. cows. They are also prepared to price young females well within their value, all things considered. The farm is situated five miles from Frankford Station, on the Central Ontario Railway, and ten miles from Belleville, on the G. T. R.



WHY A "MAGNET" CREAM SEPARATOR? BECAUSE!

The MAGNET, coming after the experiments of the previous 20 years, completely overcomes all the objectionable features of other machines, besides the introduction of many new features. In the 10 years no radical changes have been required, because its construction is on perfect mechanical lines. Every-day work has demonstrated its completeness.

It will pay you to know about the double-supported bowl. A postal card to:

The Petrie Mfg. Co., Ltd.

Hamilton. Winnipeg. St. John, N. B. Regina, Sask. Calgary, Alta.



JUST SIX MINUTES TO WASH A TUBFUL.

This is the grandest Washer the world has ever known. So easy to run that it's almost fun to work it. Makes clothes spotlessly clean in double-quick time. Six minutes finishes a tubful.

Any Woman Can Have a 1900 GRAVITY WASHER On 30 Days' Free Trial.

Don't send money. If you are responsible you can try it first. Let us pay the freight. See the wonder-it performs. Thousands being used. Every user delighted. They write us bushels of letters telling how it saves work and worry. Sold on little payments. Write for fascinating Free Book to-day. Address: F. A. O. Bach, Manager The 1900 Washer Co., 357 Yonge St., Toronto.

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

LONDON, ENGLAND.

IMPORTANT SALE

200 Reg'd Hackneys and High-class Harness Horses

On TUESDAY, 9th MARCH, 1909,

At the Repository, Cricklewood Lane, Cricklewood, London, England.

STALLIONS. BROOD MARES. HARNESS HORSES.

The sale takes place the week following the close of the Great Hackney Horse Show, when many prizewinners will be sold. Catalogues on application to:

TICHENOR-GRAND COMPANY, Proprietors and Auctioneers.

HAVE YOU SECURED ONE OF "THE FARMER'S ADVOCATE" PREMIUMS

The Dominion Bank

PROCEEDINGS OF

The Thirty-eighth Annual General Meeting of the Shareholders.

THE THIRTY-EIGHTH ANNUAL GENERAL MEETING OF THE DOMINION BANK was held at the Banking House of the Institution, Toronto, on Wednesday, 27th January, 1909.

Among those present were noticed:

Dr. Grasett, A. M. Nanton, A. Foulds, J. H. Maclaren, Andrew Semple, Hon. J. J. Foy, W. E. Booth, E. B. Osler, C. W. Band, W. Crocker, R. M. Gray, Dr. J. F. Ross, V. H. E. Hutchison, Alex. C. Morris, S. Samuel, A. Monro Grier, F. J. Harris (Hamilton), Wm. Glenney (Oshawa), W. C. Lee, A. R. Boswell, G. N. Reynolds, Ira Standish, H. B. Hodgins, Barlow Cumberland, H. S. Harwood, Stewart Houston, Capt. Jessopp, J. T. Small, C. Walker, Wm. Ross (Port Perry), R. J. Christie, H. Gordon Mackenzie, Col. Sir H. M. Pellatt, Wm. Mulock, jr.; W. C. Crowther, Richard Foster (Dowmanville), Geo. D. Scott, Jacob E. Finkle, W. R. Brock, W. D. Matthews, Temple Blackwood, A. W. Austin, J. J. Dixon, Dr. Andrew Smith, L. A. Hamilton, E. W. Langley, Thos. Walmesley, Robt. Mills (Hamilton), J. C. Eaton, Jas. Matthews, A. H. Campbell, jr.; W. H. Cawthra, J. G. Ramsey, Mrs. Adamson, James Scott, Richard Brown, David Smith, C. A. Bogert, H. J. Bethune, and others.

It was moved by A. W. Austin, seconded by Dr. A. Smith, that Mr. E. R. Osler do take the chair, and that Mr. C. A. Bogert do act as Secretary.

Messrs. A. R. Boswell and A. H. Campbell, jr., were appointed Scrutineers.

The Secretary read the Report of the Directors to the Shareholders, and submitted the Annual Statement of the affairs of the Bank, which is as follows:

To the Shareholders:

The Directors beg to present the following Statement of the result of the business of the Bank for the year ending 31st December, 1908:

Balance of Profit and Loss Account, 31st December, 1907	\$ 235,140 61
Premium received on new Capital Stock	148,274 75
Profit for the year ending 31st December, 1908, after deducting charges of management, etc., and making provision for bad and doubtful debts	641,318 11
Making a total of	\$1,024,733 47

Which has been disposed of as follows:

Dividend 3 per cent., paid 1st April, 1908	\$116,502 81
Dividend 3 per cent., paid 2nd July, 1908	118,161 75
Dividend 3 per cent., paid 1st October, '08	119,365 50
Dividend 3 per cent., payable 2nd January, 1909	119,432 58
	\$473,462 64
Written off Bank Premises	100,000 00
Transferred to Reserve Fund	148,274 75
	721,737 39
Balance of Profit and Loss carried forward	\$ 302,996 08

RESERVE FUND.

Balance at credit of account, 31st December, 1907	\$4,833,456 87
Transferred from Profit and Loss Account	148,274 75
	\$4,981,731 62

At the Annual Meeting in January, 1908, your Directors in their Report to the Shareholders made reference to the unusual financial conditions then prevailing and the policy which it was considered advisable to pursue in conducting the affairs of the Bank. Since then a marked change has taken place—there has been a steady contraction in the trade of the country, and the demand for banking accommodation has been limited, although we now find an improvement in this respect, and can confidently look for a gradual expansion in business. A crop somewhat above the average was harvested, and the proceeds distributed through the country, which has tended largely to increase deposits. From the causes just mentioned, the Cash Reserves of the Bank have been particularly strong for some months, and the percentage of liquid assets is exceptionally high.

In January, 1908, we took over Branches of the Sovereign Bank at Baden, Linwood, Marmora, Mount Albert, New Dundee and Pefferlaw. The Pefferlaw office was subsequently closed.

Branches have also been established at the corner of King and Wentworth Streets, Hamilton; on Upper Sherbourne Street, Toronto, and at Wawota, Sask. It is our intention to shortly erect an office at the corner of St. Clair Avenue and Vaughan Road, Toronto, where a site has recently been purchased.

Further expenditures have been made at Avenue Road Branch, Toronto; at Fort William and Windsor, Ont.; at the North End Branch, Winnipeg; at Selkirk and Deloraine, Man., and at Grenfell and Regina, Sask., to an extent fully warranted by the importance of the Bank's interests at these points.

In connection with the issue of \$1,000,000 of new Capital Stock in 1907, it is worthy of note that the amount subscribed for has now been paid in full.

A Special Committee of your Directors has completed the customary verification of the General Balance Sheet of the Bank as on 31st December, 1908, including the certification of our funds in the hands of Foreign Agents. They have also examined and found correct the Cash Reserves, Investments and Securities, as shown on the Statement presented.

All Branches of the Bank have been thoroughly inspected during the year.

E. B. OSLER, President.

The Report was adopted.

The thanks of the shareholders were tendered to the President, Vice-President and Directors for their services during the year, and to the General Manager and other officers of the Bank for the efficient performance of their respective duties.

The following gentlemen were duly elected Directors for the ensuing year—Messrs. A. W. Austin, W. R. Brock, James Carruthers, R. J. Christie, J. C. Eaton, J. J. Foy, K. C., M.L.A.; W. D. Matthews, A. M. Nanton, and E. B. Osler, M.P.

At the subsequent meeting of the Directors, Mr. E. B. Osler, M.P., was elected President, and Mr. W. D. Matthews, Vice-President, for the ensuing term.

GENERAL STATEMENT.

LIABILITIES.

Notes in Circulation	\$ 3,087,539 00
Deposits not bearing interest	\$ 5,114,040 35
Deposits bearing interest (including interest accrued to date)	32,799,056 46
	37,913,096 81
Deposits by other Banks in Canada	380,643 63
Balances due to Banks in the United States	33,874 81
Total Liabilities to the Public	\$41,865,154 25
Capital Stock paid up	3,983,392 38
Reserve Fund	4,981,731 62
Balance of Profits carried forward	302,996 08
Dividend No. 105, payable 2nd January, 1909	119,432 58
Former Dividends unclaimed	102 75
Reserved for Exchange, etc.	14,015 00
Reserved for rebate on Bills Discounted	114,556 56
	\$50,881,381 22

ASSETS.

Specie	\$ 1,138,165 89
Dominion Government Demand Notes	4,766,913 00
Notes of and Cheques on other Banks	2,201,455 24
Balances due from other Banks in Canada	281,542 16
Balance due by Agents in Great Britain	164,927 72
Balances due from other Banks elsewhere than Canada and Great Britain	1,521,556 29
	\$10,074,560 30
Provincial Government Securities	335,456 26
Canadian Municipal Securities and British or Foreign or Colonial Public Securities other than Canadian	672,666 28
Railway and other Bonds, Debentures and Stocks	8,522,192 03
Loans on Call secured by Stocks and Debentures	3,261,660 76
	17,866,596 63
Bills Discounted and Advances Current	\$30,960,438 90
Deposit with Dominion Government for Security of Note Circulation	160,000 00
Loans to other Banks in Canada, secured	668,219 22
Overdue Debts (estimated loss provided for)	53,362 33
Real Estate, other than Bank Premises	95,600 00
Mortgages	41,886 44
Bank Premises	1,020,000 00
Other Assets, not included under foregoing heads	15,338 70
	33,614,845 59
	\$50,881,381 22

C. A. BOGERT,
General Manager.

Toronto, 31st December, 1908.

GOSSIP.

Messrs. Kyle Bros., Ayr, Ont., importers and breeders of Shorthorn cattle, write: "Last year we got Mr. A. T. Gordon, Combscausway, Insch, to send us two bulls from Scotland, and being so well satisfied we sent for two more this last fall. Mr. Gordon is one of the most successful breeders and showmen in Scotland. He made the highest average this past season on his bull calves. The dam of one of the bulls he sent us was the dam of Bandmaster, the calf he won first on at the Royal, and which sold for over \$3,000; and two heifer calves, a full sister and a half-sister of the other, sold for nearly \$2,000, at his sale in October. This will give some idea of the quality of bulls he sent, and we think he has sent us two the equal, if not better than the other ones. One is Newton Ringleader, a roan, of the Cruickshank Fragrance family, sired by Cam Ringleader, a winner at the Royal and many other shows. This is a very strong animal, and should develop into a grand bull. The other is Loyal Scot, sired by the Duthie Lavender bull, Sittyton Royal. All that need be said of this bull is that he is a show one of high order, and anybody wanting a show or stock bull should not fail to see him. We have sold nineteen bulls in the last thirteen months, and still have five good ones, from ten to fifteen months old, besides the two imported ones. The recent sales we have made are: Black Rock Chancellor, to Fried Bros., Roseville. The full sister of this bull was champion at London, 1907, and a full brother was second at Toronto and first at London the same year. To Capt. T. E. Robson, London, we sold the show bull, Broadhooks Chancellor. For breeding and quality, he is hard to beat, being of the renowned Broadhooks family. He was not beaten in the show-ring last fall, winning first at Toronto in a class of 26 entries. We also sold to W. Renick, Ayr, the English Lady bull, Rex, by Clipper Chief (imp.).

Two Suffolk Punch stallions are advertised for sale in this paper by Thos. Knaggs, Vandecar, Oxford County, Ont.

Dr. Duncan McEachran, Ormsby Grange, Ormstown, Que., has established a horse depository at that place for the sale of imported Clydesdale stallions and mares. His first importation was made in October last, and he purposes making annual importations, having made such arrangements in Scotland as will enable him to furnish such stallions or mares as clients may desire.

TRADE TOPIC.

THE TRADERS BANK.—Very favorable report presented by the Board of Directors. The twenty-fourth annual meeting of the Traders Bank was held in the head office building, Toronto, Jan. 26th, and the statement published elsewhere in this issue, presented by Mr. Stuart Strathy, the General Manager, disclosed the results of a year of successful operation and a very satisfactory condition of the bank's affairs. Notwithstanding the financial disturbances of the past year, the earnings on the paid-up capital amount to the large sum of \$500,217.60. The liquid assets of the bank are over \$9,000,000, being about thirty per cent. of the liabilities to the public, which places the bank in a very strong position. A large increase in the deposits has taken place during the year, the amount now on deposit being over \$25,000,000, \$4,000,000 of which is non-interest bearing. The remarks of the General Manager, Mr. Strathy; of the President, Mr. C. D. Warren, and the Vice-President, Hon. J. R. Stratton, M.P., agreed in asserting the belief that the wave of business depression had spent its force, and a brighter future in financial and industrial circles is in sight. The circulation of the bank amounts to \$2,600,905, while the total assets of the bank now amount to \$34,859,590.33. The Traders Bank, in point of capital, is now the sixth largest bank in the country, and is one of the most progressive of Canada's financial institutions.

HORSE OWNERS USE
GOMBAULT'S
CAUSTIC BALSAM.

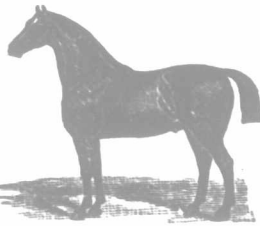


A safe, speedy and positive cure. The safest, best BLISTER ever used. Removes all bunches from horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.

THE LAWRENCE-WILLIAMS CO., Toronto, Canada

Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle and to remove all unnatural enlargements.



This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin or money refunded, and will not kill the hair. Manufactured by Dr. Fredrick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:

J. A. JOHNSTON & CO., Druggists, 171 King St. E., TORONTO, ONT.

Shannonbank Clydesdales, Ayrshires, S. Yorkshires. One stallion rising three years, by imp. Hopewell. Two young bulls ten months, and some heifers from six months to two years. Yorkshires of both sexes. W. H. TRAN, Cedar Grove, Ont., Locust Hill Sta., C. P. R.

ABSORBINE

Removes Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain, Cures Spavin Lameness, Always Pain Does not Blister, removes the hair or lay the horse up. \$2.00 a bottle, delivered. Book 1 D free.

ABSORBINE, J.C., (mankind \$1.00 bottle). For Synovitis, Strains, Gouty or Rheumatic Deposits, Varicose Veins, Varicose, Hydrocele, Allays pain. Book free. W. F. YOUNG, P.O.F., 73 Monmouth St., Springfield, Mass. Canadian Agents: Montreal, Canadian Agents.

POTATOES PAY

Make them pay by using the machines that really do the work—

CUT, PLANT, SPRAY, DIG and SORT



There's nothing in potato machinery up to **ASPINWALL EQUIPMENT**

Write for copy of our free book telling how to make money, growing potatoes.

ASPINWALL MFG. CO.
104 Sabin St., Jackson, Mich., U.S.A.
Canadian Factory: Guelph, Ontario

A lady was going by boat from Leith to London, and it was the first time she had ever travelled so far by sea. She reached her destination jaded and tired out. Her hostess remarked that she looked fatigued. "Yes," said the voyager, "I am just tired to death. I don't know that I care to travel by water again. I read the notice in my cabin about how to put the lifebelt on, and I thought I understood it. I suppose I didn't, though. Some way or another, I could not get a wink of sleep with the thing on."

Samson Gates and Ornamental Fences.
In ornamental fencing and gates "Samson" is admittedly far and away the best.
Send for catalogues and our good proposition to agents.
Lock Wire Fence Co., Ltd.,
Hamilton, Ont.

QUESTIONS AND ANSWERS.
Veterinary.

WOLF TEETH—ITCHY LEGS.

1. Four-year-old mare has a small tooth in front of the first upper molar on each side.
2. Draft horses have itchy legs.

J. H.

Ans.—1. These are supernumerary teeth, and are called wolf teeth. They should be extracted. The practice of knocking them out is wrong, as it usually breaks the teeth and leaves the roots in the jaw.

2. Heavy horses, with poor quality of bone, are especially liable to this trouble. Purge each with 10 drams aloes and 2 drams ginger. Follow up with 8 grains of arsenic, or 1 1/2 ozs. Fowler's Solution of Arsenic, twice daily, for a week. Dress the legs once daily with a warm solution of corrosive sublimate, 20 grains to a pint of water. Rub well and keep excluded from cold and drafts until dry, after dressing.

LOSS OF COLOSTRUM.

The colostrum always escapes from my mare's mamme before foaling, and the foals do not do well. What can I give as a substitute for the colostrum?

G. A. H.

Ans.—If the mare is given regular exercise and not fed much moist and milk-producing food during the later months of gestation, it is probable the loss of colostrum will not take place. If it should, and it is found necessary to give the foal laxatives, small quantities of castor oil, say a teaspoonful twice daily, for two or three days, will give good results. We seldom find it necessary to give laxatives to foals, and it must always be done very carefully, and in small doses, else diarrhea will result. When the meconium (the contents of the bowels at birth) is not passed, it should be removed with the oiled finger, and injections of warm linseed oil given occasionally until the faeces become yellowish. This is a much safer way than administering laxatives.

Miscellaneous.

CURING PORK.

As a subscriber of "The Farmer's Advocate," I noticed on page 98, of the January 21st number, an item about curing pork, which was very good till you came to the saltpetre. I say, why not use cream tartar, which is just as good, and better for the system, than so much saltpetre, and the meat is not so hard and acidic. We have used it with good results.

W. S.

Ontario.

[This suggestion was submitted by the editor of "The Farmer's Advocate" to Prof. R. Harcourt, O. A. C., Guelph, who replies as follows: "The function of saltpetre in the curing of meats is to preserve the natural, fresh color of the flesh. I have never heard of cream of tartar being used for this purpose, or, in fact, being used as an ingredient in any of the pickling recipes. Cream of tartar is one of the constituents of our better classes of baking powders, and is not considered deleterious to the system in any way. In the case of saltpetre, the general opinion concerning the therapeutic action, is that it is not a proper substance to mix with food. I believe, however, that there are very large quantities of it used in preserving meats of various kinds in this country."]

TRADE TOPIC.

LABOR-SAVING IMPLEMENTS.—Farm and garden implements for the saving of labor in planting seed for truck-garden crops and field roots are as much a necessity as machinery for sowing cereals or other grain crops. The high cost of hired help makes it advisable to curtail labor in every department. Planet Jr. farm and garden tools made by S. L. Allen & Co., and advertised in this issue, have a wide reputation for satisfaction in every particular. By writing to the firm a catalogue describing seeders of different kinds, wheel hoes, one-horse and two-horse cultivators, and implements of various combinations, will be forwarded promptly.

Get more out of your garden

Use the Planet Jr. Combination Garden Tools, and you'll do better work; save two-thirds your time, and get a better yield.



No. 4 Planet Jr. Combined Seeder and Wheel Hoe saves time, labor, seed and money. Almost all useful garden implements in one. Adjustable in a minute to sow all garden seeds, hoe, cultivate, weed, or plow. Pays for itself quickly, even in small gardens.

No. 12 Planet Jr. Double-Wheel Hoe, Cultivator and Plow, the handiest implement ever made for truckers and gardeners. All cultivating parts are of high-carbon steel to keep keen edge. Specially designed to work extremely close to plants without injury.

Write for our 1909 free illustrated catalogue which describes 45 Planet Jr. implements, including Seeders, Wheel-Hoes, Horse-Hoes, One- and Two-Horse Riding Cultivators, Harrows, Orchard and Beet-Cultivators.

S. L. ALLEN & CO.,
Box 1108F Philadelphia, Pa.

Planet Jr. Garden Tools

WRITE FOR THE NAME OF OUR NEAREST AGENCY.

EWING'S SEEDS

Seeds that have as much growing ability as nature, care and careful selection can cram in.

WRITE NOW FOR A CATALOGUE.
Wm. Ewing & Co., Seedsmen,
142-146 McGill Street,
Montreal.

MIDWAY HORSE MARKET

Holds its GRAND AUCTION SALES Every Wednesday.

Over 600 head of horses of all classes, including 350 head of drafters, farm mares and business horses, will be sold without reserve at each sale.

PRIVATE SALES DAILY.

There will be the largest assortment of good horses at these auctions ever offered for sale, and you should be on hand. BUY NOW.



BARRETT & ZIMMERMAN, Midway Horse Market, St. Paul, Minn.
Take interurban cars from either city.

Let Me Send a DOMO CREAM SEPARATOR to Your Home for 10 Days' Free Trial.



The test or trial will not cost you a penny. That is the way I sell separators. It is a fair, good, honest way. I do not belong to any trust, and nobody dictates the price I shall sell. I sell my machine strictly on its merit, and it has to be better than others (not simply as good) to stand a chance in competition. It is better, and is introduced in a square-deal way. My free trial and examination plan should interest you. Write for circular "A" to:

No. 2 DOMO Cream Separator. Price, \$30.00.

J. H. MORROW, BRIGHTON, ONT.

CLYDESDALES AND FRENCH COACHERS

We have still on hand a few choice Clydesdale stallions—all young—that for size, style and quality will stand inspection. We have also a few Clyde fillies—imported and Canadian-bred, and two French Coach stallions. Correspondence and inspection invited. Our prices are easy and terms to suit. Phone connection.



R. NESS & SON, HOWICK, QUEBEC.

Poultry Tonic

INCREASES EGG PRODUCTION. CURES DISEASE.
1 1/2 lbs., 25c. By Mail, 35c.
MADE IN CANADA

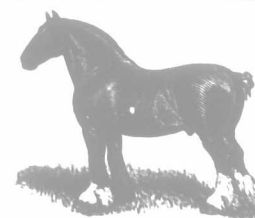


Louse Killer

KILLS LICE ON POULTRY AND STOCK.
SATISFACTION GUARANTEED
1-lb. Can, 25c. By Mail, 35c.

THE HACKNEY STOCK TONIC COMPANY, TORONTO, ONTARIO.

Clydesdales and French Coachers, Imp.



Scottish and Canadian winners, stallions, mares and fillies. The Clydes represent the blood of such noted sires as Baron's Pride, Up-to-Time, Royal Favorite, Ethiopia and Acme. They combine size, quality and action. The French Coachers are a big, flashy, high-stepping lot, and are winners in both France and Canada. Our prices are right, and our horses as good as the best. Long-distance telephone.

ROBT. NESS & SON, HOWICK, QUEBEC.

Clyde Park Imp. Clydesdales I have on hand for sale several imported Clydesdale stallions and fillies, also 3 foals. Parties wanting something extra well bred and of the big-quality kind should write me. They will be sold at a right price, and on terms to suit.
ALEX. F. McNIVEN, ST. THOMAS, ONTARIO.



Make Your Own Stock Food.

One pound of Barnes English Compound makes ten pounds of stock food, by mixing it with three pounds of linseed meal and six pounds of corn meal. As a conditioner and flesh-producer has no equal. Postpaid on receipt of 50c., money order or stamps. Address: S. G. Amsden, Windsor, Ont.

Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with Fleming's

Fleming's
Fistula and Poll Evil Cure
—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Adviser.

Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated.
FLEMING BROS., Chemists,
75 Church Street, Toronto, Ontario

Radiol

RADIOL TREATMENT
prolongs the life of a horse's legs. Completely removes by radiation all soft swellings that disfigure and lame a horse, as Sprained Tendons, Windgalls, Bog Spavins, Capped Elbow, Big Leg, Enlarged Glands, etc.
No Blister! No Laying Up; No Hair Removed.

RADIOL TREATMENT fines down a worn horse's legs, and is a certain cure for puffy joints and sprains, prevents Filled Legs.

An intelligent use of the "RADIOL LEO WALK" counteracts that daily wear and tear of the legs unavoidable with the horse in constant work, whether training, racing or on the road.

One flask of "Radiol" will make a gallon of valuable leg wash.

6 Mar., 1909.
Dear Sirs,—I have found Radiol very effective in reducing capped hocks and similar enlargements on horses' legs, and I therefore, consider your claim that it is a necessary stable requisite quite genuine.
Yours faithfully,
W. M. PRICE,
Estate Manager to the Earl of Minto, Howick, N. B., England.

WRITS FOR ILLUSTRATED BOOKLET AND USES OF "RADIOL." Ask your chemist for "RADIOL." Price \$3 a large flask, or post free from Canadian Agent:
Thos. Reid, 9 St. Nicholas St., Montreal.
Manufactured by The Radiol Co., 213 Westminster Bridge Road, London, England.

Ormsby Grange Stock Farm, ORMSTOWN, P. Q.

DUNCAN McEACHRAN, F. R. C. V. S., D. V. S., Proprietor.

Importer and breeder of high-class pure-bred **CLYDESDALES.** Farmers or ranchmen starting breeding Clydes, pure or grade, specially invited to correspond.

Dr. Bell's Veterinary Medical Wonder cures inflammation of lungs, bowels and kidneys. The 20th-century wonder. Agents wanted in every county. Write for terms.
DR. BELL, V. S., Kingston, Ont.

FOR SALE: **Suffolk Punch Stallions**
TWO GOOD
Sired by pure-bred Suffolk Punch stallion, Ontario. One brown, 6 years old; one sorrel, 4 years old.
THOS. KNAGGS, VANDECAR, ONT.

Shires, Shorthorns and Lincolns
We are now offering eight specially good young bulls, richly bred, and will be priced right; also a dozen heifers. Some choice young Shire fillies. And Lincolns of both sexes.

John Gardhouse & Sons, Highfield, Ont.
Weston Station.

Shetland, Welsh and Iceland Ponies
I have on hand a number of single ponies and matched pairs; all ages; thoroughly broken to harness and reliable in every way.
E. DYMENT, Copetown P.O. and Sta.

QUESTIONS AND ANSWERS. Veterinary.

APOPLEXY.

Pig, three months old, began to take fits a few days ago. When it commences to eat, it apparently chokes, falls over, breathes hard for a time, and then gets up.

A. J.

Ans.—This is apoplexy, due to want of exercise and too much to eat. Purge it with two ounces Epsom Salts. Feed on milk, bran, and raw roots for a few weeks, and see that it gets regular exercise.

ECZEMA.

Collie dog has offensive smell. He appears itchy and licks himself, but there are no sores or rash.

C. E.

Ans.—Your dog has eczema. Take a tin of Gillett's lye, dissolve it in water, add four pounds sulphur, with brisk stirring, then add water to make a barrel. Heat a sufficient quantity of this to about 105 degrees Fahr., and give the dog a thorough bath. After the bath, rub him well and keep comfortable until dry. Feed on light food, with little meat. Repeat the bath once weekly as often as necessary.

BOG SPAVIN AND CURB.

Five-year-old horse has a bog spavin and a curb on the same hock. I blistered him for this trouble when two years old. He goes lame for a short distance after starting.

J. H. W.

Ans.—As blistering failed to effect a cure when he was a two-year-old, it would not be wise to waste time and money in trying it again. Get your veterinarian to fire and blister him. This will probably remove the lameness, but it is not probable the enlargements can be removed after three years' standing.

UNDESIRABLE HABIT.

When standing in the stable, my 4-year-old gelding elevates his tail, steps up with hind feet, and voids a small quantity of urine so forcibly that you would think it was propelled with considerable force from behind. He does this very frequently. I noticed the same habit last winter. When in harness he does not do so, and after a drive he voids urine in a normal manner and in a normal quantity. He was on pasture all summer and the habit was not noticed, but I noticed it as soon as he was brought to the stable in the fall.

R. W. F.

Ans.—This is a habit, probably contracted while standing in the stable for considerable time without exercise. The fact that it is not practiced when in harness, or on pasture, indicates that it is a habit, and not due to disease. If there be any irritation of the urinary organs, the administration of 1½ ounces of the tincture of hyoscyamus, in a pint of cold water as a drench, twice daily, for a few days, should relieve it, but I am of the opinion there is no organic derangement.

BROKEN WIND—UNTHRIFTY COLT.

1. Horse had distemper last July. He still breathes heavily, and heaves at the flank and coughs.

2. Six-months-old colt is not doing well. His appetite is poor. He will eat a couple of handfuls of oats, a little clover hay, and a little stock food, but does not eat enough.

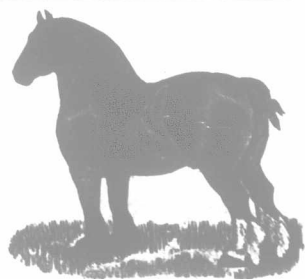
S. T. M.

Ans.—1. If he really has heaves, a cure cannot be effected. The cough can be checked by giving him every morning a ball composed of 2 drams solid extract of belladonna, 1½ drams gum opium, 20 grains digitalis, and 1 dram camphor. Add sufficient oil of tar to make plastic, roll in tissue paper, and administer, or mix with a pint of warm water and give as a drench. Feed limited quantities of hay of first-class quality, and liberally on oats of good quality. Dampen all he eats with lime water.

2. Take 1 oz. each of sulphate of iron, gentian, ginger, and nux vomica. Mix and make into 24 powders. Give a powder three times daily. Discontinue the stock food. Feed liberally on rolled oats, bran, and good hay, and give a carrot or turnip daily, and see that he gets regular exercise.

V.

MY NEW IMPORTATION OF 23 Clydesdale Stallions



Which arrived in December, 1908, are all for sale. This lot include gets of the most famous sires. Four are by the renowned Everlasting, two are by Hiawatha. Please come and see them, or write to me. I am only two miles from the end of street car line. I also have two home-bred Hackney stallions for sale at a low price.

O. SORBY, GUELPH, ONT.



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.

Clydesdale Stallions and Mares!

A fresh lot has just arrived, including many prizewinners. Some extra big ones. Prices right. Inspection invited.

DALGETY BROS., LONDON, ONTARIO.
Stables Fraser House. Address correspondence to Dalgety Bros., Glencoe, Ont.

CLYDESDALES AND SHORTHORNS.—Both imported and Canadian-bred, at Columbus, Ont., the home of the winners. Our last importation landed in August. They include the pick of Scotland, from such renowned sires as Baron's Pride, Everlasting, Baron of Buckley, Hiawatha, Marcella, Sir Everest, and Prince Thomas. We have on hand over 30 head to choose from, from the above noted sires, from 1 to 6 years old, and including stallions and mares. Correspondence solicited. Call and see them at our barns, Columbus, Ont., before purchasing elsewhere. Our prices are right. Long-distance phone in houses. Phone office, Myrtle station. Myrtle station, C.P.R.; Brooklin station, G.T.R.; Oshawa station, G.T.R. **Smith & Richardson & Sons, Columbus, Ont.**

Imported Clydesdale Stallion to Rent "Lord Cathart" Imp. (1904); sire Pride of Blacon (Scottish Champ); g. sire Baron's Pride. Five years; brown; white points; sound; quiet. A proved sire of grand stock. \$285 for season, payable Feb. 1910, with option purchase. Rare chance. Also beautiful Hackney yearling colt and mares. **MOUNT VICTORIA STOCK FARM, HUDSON HEIGHTS, P. Q.**
T. B. MACAULAY, PROPRIETOR. ED. WATSON, MANAGER

Oak Park Stock Farm Co., Ltd. have at present for sale a choice selection of young HACKNEYS broken to harness, well worth moderate prices. Also 70 choice SHROPSHIRE RAM and EWE LAMBS, all bred from imported ewes, and sired by the best imported rams. Will be sold at times prices.
JAS. J. BROWN, Manager, BRANTFORD

IMPORTED SHIRES At their St. Thomas stables, the John Chambers & Sons Co., of England have for sale stallions and fillies from their noted Shire stud, high-class representatives of the breed. Correspondence solicited. Address **DR. C. K. GEARY, St. Thomas, Ont.**

IMP. CLYDESDALE STALLIONS AND FILLIES.—Our new importation of stallions and fillies are the best we could select in Scotland, particularly well bred, with the size, smoothness and quality that Canadians admire. Show-ring stuff. Come and see them. Will sell on terms to suit. **JOHN A. BOAG & SON, Queen'sville P. O., Ont.; Newmarket Sta., G. T. R.** Telegraph and telephone one-half mile from farm. Metropolitan Street Ry. from Toronto crosses the farm.

Clydesdales and Hackneys We have for sale a few choice Clydesdale mares, imported and Canadian-bred; also some Canadian-bred Clydesdale stallions. Hackney stallions and mares for sale always. **HODGKINSON & TISDALE, BEAVERTON, ONTARIO.** G. T. R. and C. N. R. Long-distance phone.

NEW IMPORTATION OF CLYDESDALES. My new importation of Clydesdales are now in my stables. 14 stallions, 2 fillies. Visitors will find them as choice a lot as ever seen in Canada. Big, full of style and quality, and bred right royally.
T. D. ELLIOTT, Bolton, Ontario, P. O. and Station

IMPORTED CLYDESDALES, SHORTHORNS AND SHROPSHIRE! I have on hand several Clydesdale stallions, as choice a lot as ever crossed the ocean. Missie, Stamford, Claret and Gem of Baleschin Shorthorns; up-to-date in type and quality. 50 imported Shropshires, 30 ewe and 30 ram lambs from imported stock. Look me up at Toronto Exhibition horse barns. **THOS. L. MERCER, MARKDALE, ONT., P. O. AND STA.**

IMPORTED CLYDESDALES My new importation for 1908 has now arrived—stallions and fillies—personally selected. Richest in breeding; highest in quality; with abundance of size and character. Sold on terms to suit. **GEO. G. STEWART, HOWICK, QUE.**

IMPORTED CLYDESDALES My new importation of Clydesdale stallions and fillies, land-acted a short time ago, are an exceptionally choice lot, full of flashy quality, style and character, and right royally bred. I will sell them at very close prices, and on terms to suit. **C. W. BARBER, Gatinseau Point, Quebec.** "Close to Ottawa."

Clydesdales Imported and Canadian-bred. Our mares all are bred to Acme (imp.), the 8th best breeding horse in Scotland in 1907. Four male foals and one filly, all from high-class (imp.) mares, for sale right.
R. M. HOLTBY, Sta. & P. O. Manchester, Ont., G.T.R.; Myrtle, Ont., C.P.R.

CONSTIPATION IRREGULARITY OF THE BOWELS

Any irregularity of the bowels is always dangerous, and should be at once attended to and corrected.

MILBURN'S LAXA-LIVER PILLS

work on the bowels gently and naturally without weakening the body, but, on the contrary, toning it, and they will if persevered in relieve and cure the worst cases of constipation.

Mrs. James King, Cornwall, Ont., writes: "I was troubled with sick headaches, constipation and catarrh of the stomach. I could get nothing to do me any good until I got a vial of Milburn's Laxa-Liver Pills. They did me more good than anything else I ever tried. I have no headaches or constipation, and the catarrh of the stomach is entirely gone. I feel like a new woman, thanks to Milburn's Laxa-Liver Pills. I used in all about half a dozen vials."

Price 25 cents a vial, 5 for \$1.00, at all dealers or mailed direct by The T. Milburn Co., Limited, Toronto, Ont.



The ordinary lamp wherever used spoils all lighting effects by its downward shadow. Replace it with

The Angle Lamp

and the improvement will surpass belief. "No under-shadow" is a great feature. But for the quality of its light alone it is superseding gas and electricity in city and country homes. Its light has all of their power with none of their glare and unsteadiness—soft, mellow, eye resting, and absolutely free of the smoking and offensive odors of ordinary lamps, either. There is nothing like it for convenience. It lights and extinguishes like gas, without removing globe—one fitting burns 16 to 22 hours, costing about 18 cents a month for oil. Compare that with the monthly gas and electric bills, or even the cost of that troublesome, smoky, smelly lamp you are using. For quality of the light, economy and satisfaction for all lighting purposes, there can be no comparison. It is the cheapest and the best kind of illumination.

50 DAYS FREE TRIAL to show its superiority. You are sure to buy it if you know it. Write at once for our book which explains all. Ask for catalogue No. "63."

THE 1900 WASHER CO.,
355 1/2 Yonge St., Toronto, Ont.

"Madam," said the teller of a bank in Baltimore to a woman who had handed him a check to cash—"madam, you have forgotten to endorse."

A worried smile came to the woman's face, but she took back the paper and wrote something on the back thereof.

When again the teller looked at the check he found that the woman had endorsed as follows:

"This ——— Bank has always paid me whatever it owed, and you need have no worry. Therefore, I endorse this check. Very truly yours, Anna M. Blank."

You cannot possibly have a better Cocoa than

EPPS'S

A delicious drink and a sustaining food. Fragrant, nutritious and economical. This excellent Cocoa maintains the system in robust health, and enables it to resist winter's extreme cold.

COCOA

Sold by Grocers and Storekeepers in 1-lb. and 1/2-lb. Tins.

QUESTIONS AND ANSWERS. Miscellaneous.

LINE FENCING.

What is the law regarding line fences? Can they be changed, straightened, or in any way moved, without the consent of both parties? SUBSCRIBER.

Ontario.
Ans.—Yes: the fence-viewers of the locality may be called in, if necessary, and the matter disposed of by and under their award.

PIGS HAVE SCABS.

I have a litter of pigs two weeks old. Some of them have scabs all over their heads. I am feeding the sows pulped roots, shorts, and a little skim milk. Is it the feed, or is it some disease? A SUBSCRIBER.

Ans.—It is difficult to assign a cause for this ailment. The feed appears to be all right. A mixture of sulphur and melted lard, or sweet oil, rubbed into the scabs, and repeated once or twice, if necessary, will probably remove them. The bedding should be clean wheat straw, if available.

PRICES OF PIPING.

A is an implement agent and sells B a power windmill and pumping outfit. The order called for 270 feet of inch and a quarter galvanized piping, for which A charged 20 cents per foot. B objected to the price, because he claimed he could get it for 13 cents per foot, but he said that the piping B referred to was only washed, and not galvanized. When the job was completed, there was three feet over what was needed. A takes the three feet, and allowed B 17 cents per foot for it, claiming that that was what it cost him.

1. Are there different grades of inch and a quarter galvanized iron piping?
2. If not, can B prosecute A for fraud? X. Y. Z.

Ontario.
Ans.—1. There is only one grade of galvanized piping known to the trade in Canada. Two firms manufacture a similar article, and the prices are uniform. It should be handled by dealers at 13 cents per foot, or less, except in cases where it was being installed at a place some distance from a railway, in which case charges could be made to cover expenses.

2. We do not think that B can do so successfully.

VESTING OF TITLE.

A dies, leaving his farm of one hundred acres to his son B, with conditions which B fulfils himself, with executrix; but the farm is still in A's name.

Through what course of law will B have to go, or how can it be put in B's name, it being five years since A died? Ontario. J. B.

Ans.—Subject to the dower, if any, of A's widow, if living, and to his debts, the title has probably by this time become vested in B, without the necessity for anything being done, other than placing the will on record in the proper registry office. If probate has not been had, then, in order to such registration, the will itself must be produced to the Registrar, and a copy left with him, accompanied by an affidavit verifying same, setting forth the death of the testator, and proving the due execution of the will by him.

TRADE TOPIC.

WORKS LIKE A CHARM.—The following letter from H. F. Vogel, of Middle Granville, N.Y., to Troy Chemical Co., whose advertisement appears on another page, is a tribute to the value of "Save-the-Horse" spavin cure: "Please find enclosed 50c. for 8 ozs. of 'Save-the-Horse' ointment; I find it works like a charm. In the winter of 1906 and 1907 I treated a mare called Nellie V. for windpuff with your 'Save-the-Horse' Spavin Cure, with good results. It has been over nine months now since she took a lame step. I worked her hard all the while I treated her, and on bad roads at that. I cannot speak too highly of your cure."

You cannot duplicate the barn you built ten years ago for less than twice what it cost you.

That barn of yours is valuable. Compared with ten or fifteen years ago lumber is scarce and the outlook for the future is that it will be scarcer still.

The longer you can put off building a new barn the better. An unpainted barn loses much of its value as a barn through decay in about twenty-five years. A barn painted with one coat of good paint every other year will still be a good barn at the end of fifty years. That is why systematic painting with good paint is not an expense but an investment—an investment that pays a good, steady rate of interest.

But you must realize more than the simple necessity of painting, you must realize the necessity of getting good paint, which means paint that will prove the most economical and satisfactory.

"Paints and Varnishes for the Farm"

This booklet will help you to select the right quality. It covers the whole subject of farm painting. It tells of special paints and varnishes for special purposes. It includes a barn paint peculiarly adapted to barns, paint that will go farther per gallon, paint that will require less labor to put on and paint that will do more and last longer when on. We send the book FREE.

SHERWIN-WILLIAMS PRODUCTS FOR FARM USE

- S W P. (SHERWIN-WILLIAMS PAINT, PREPARED)—for preserving good buildings.
- S-W CREOSOTE PAINT — for prolonging the life of barns and other rough exteriors.
- S-W COMMONWEALTH BARN RED
- S-W BUGGY PAINT—for refinishing the carriage.
- S-W WAGON AND IMPLEMENT PAINT—for preserving farm machinery.
- S-W ENAMEL LEATHER DRESSING—for renewing carriage tops and aprons.
- S-W PARIS GREEN
- S-W ARSENATE OF LEAD — for preventing destruction of crops by insects.
- S-W MEDICINAL LINSEED OIL — for treating and conditioning of horses and other live stock.

The SHERWIN-WILLIAMS Co.

LARGEST (BECAUSE BEST)
PAINT AND VARNISH MAKERS IN THE WORLD

Address all inquiries to 639 Centre St., Montreal.

HOMESTEAD ABERDEEN-ANGUS



Bell telephone.

Good individuals and good breeding, at prices that anyone wanting a good young bull or heifer can afford to pay. Come and see them.

WM. ISCHIE,
Sebringville, Ont.

THE "MAPLES" HEREFORDS



Canada's Greatest Show Heifer.
For Sale: 25 bulls from 6 to 18 months of age, bred from imported and show stock; also about the same number of heifers, none better. Prices right.

W. H. HUNTER,
Orangeville P.O. and Sta.

GLENGORE Present offering: One bull 2 year old, and three choice yearling bulls, and anything in the female line. A choice ANGUS lot and sold right. GEO. DAVIS & SONS, ALTON, ONT. Station, C. P. R.

Aberdeen-Angus

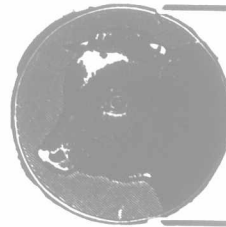
For sale: The right sort, some of them by Klondyke, imp. Drumbo station. WALTER HALL, Washington, Ontario.

ABERDEEN-ANGUS CATTLE!

FOR SALE: Some of the best strains. Several fine heifers; also cows and a couple of bulls. Apply: MANAGER.

GRAPE GRANGE FARM, CLARKSBURG, ONT.

Aberdeen-SUFFOLK DOWN SHEEP. If you require either of these breeds, write: JAMES BOWMAN, Elm Park, Guelph, Ont.



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 CLANCY, Manager. H. Cargill & Son, Cargill, Ont.

VALLEY HOME Shorthorns and Berkshires

For sale: Six young bulls fit for service, and young cows and heifers; some are choice show animals. Also ten fine young Berkshire sows of prolific strains. Write, or come and see our stock. Visitors welcome.

S. J. Pearson, Son & Co., Meadowvale, Ont.

Stations: Meadowvale, C. P. R., and Brampton, G. T. R.

Pleasant Valley Herd

Present offering: 7 high-class young bulls by Imp. Ben Lomond = 45160 = (80468) and Bud's Emblem = 63860 =, and good imp. and Canadian-bred dams. Write for particulars and prices, or visit personally.

GEO. AMOS & SON, Moffat Station and P.O. Moffat is 11 miles east of Guelph on C. P. R.

AN OPPORTUNITY TO SECURE YOUNG MAPLE SHADE FARM.

Combining Substantial Individuals with Rare Breeding. A few heifers will be sold cheap. Long-distance telephone. STATIONS: } MYRTLE, C. P. R. } BROOKLIN, G. T. R. } JOHN DRYDEN & SON, BROOKLIN, ONT.

Bone Spavin

No matter how old the blemish, how lame the horse, or how many doctors have tried and failed, use

Fleming's Spavin and Ringbone Paste

Use it under our guarantee—your money refunded if it doesn't make the horse go sound. Most cases cured by a single 45-minute application—occasionally two required. Cures Bone Spavin, Ringbone and Sidebone, new and old cases alike. Write for detailed information and a free copy of Fleming's Vest-Pocket Veterinary Adviser

Ninety-six pages, durably bound, indexed and illustrated. Covers over one hundred veterinary subjects. Read this book before you treat any kind of lameness in horses.

FLEMING BROS., Chemists,
75 Church Street, Toronto, Ontario

Imported Bull!

To save inbreeding I will sell the Cruickshank (Duthie bred) imp. bull, Sittytion Victor = 50093 = (87397), a proven sire of merit, gentle and active. Also some young bulls by him, out of imp. dams. Address:

John Brydson, Milverton, Ont.

WILLOW BANK STOCK FARM

Shorthorns, Leicesters. Herd established 1855; flock, 1848. The great Duthie-bred bull, imported Joy of Morning = 32070 =, at the head of herd. A choice lot of cattle of either sex to offer. It will pay you to see them. Also choice Leicesters. **JAMES DOUGLAS, Caledonia, Ont.**

FLETCHER'S SHORTHORNS!

Our herd of the most noted Scotch families is headed by Benachie (imp.) = 69954 = (bred by Alex. T. Gordon), sire Scottish Farmer, dam Beatrice 22nd, which produced Bandmaster, first-prize bull calf at the Royal in 1908. Sold for 600 guineas. The young stock of either sex for sale are mostly sired by the former stock ball, the famous Joy of Morning (imp.). **Geo. D. Fletcher, Binkham P. O., Erin Sta., C. P. R., Ontario.**

Mrs. Hicks was telling some ladies about the burglar scare in her house the night before:

"Yes," she said, "I heard a noise and got up, and there, from under the bed, I saw a man's leg sticking out."

"Mercy!" exclaimed the woman. "The burglar's legs?"

"No, my dear; my husband's legs. He heard the noise, too."

Jack London, the author, was introduced one day to a musician.

"I, too, am a musician in a small way," London said. "My musical talent was once the means of saving my life."

"How was that?" the musician asked.

"There was a great flood in our town in my boyhood," responded London. "When the water struck our house my father got on a bed and floated with the stream until he was rescued."

"And you?" said the musician.

"Well," said London, "I accompanied him on the piano."

DO JUST WHAT IS CLAIMED FOR THEM

That's What Joseph Macklin Says of Dodd's Kidney Pills.

They Cured His Neuralgia, Cramped Muscles and Heart Disease From Which He Had Suffered for Two Years.

St. Paul de Metis, Alta., February (Special).—"Dodd's Kidney Pills have done for me all that is claimed for them." So says Joseph Macklin, a well-known farmer of this district. "I was ill for over six years with Neuralgia, Cramps in my muscles, Backache and Heart Disease. I called on different doctors, but got no help. I heard that Dodd's Kidney Pills were meant for just such cases as mine and bought eight boxes of them. Now I feel just like a new man. I recommend them to all as a sure cure for Rheumatism and all troubles arising from diseased Kidneys."

Thousands of farmers all over the West relate similar experiences to that given by Mr. Macklin. They find that Dodd's Kidney Pills do just what is claimed for them—cure all diseased Kidneys and all diseases arising from diseased Kidneys.

QUESTIONS AND ANSWERS. Miscellaneous.

RETENTION OF PLACENTA.

I would like to know, through your columns, what is the easiest and most humane way to remove the afterbirth from a cow that has failed to drop it in the usual natural way, and what is the cause? A SUBSCRIBER.

Ans.—Keeping the cow warm, by blanketing, and placing a sack of hot salt or bran over the loin, will tend to hasten a clearance. If the placenta does not come away in 24 hours after parturition, it should be removed by introducing the hand, first dipped in hot water, into the uterus, and with the finger and thumb, releasing the membrane from the button-like cotyledons attaching it to the walls, when it will come away in bulk.

EXCESSIVE SALIVATION.

Heifer, two years old, loses her saliva when eating. Appetite is good, but she is far too thin for the amount and quality of food consumed. She seems lively enough when out. The ration consists of cut straw, silage and turnips mixed with a handful of meal, three times per day. Last winter she did not thrive, but did not lose saliva. Can you prescribe a cure, or give a cause? X. Y. Z. Huron Co.

Ans.—Salivation is in some cases merely a habit. In other cases it is due to some trouble in the mouth, and in others to some irritant weeds in the feed. Have her mouth examined, and if anything is found wrong with the teeth, cheeks or tongue, have the trouble treated.

DOG WHEEL POWER.

In reference to your very interesting description of a dog power machine in the issue of your valuable paper dated Dec. 31st, 1908, would you please, through your inquiry column, give me a little further information on the subject.

1. What breed and weight of dog should be used?
2. How are they trained?
3. How long at a time can the dog work?
4. About what horse-power would a 10-foot wheel give?
5. How many revolutions per minute would the wheel be likely to run?

B. O. R.

Ans.—These questions were submitted to the subscriber who had sent us the original description. He replies as follows:

1. The collie dog is the farmer's dog, and there is no better dog for the power. Collies will weigh from 40 to 60 pounds, usually. Almost any breed of dogs can be trained to run the power.
2. Place the dog in the wheel. Pet and coax him; talk kindly, so as to let the dog understand there is nothing going to hurt him. Turn the wheel gently by hand, talking kindly all the while to encourage him to start to walk in the wheel. Usually, when the dog finds out there is nothing to fear, he will commence to walk. Do not keep him in too long at the first few times. It may be necessary to tie dog for a while at first. Tie short as you can, at the same time giving rope enough to allow it to walk forward. If the shaft is stationary, a stick can be fastened to it, projecting forward, to hold the dog in position. If the shaft turns with the wheel, put a bit of wire on it and tie the rope to that. A small door, or a board or two, may be placed on the outside, so that he cannot jump out. Do not be discouraged if you do not succeed very rapidly, but keep trying. Some dogs will learn much more readily than others, but when used to it they enjoy it.
3. It depends on what you are doing. For pumping water, a dog need not go any faster than a walk, and can stay in almost any length of time. I used two dogs last winter. It would take them about three-quarters of an hour to fill the tank, but would stay in twice that long if required. For pulping, the dog must trot, or canter along as fast as it likes. I can pulp roots enough for 30 head of cattle in ten minutes. If the dog goes fast, ten or fifteen minutes is long enough, and as long as would be required, usually.
4. I am told that a fifty-pound dog, walking, would give about one-tenth of a horse-power.
5. The dog walking would turn the wheel about 15 revolutions per minute.

S. J. PYM.

BARN THAT SCATTER LIGHTNING

Yes, we mean just that. If you want to know about a reliable

Barn Roofing

that is fire, lightning, rust and storm proof—write us. We'll give you some hard facts that ought to turn you against wood and convert you to metal. Give us a chance—write us.

THE METALLIC ROOFING CO., LIMITED
MANUFACTURERS
TORONTO and WINNIPEG

10 Imported Scotch Shorthorn Bulls 10

Personally selected from the leading Scotch herds. Now in quarantine. Will be for sale at my farm first week in January. They are of such noted families as Broadhooks, Butterfly, Claret, Clara, Roan Lady and Jilt. I also have for sale four bull calves from imp. sire and dam, and a number of good young cows and heifers. Catalogue being prepared. Write for one. Prices, as well as quality and breeding, will please you. Farm ¼ mile from Burlington Junction station, G. T. R.

FRED. BARNETT, MANAGER. J. F. MITCHELL, BURLINGTON, ONT.

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, Gobles, Ontario.

1854 MAPLE LODGE 1908 STOCK FARM 1908

A few extra good young SHORTHORN bulls and heifers for sale.

LEICESTER ram lambs by the grand champion ram, "Sanford." Right good ones, and a few choice ewes.

A. W. SMITH, MAPLE LODGE P. O., ONT.

Lucan Crossing Station, G. T. Ry.

Shorthorns!

BELMAR PARC

John Douglas, Peter White, Manager, Pembroke, Ont.

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.

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 = 283904 A. H. B. Young stock for sale. Long-distance phone in house.

WILL MAKE PRICES ON THE FOLLOWING LIST OF Two imported bulls, tried Shorthorns, Clydesdales, Shropshires and Cotswolds sires, very valuable, will sell or exchange at moderate price.

That No Man Keeping Live Stock Can Afford To Overlook: One Clydesdale filly coming three, from imported sire and dam, amongst the best. The filly is good and has the quality wanted in a show mare. A small number of imported cows and heifers, and some splendid young bulls and heifers from imported sires and dams. Ewes in lamb to high-class imported sires.

ROBERT MILLER, Stouffville, Ont.

SHORTHORNS! Greengill Shorthorns!

Present offering: Choice young stock, either sex, by Golden Crest = 7325 = and Nonpareil Victor 2nd = 34534 =. Prices reasonable.

John Racey, Lennoxville, Que.

We offer for sale our herd bull, imp. Lord Roseberry, also young bulls and females all ages, either imp. or from imp. stock. Prices right. Long-distance phone.

R. Mitchell & Sons, Nelson P. O., Ont. Burlington Jct. Sta.

SPRING VALLEY SHORTHORNS.

Our herd is pure Scotch, imp. and home-bred. 50 head to choose from. Our present crop of young bulls are the best we ever had. All sired by the great stock bull, imp. Bapton Chancellor. High-class show things among them, including this fall Toronto winners. Nearly every one a herd header.

KYLE BROS., AYR, ONT., P. O. and STATION.

Stock Bull Trout Creek Sailor = 59421 = 247242, A. H. B., for sale; also roan show bull, fit for service. A. M. SHAWER, ANGASTER, ONT. Station 13, Brantford and Hamilton Electric Line; three minutes' walk from barns. Inspection invited. Priced right.

When writing please mention this paper.

Scotch Shorthorns Canada's greatest living sire, Milled'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.**

Rowan Hill Shorthorns The 1908 Toronto grand champion, Royal Chief 65495, heads my herd. For sale are: 3 spring bulls and a few heifers, sired by him, and out of show cows. These are choice young things that are sure to please. **R. F. DUNCAN, Carluke P. O., Ont. Caledonia Station, G. T. R., or station 13 Hamilton and Brantford Electric Road.**

Scotch Shorthorns Fifteen choice red bulls, 7 to 17 mths., by Imp. Protector; some out of imp. dams. Will be sold reasonable. **McFARLANE & FORD, M. C. and P. M. Rys. Box 41, Dutton, Ont. two miles east of station.**

Shorthorn Bulls Ready for service. One will make a show bull. Also young things from Matchless, Crimson Flower, Miss Ramsden, Rosemary, Diamond and Lady Fanny dams, the get of Chancellor's Model. Prices to suit times. Come and see. **Israel Groff, Elmira, Ont.**

SHORTHORNS FOR SALE!

I have a dozen young cows and heifers, got by the Brawith Bud bull, Golden Abel (imp.), and in calf to the Bruce Mayflower bull, Royal Bruce (imp.), that I will sell very reasonable. A number of them are out of imported dams, and registered in Dominion and American Herd-books.

R. J. DOYLE, OWEN SOUND, ONT.

GREAT MEN WHO HAVE PROVED ZAM-BUK.

Scientist, Analyst, Magistrate, and War Correspondent all Testify.

Men and women great in point of knowledge, position and experience, say that Zam-Buk stands superior to all other healing substances. Read the opinions of the following eminent men:

Mr. C. E. Sanford, of Weston, King's Co., N.S., a magistrate, a school commissioner, and Baptist deacon, says: "Zam-Buk cured me of eczema on my ankle, which had defied every other remedy tried during twenty years. It also cured me of piles; and I take pleasure in recommending it to my fellow-men."

Mr. Frank Scudamore, the famous war correspondent, who has gone through twenty-nine battles, and whose dispatches during the Boer War were so eagerly read from coast to coast in Canada, says: "Owing to the poisonous dye from an undergarment penetrating a slight scratch, my leg broke out in ulcers. At one time I had seventeen deep holes in my left leg, into each of which I could put my thumb; and had fourteen similar ulcers on my right leg. Remedy after remedy failed to heal these, and I was well-nigh worn out with pain and lack of sleep." Zam-Buk was introduced, and I am glad to say that it gave me speedy relief. A few weeks' treatment resulted in a perfect cure of all the ulcers."

Dr. Andrew Wilson, whose reputation as a scientist is world-wide, in a book recently published ("Homely Talks on First-Aid") says: "Zam-Buk may be relied upon as an antiseptic dressing which requires no preparation, and has the particular advantage of possessing unique healing properties."

Mr. W. Lascelles-Scott, the famous analyst to the Royal Commission for Victoria, says: "I have no hesitation in certifying the entire purity of Zam-Buk. It is of great healing power for open wounds or injuries."

So one could go on quoting authority after authority, all of the opinion, based on personal tests, that Zam-Buk should be in every home. Zam-Buk is a sure cure for cuts, burns, scratches, cold-sores, chapped hands, ulcers, scalp sores, ring-worm, blood-poisoning, and eczema. It is also used extensively for piles, for which it is without equal. All druggists and stores sell at 50c. a box; 3 for \$1.25; or post free from Zam-Buk Co., Toronto, for price. You are warned against harmful imitations.

A BIG MONEY SAVING BARGAIN

THE BISSELL DISK HARROW

Because the "Bissell" cuts cleaner and turns the soil over better it has become the favorite of the farmer—famous throughout Ontario and the older Provinces as a great money-making farm tool. Perfectly adjusted, simple, compact, stout, rigid, and long lasting. Light draft, no neck weight on team; under absolute control at all times. Several styles for farm and orchard. A harrow bargain. It will pay you to know more about. Free descriptive booklet furnishes the facts. Write for it today. Address Dept. W. T. E. BISSELL CO. Ltd., Elora, Ont.



Husband—Our little boy is sick, doctor, so please come at once.

Physician—I can't get over much under an hour.

Husband—Oh, do, doctor. You see, my wife has a book on "What to Do Before the Doctor Comes," and I'm so afraid she'll do it before you get here!—Harper's Weekly.

10c. The latest success.

Black Watch

The big black plug chewing tobacco.

2288

QUESTIONS AND ANSWERS. Miscellaneous.

SIDEBONES.

Mare, five years old, contracted sidebones last September, and has been lame ever since. Is there any cure for sidebones that lame a horse? Will blistering do any good. J. R.

Ans.—Blistering generally allays the pain and cures the lameness, but the bony excrescence still remains. If the mare is lame apply a strong blister, consisting of biniodide of mercury and cantharides, each two drams, and lard two ounces, clipping the hair off the part first and tying so she cannot bite it. If this does not give relief after being repeated, get your veterinarian to fire and blister the part.

PROSPECTS FOR GOLD.

1. Is there likely to be gold in ground which is level, but has plenty of water near the surface?

2. Is there likely to be gold in such ground where there is mica and iron pyrites in plenty?

3. How must I proceed to wash such sand to find if it does contain gold? Oxford Co., Ont. A. N. C.

Ans.—1. There is little chance of gold being found in drift soil of Oxford County, Ontario.

2. There is a golden mica which glitters, but it is not gold. In iron pyrites, gold frequently is found.

3. In order to ascertain whether or not gold exists in paying quantities, your best plan is to send a representative sample to the Government Assayer, Belleville, Ont. He will give you the result of the assay for a small charge—probably \$2.

HOUSE MATERIALS AND PLANS

Editor "The Farmer's Advocate":

I am contemplating building a house. Can you, through "The Farmer's Advocate," give any information as to which is the cheapest to build, frame or concrete, and about what is the difference, without regard to the hauling of material? Is there a tendency to concrete being damp in some locations more than others, and what are some of the precautions to be observed in building either? Have you any plans of farm-houses on hand? We want a kitchen, a parlor, a dining-room, a pantry, and two bedrooms, down stairs. What is the best kind of a cistern to build? Would you advise building it under the house? H. N.

[Note.—We shall be pleased to publish answers from readers, including plans of houses actually built and in use for a year or more.]

Veterinary.

COW WITH COUGH.

1. Cow began to cough last fall and is not getting better. She has a dry, short cough. Otherwise she seems well. She eats well, but is getting thinner all the time.

2. What would it cost to have an inspector examine her?

3. If the inspector pronounced it a contagious disease and ordered her slaughtered, would the Government pay me for the cow? H. S. P.

Ans.—1. The symptoms indicate pulmonary tuberculosis. There is practically no doubt that she is diseased, but the only means of making a definite diagnosis is to have her tested with tuberculin by a veterinarian.

2. If you write the Department of Agriculture, Ottawa, naming the veterinarian whom you want to do the testing, the Department will send him sufficient tuberculin, free of charge, on conditions that he send them back the figures of the test. You will have to pay the veterinarian. If you live close to the veterinarian, his charge will probably be about \$5, but if you could fetch the cow to his infirmary to be tested, it would be considerably less.

3. The Government does not remunerate for loss from tuberculosis; neither does it order slaughter. If the animal is diseased, it is ear-marked, and you can keep her or destroy her as you like, but must not sell her for a sound animal. V.

POTASH

has absolutely no substitute as an ingredient of a COMPLETE FERTILIZER for all Farm, Orchard and Garden crops.

This important "Plant Food" can be obtained from all leading fertilizer dealers and seedsmen in the highly-concentrated forms of

SULPHATE OF POTASH AND MURIATE OF POTASH.

Write for full particulars and copies of our free publications, including: "Fertilizing Orchard and Garden," "Potato Crop in Canada," "Fertilizing Root Crops and Vegetables," "Fertilizing Hay and Grain Crops," "Artificial Fertilizers: Their Nature and Use," etc., etc., etc., to

Dominion Agricultural Offices of the Potash Syndicate, 1102-1105 Temple Building, Toronto, Ont.

RAW FURS and HIDES

Write for Weekly Price Lists.

Shipments Solicited.

JOHN HALLAM

TORONTO, ONT.

CHERRY BANK AYRSHIRES.

I am now offering young bulls and heifers true to type and high in quality. Some with imp. sire and dam; also will spare a few older females. P. D. McArthur, North Georgetown P. O., Que. Howick station, Que.

Ayrshires—Oldest-established herd in Ontario. Average B. F. test for the whole herd, 4.2; milk yield, 40 to 60 lbs. a day. For sale: Females of all ages, and several young bulls, all by imp. sire, and some out of imp. dams. JAMES BENNING, Williamstown P. O., Ont. Lancaster station.



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 Bull and heifer calves from producing dams. Right good ones. Hickory Hill Stock Farm. N. DYMENT, Dundas Station and telegraph. Clappison, Ont.

HOWGLEN AYRSHIRES!

For sale: 75 pure-bred registered Ayrshires, all ages; prizewinners; many imported. Apply to ALLAN P. BLUE, Eustis, Quebec.

A BETTER LOT OF AYRSHIRE Cows and Heifers

Were never to be seen before at Stockwood. Deep milkers, good teats; lots of size, just the kind for foundation stock. Young bulls from prizewinning dams; also heifers. Prices low. Terms to suit purchaser. All stock guaranteed before shipping. D. M. WATT, St. Louis Sta., Que.

AYRSHIRES AND YORKSHIRES!

We will sell or exchange for a young cow or (imp.) 3-year-old bull. On hand: Young bulls fit for service (imp. or home-bred). Choice August and September, 1908, calves from imp. sires, some imp. dams. One a grandson of Eva of Menie. Females any desired age. Bargains now, as we are crowded. We will only fill orders for 1909 importation. Young sows ready to breed. Phone Campbellford.

ALEX. HUME & CO., MENIE, ONTARIO.

HOARD'S STATION, G. T. R.

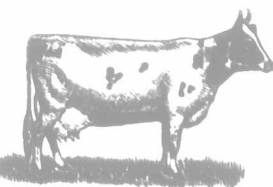
SPRINGBROOK have been bred with a view to large milk and butter production, coupled with vigor of constitution, and being true to type. A few bull calves of 1908 for sale. W. F. STEPHEN, Box 163, Huntingdon, Que.

WARDEN AYRSHIRES!

I have now for sale 2 yearling and 3 bull calves from good milkers. F. W. TAYLOR, Wellman's Corners, Ont. Hoard's Sta., G. T. R. Telephone in house.

UTILITY GLENORA OF KELSO = 15798 = AYRSHIRES at head of herd. For sale: Females of all ages, and several young bulls, some out of 11,000-lb. cows. Come and see, or address: R. C. CLARK, Hammond, Ont. Railway station, Hammond (G. T. R. and C. P. R.).

Ayrshire Cattle for Quick Sale—Choice bulls, heifers and cows, imported or Canadian-bred, for immediate sale. Prices very low considering quality. Good teats. Heavy milkers. For particulars write: WILLIAM THORN, Trout Run Stock Farm, Lynedoch, Ont. Norfolk Co.



Springhill Ayrshires!

A better lot of young cows and heifers we never had. They have only to be seen to be appreciated. "Good milkers." "Good teats." Just the kind for foundation stock. Bull calves from best cows. Will leave for Scotland shortly to import. Order a choice yearling or bull calf or a female or two. They will be out of quarantine for spring service. Write for prices. Long-distance phone.

ROBERT HUNTER & SONS, Maxville, Ont.

STOCK FOR SALE AT A number of Ayrshire bulls and heifers of Springburn Stock Farm WILLIAMSBURG, ONT. deep-milking strain. 15 Oxford Down shearing and ram lambs. Ewes any age. Prices reasonable. H. J. WHITEKER & SONS, Williamsburg, Ont., Props.

SUBSCRIBE FOR "THE FARMER'S ADVOCATE AND HOME MAGAZINE."

Stonehouse Ayrshires.

36 head to select from. All imported or out of imported sire and dam. For sale: females of all ages. Am now booking orders for bull calves. HECTOR GORDON, Howick, Quebec.



QUESTIONS AND ANSWERS. Miscellaneous.

CHANGING STAIRWAY.

I am a constant reader of your valuable paper, and must say it is good interesting literature, and very instructive. I take great interest in reading the articles written on the poultry and dairying questions, and would like to see that about the remodelling the farmhouse discussed. What would be the cost of changing a stairway? MRS. D. G.

Ans.—This is a question that cannot be answered without knowing particulars. A local carpenter, who can be made acquainted with the present layout of the house, who can see how much of the lumber from the old stairway can be used in the new one, and who can estimate how much lumber will be required, and how long it will take to do the work, will be pleased to give you the desired information. It may be practicable to remove and replace the stairs without taking to pieces.

CAPACITY OF GRAIN BINS.

I have a large bin full of oats, one of barley, and one full of peas. They are all square. How can I determine the number of bushels in each, as I wish to know how much I can feed and have enough left for seed? W. N.

Ans.—The capacity of bins is easily ascertained when it is remembered that one cubic foot contains 6.2321 gallons, or, approximately, 25 quarts. If you had a bin with 8 feet front, ten feet from front to back, and filled that to a depth of four feet, you would have 8 x 10 x 4, or 320 cubic feet of grain. This gives a total of 8,000 quarts. But there are 32 quarts in one bushel, so that the capacity of the bin, when filled four feet deep, would be 250 bushels. The capacity of any rectangular bin in bushels can be found, to within a trifling fraction, by multiplying the length by the width by the depth, and then multiplying by 25 and dividing the product by 32.

TREES FOR LAWN—LAWN-GRASS SEED.

1. When should a person start to transplant trees to plant a lawn? What is best kind of trees to get? How would you do this?

2. What kind of seed would be the best to plant a lawn? F. A. P. Q.

Ans.—Most trees are best transplanted in spring. The more roots taken up with the tree and the more soil transferred along with it, the greater are the chances for the tree living in its new quarters. However, in comparatively rich soil, well worked as a lawn would be, there is little danger of trees dying in transplanting, unless they were badly treated. With evergreens, it is well to recut the ends off the roots just before setting them, and to provide water freely for a time. The kind of trees to be planted depends on the size of the lawn. On large lawns, it is well to have a variety. In your district almost any of the species commonly found on lawns should thrive. Among the more desirable are spruce, cedar, maple, elm and poplars. An occasional fancy specimen such as Colorado blue spruce, weeping birch, and cut-leaved maple, add to the beauty of the lawn. Some of the common kinds may be secured in the bush lands near by. Others will have to be procured from reliable nursery firms. The choice as to numbers and varieties must necessarily be regulated by the size of the lawn.

2. Almost any reliable seed house supplies a satisfactory lawn-grass mixture. June grass, or Kentucky blue grass, along with White Dutch clover, is a simple mixture, that gives satisfaction in most parts of Eastern Canada. A more elaborate mixture, frequently advised by park commissioners and experts, comprises equal parts, by weight, of the following sown thickly: Kentucky Blue grass, fancy Red-top, perennial Rye grass, white Dutch clover, timothy and German millet. Millet is sown only as nurse crop, and gives fresh appearance the first season. Timothy, too, will be crowded out in a few seasons.



No "Shoddy" Here. It has the A.1. "Frost" Fence Quality

There is no "shoddy" in this sheep. It's lik "Frost" Fence in quality. Unlike the "shoddy" fence, there are no jointed or soft wire stays, no short kinked laterals, no locks with unsecured ends to loosen, no poorly galvanized wires, in the "Frost" Fence. It is "all wool" in quality. It's all No. 9 wire.

While scarcely over a year old, "Frost" Woven Fence holds the record for big sales. Notwithstanding heavy production and almost constant operation of our big plant, we had less of these goods on hand at the end of our first year than we had at the end of the first week.

December, January and February usually are "lean" months in the fence business, but "Frost" factory is working overtime. We are busy making a fence that is generally acknowledged the most perfect "factory-made" fence on the market. It enjoys the distinction of possessing the strongest and most secure binding (having more inches and weight of wire in the tie) on a "ready-made" fence. The horizontal and stay wires are made from the same grade of hard steel wire as "Frost" Coiled Wire.

In fact, "Frost" Woven Fence has become a keen rival of fencing with Coiled Wire Laterals. It is made in 37 different styles, giving a complete assortment in heights, different spacings of horizontal and stay wires.

"Frost" Woven Fence is daily proving itself positively the best proposition for anyone who has some spare time which he can devote to the handling of its sale. If you would like to talk this matter over, we will be very glad to put our time against yours. We will send a traveller if you will give us the tip.

Now if you are engaged in wire fence business but want to enjoy the BIG trade, better get in touch with us at once as we are establishing new agencies in all unrepresented fields.



Ample provisions are made for expansion and contraction. FROST WIRE FENCE CO., LIMITED, Hamilton, Ont. MANITOBA FROST WIRE FENCE CO., LIMITED, Winnipeg, Man.

"Frost" Fence

Riverside Holsteins

For sale: Seven young bulls from two to nine months old, out of Record of Merit cows, sired by Sir Pieterje Posch De Boer, whose dam and sire's dam average in official test 25.87 lbs. butter in 7 days, and 87.6 lbs. milk in 1 day.

J. W. Richardson, Caledonia, Ont.

Centre and Hillview Holsteins

125 head to select from. 35 in the R. O. M. Stock bulls Bonheur Statesman, high official backing, and is closely related to Colantha 4th's Johanna; Brookbank Butter Boy. All nearest dams over 20 lbs. From these sires, out of R. O. M. dams, are several young bulls and a few heifers. Prices right. P. D. EDE, Oxford Centre, Ont. Woodstock Station.

Spring Brook Holsteins and Tamworths. 32 choice young Tamworths from imp. sows, and sired by imp. Knowie King David, of best British blood and Royal winners. Correct type. Holsteins of best strains. Write for what you want, or, better, come and see. Will not exhibit this year. Stock better than ever. A. C. HALLMAN, BRBSLAU, WATERLOO CO., ONT.

HOMESTEAD HOLSTEINS

For sale: 4 bulls of serviceable age, sired by the champion, Count Mercedes Posch, whose nearest dams' records average 25 lbs., and out of Advanced Registry dams. G. S. F. GRIFFIN, Burgessville, Ont. Oxford Co.

Holsteins & Yorkshires

R. Honey, Brickley, Ont. All surplus stock of Holsteins sold, except this crop of calves. Ready to book orders for them. Best bacon type Yorkshires, one to six months, both sexes, at moderate prices.

OIL CAKE

J. & J. Livingston Brand

The finest feed known for stock. Once a user, always a user. Sold either fine or coarse ground. Write:

DOMINION LINSEED OIL CO., LIMITED, BADEN, ONTARIO. 31 Mill St., MONTREAL, QUE.

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 1/4 pounds each, and over 43% 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, Hevelton, St. Law. Co., N. Y., near Prescott, Ont.

MAPLE HILL HOLSTEIN - FRIESIANS!

Two cows due to calve inside of six weeks. Two cows giving milk, bred to Prince Posch Pieterje C. G. W. GLEMONS, ST. GEORGE, ONT. EVENGREEN STOCK FARM offers for sale choice young HOLSTEIN BULLS, from 10 to 12 months old, sired by sons of Mercena 3rd and Tidy Abbe-kerk, each of which made over 27 lbs. of butter per week, and 80 lbs. milk per day. Also choice young females. Write for prices. F. E. PETTIT, Burgessville, Ont.

HOLSTEINS

We must sell at least 25 cows and heifers at once in order to make room for the increase of our large herd. This is a chance of a lifetime to buy good cattle at bargain prices. The best way: arrange to come and look the herd over. If you cannot, we will do our best for you by correspondence. Also a few young bulls, 100 head to select from. Imported Pontiac Hermes, son of Hengerveld De Kol, world's greatest sire, head of herd. All leading breeds represented. Putnam station, near Ingersoll.

LYNDALE HOLSTEINS

Offers for sale 5 young bulls from Record of Merit cows, and sired by Count De Kol Pieterje. Also 2 bulls sired by Sara Hengerveld Korndyke, and a number of heifers bred to this bull. BROWN BROS., LYN, ONTARIO.

The Maples Holstein Herd! RECORD-OF-MERIT COWS.

Headed by Lord Wayne Mechthilde Calamity, also in the Record of Merit. Several choice bull and heifer calves; also one bull fit for service. WALBURN RIVERS, Falden's Corners Ont.

Only Bull Calves FOR SALE, HOLSTEINS and AYRSHIRES, Of the best performing strains. GEO. RICE, ANNANDALE STOCK FARM, TILLSONBURG, ONTARIO.

Cattle and Sheep Metal ear labels, with owner's name and address, and numbers. Sample and prices mailed free. F. G. James, Bowmanville, Ont. Subscribe for "Farmer's Advocate"

BUSINESS HOLSTEINS! Over 60 head to select from. Milk yield from 60 to 85 lbs. a day, and from 35 to 47 lbs. a day for 2-yr.-olds. There are 10 2-yr.-old heifers, 8 1-yr.-olds, and a number of neifer calves. Bulls from 1-yr.-old down. Priced right. Truthfully described. W. HIGGINSON, Inkerman, Ont.

Now

is the time to buy a bull for service next year, because we sell CHEAPER now than we do next spring. Why not write to us RIGHT AWAY for a BARGAIN in bulls from R. O. M. dams? Or better yet, call and see us.

E. & F. MALLORY, FRANKFORD, ONTARIO.

DON'T Buy a HOLSTEIN BULL till you get my prices on choice goods from 14 months to 1 month old, from best producing strains. "Fairview Stock Farm." FRED ABBOTT, Harrietsville, Ont.

HOLSTEINS Choice bull calves from high-producing and Record of Merit dams. White Rocks and Bull Orpingtons. Winners of silver cup and sixteen regular and special prizes at Galt and Hespeler shows. David Rife & Sons, Hespeler, Ont.

Maple Glen For sale: Two bull calves born April 28th. One sired by Brightest Canary; dam of calf has 22 1/2 lbs. butter record, over 4 per cent. fat. The other from 19.48-lb. 2-year-old A. R. O. test, sired by a bull with a 22 1/4-lb. tested dam, with 93 lbs. milk 1 day. Also a 4-year-old cow due in Oct., sire's g. dam sister of Carmen Sylvia. G. A. Gilroy, Glen Buell, Ont.

HOLSTEINS FOR SALE. Both male and female, including my present stock bull, Cornucopia Alban De Kol, imported. J. A. CASKEY, MADOC ONT.

FOR SALE! Blue Bell's Fox

Two years old; T. S. Cooper's breeding. Bred right. Blue Bell on sire side. Creampot on dam's side. The two best cows Cooper has imported. And he is nice and gent'e. T. PORTER, WEST TORONTO, ONT.

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ROOFS THAT NEVER WEAR OUT

Sea Green or Purple Slate

is nature's own product—not man made. Quarried from solid rock—split into convenient form for laying, and then in its natural state ready for the roof.

SOLID ROCK CAN NOT WEAR OUT

It can't burn, rust, warp, crack, tear or decay. That's why Sea Green or Purple Slate Roofs never wear out and never require painting and repairing like all other roofing. Sea Green or Purple Slate Roofs are suitable for any building, new or old. Give perfect protection. Reduce insurance rates because spark and fire-proof. Afford clean interior water. Not affected by heat or cold. First cost—only a trifle more than short lived roofing. Satisfy your roof question for all time. Don't spend more money for poor roofing. Write to us for our free book "ROOFS"—it will save you money. Give name of your local roofer. Write today.

AMERICAN SEA GREEN SLATE CO.
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FREE Big Magic Lantern

For selling only \$2.70 worth of Vegetable and Flower Seeds. You get it all complete, with one Dozen Slides of Colored Views, good amp and magnifying lenses. You can work it yourself and give performances for your friends.

The seeds are assorted varieties, both vegetable and flower, in 5c (small) and 10c (large) packages and sell fast. Send to-day your name and address, plainly written. A post card will do.

RELIABLE PREMIUM CO., Dept. X, Waterloo, Ont. 24

RHEUMATISM

The best and safest cure for GOUT, RHEUMATISM, SCIATICA, LUMBAGO, is

BLAIR'S GOUT PILLS

All Druggists, at 40c. and \$1 per box. Registered No. 174.

FAIRVIEW SHROPSHIRE EWES

For sale at very moderate prices. They were sired by a champion ram. And are being bred to another champion. Are of first-class type and quality. Write for circular and prices.

J. S. D. J. CAMPBELL, WOODVILLE, ONTARIO.

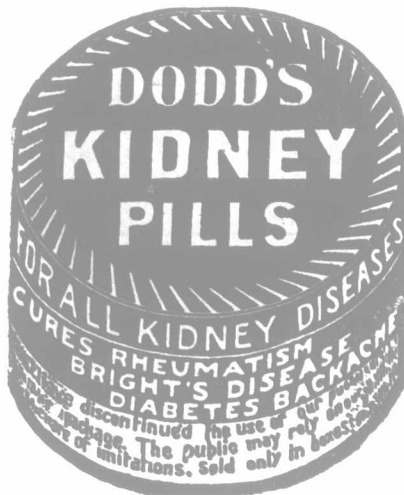
Hampshire Swine I will have some choice ones to offer for sale this spring, and parties wishing to start a good herd should write to me at once. Orders booked now. H. A. BUCK, Sydenham, Ont.

Dr. Walter C. Smith, the popular Scotch poet-preacher, on one occasion tried to explain to an old lady the meaning of the Scriptural expression, "Take up thy bed and walk," by saying that the bed was simply a mat or rug, easily taken up and carried away.

"No, no," replied the lady, "I cannot believe that. The bed was a regular four-poster. There would be no miracle in walking away with a bit of mat or rug on your back."

ROLLING ALONG.

Don't you come a-whinin' an' a-pinin' 'bout de way
Dat de days keeps a-rollin' along;
Dar wouldn't be no sense in hangin' roun' de same ol' day
An' a-singin' de same ol' song.
De snow has got to fade away to bring along de spring;
De trees mus' shade deir branches so's de birds kin come an' sing.
Un' de blossoms got to drap f'um whah de fruit is g'ineter swing.
As de days keeps rollin' along.



QUESTIONS AND ANSWERS. Miscellaneous.

GRAFTING-WAX.

What is a good formula for making grafting-wax?
A. S. E. M.

Ans.—A satisfactory wax for grafting is made as follows: Resin, 4 parts (by weight); beeswax, 2 parts; rendered tallow, 1 part. Melt together and pour into a pail of cold water; grease the hands and pull until it is nearly white.

SEPARATOR MILK FOR COLT.

I have a colt coming two years old; feed it quart bran and oats, mixed, morning and night, and it is doing well and putting on flesh. It has taken a notion to drink new milk right from separator. Do you think it will be safe to let it do so? If safe, could I take the grain from it and it do well? How much milk ought I to let it have a day?
T. P.

Ans.—The milk will certainly do the colt good if fed in moderation. Beginning with a quart or so at a meal, the amount may be gradually increased to two quarts twice a day. For best results, the grain ration should be continued, in part, at least. See that it gets sufficient exercise to keep its muscles firm and prevent it laying on excess of fat.

BUTTER PRINTING.

Please give some directions with regard to making butter into prints. I scald the printer and leave it in cold water, but in spite of this the prints invariably look as though the rats had nibbled them, and are not satisfactory. McK.

Ans.—The practice commonly observed is to prepare worker, butter ladles and printer, while the butter is draining. The treatment is to give these utensils a thorough scouring with a fiber brush with water and a little salt, and then to put them in cold water. After they are used the adhering butter is removed with hot water and the utensils again scoured with salt and rinsed with boiling water. Then they are allowed to dry until again wanted for use. When the butter has been properly worked and salted, the print is pressed into the butter until it, the mould, is completely filled. The surplus butter can be removed with the flat edge of the ladle, and the brick wrapped in parchment paper previously made ready by being moistened in clear, cold water. Provided other conditions are right, this method should prove satisfactory.

ROTTEN TURNIPS AS FEED.

1. Do you think that turnip tops, badly affected with lice, and partly rotten, would put cows dry, or in any way be an injury to the cows?
2. In the fall we took in our turnips, which had rotted badly. Do you think that the turnips that had rotten spots on are fit for feeding? I have put the worst out, and the cattle eat them.
3. How would the turnips affect new milk cows?
A. B. M.

Ans.—1. Decayed, or decaying feed of any kind, is not as satisfactory as the pure, wholesome article. Turnip tops, covered with aphids and partly rotten, certainly would be undesirable feed for milk cows, or any other animal. Provided liberal quantities of other suitable foods were given, there might be little evidence of the cows going dry, but the spoiled turnip tops could not be credited with much aid in maintaining the flow. If large quantities were eaten for many days, the cows would most probably be in an unthrifty condition.

2. Rotten turnips are as undesirable as rotten tops. Roots are grown and kept for winter feeding, to provide something succulent and appetizing. If they are decayed, they may be succulent, but they are not very appetizing or wholesome. Those turnips that had rotten spots should have been placed by themselves and fed to young cattle and dry cows, and to the pigs, early in the season, in small quantities at a time. A good plan is to throw them in the yard so that the stock may pick over them and eat what they consider fit for them.

3. Even clean, sound turnips, have a tendency to taint milk, if fed to cows, unless fed in very small quantities, and immediately after milking operations cease. Turnips such as you mention should be even more objectionable.

CALDWELL'S MEAL Non-Medicated.

Horses fed on Caldwell's Meal rapidly take on solid weight, develop prodigiously in muscular energy, grow glossy coats, and enjoy uninterrupted health. On January 1st of this year, Caldwell's Meal was being fed in 457 stables in the City of Toronto alone. 75% of all the Canadian horses exhibited at the recent New York Horse Show were fed on Caldwell's Meal. 31 winners at the recent Ontario Horse Breeders' Show in Toronto were fed on Caldwell's Meal. Manufactured by A. C. CALDWELL, EAST TORONTO, ONTARIO. Price \$34.00 per ton, freight prepaid. Write for literature and sample.

Sheep Breeders' Shropshire and Cotswold Ewes Associations

American Shropshire Registry Association, the largest live-stock organization in the world. Henry L. Wardwell, President, New York City. Address correspondence to MORTIMER LEVERING Secretary, Lafayette, Indiana.

I am offering 20 choice shearing Shropshire ewes of my own breeding, from imp. Mianon and Buttar dams, and bred to a first-class imp. ram; also 20 extra good Cotswold ewes of first-class breeding. They must be sold to make room.

JOHN MILLER, Brougham, Ontario. Claremont Stn., C.P.R.

SOUTHDOWNS AND COLLIES.

Long-distance Telephone.

10 good yearling rams, including the first and third prize winners at London. Also some good breeding ewes, which must be sold, as the flock is being reduced.

ROBT. McEWEN, Byron, Ont. Ry. Stn., London, Ont.

OXFORD DOWN SHEEP AT FARNHAM FARM.

We have 50 yearling ewes, all bred to our imported ram, champion at Toronto Exhibition, 1908, which we will sell at especially reduced prices for the next thirty days, in lots to suit purchaser. Also a few yearling rams and ram lambs by imported sires. Terms reasonable.

HENRY ARKELL & SON, ARKELL, ONTARIO. Guelph, G. T. R.

POPLAR LODGE SOUTHDOWNS AND BERKSHIRES.—At right prices, 2 aged, 3 shearing rams, 2 ram lambs. Flock headers. Berkshires all ages, both sexes. Ideal type. Correct description guaranteed. S. Lemon, Kettleby, Ont., P.O. and Sta., also Aurora Sta. Long-distance phone.

CLAYFIELD Buy now of the Champion Cotswold 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.

HIGHEST PRICES PAID FOR ALL KINDS OF HIDES, SKINS AND

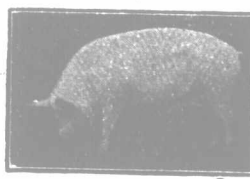
RAW FURS

Write for our COMPLETE PRICE LISTS. Issued every little while.

E. T. CARTER & CO., 84 Front St., East, Toronto, Ont.

We pay all EXPRESS CHARGES. PROMPT RETURNS.

Summer Hill Herd of Large English



We are bound to get rid of 100 Yorkshires, either sex, any age, within the next few weeks. Since the United States ports are closed against us, our trade has been more than cut in half, and we must

sell double the number to Canadians to make room for natural increase in the herd. If you think of buying a large, growthy Yorkshire in the near future, do it now and save your money. We have the greatest show record on earth. Also the world's public sale record. Better write now. We will also sell a few choice Holstein heifers, in calf to the best backed-up bull in Canada.

D. C. FIATT & SON, Millgrove, Ont., Hamilton Sta.

MAPLE LEAF BERKSHIRES

For sale: Sows bred and ready to breed. Guelph winners among them. Boars all ages. The highest types of the breed. Imp. sires and dams. Pairs not akin.

Joshua Lawrence, Ontario, Oxford Centre.



Morrison Tamworths, Shorthorns and Clydesdales.

Tamworths from Toronto winners. Either sex. Any age. Sows bred and ready to breed. Pairs not akin.

CHAS. CURRIE, Morrison, Ont. Schaw Sta., C. P. 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.



February Offering!



A choice lot of young SOWS in pig. BOARS ready for service.

A good lot of September and October pigs. Pairs supplied not akin. Orders taken for young pigs. Prices moderate. Write or call on:

H. J. DAVIS, WOODSTOCK, ONT. Importer and breeder of Shorthorns and Yorkshires.

Maplehurst Herd of Tamworth Swine, Bronze Turkeys, Toulouse Geese, Pekin Ducks, S.-C. W. Leghorns.

Tamworths of excellent breeding and ideal bacon type. Herd won sweepstakes at Toronto and London, 1905-6-7-8; winnings at World's Fair, St. Louis, 1904.—sweepstakes aged and junior herd, and two grand championships. Apply to:

D. DOUGLAS & SONS, MITCHELL, ONTARIO.

ELMFIELD 50 young pigs for sale, both YORKSHIRES sexes. Young sows bred to imported boar, also sows to Canadian-bred boar due to farrow about 1st October.

G. B. MUMA, Ayr, Ont. Ayr, C.P.R.; Paris, G.T.R.

CHESTER WHITE SWINE

A choice lot of young stock. Write for prices. W. E. WRIGHT, SUNNYSIDE FARM, GLANWORTH, ONTARIO.

Willowdale Berkshires!

Won the leading honors at Toronto this fall. For sale are both sexes and all ages. Show things a specialty. Everything guaranteed as represented. J. J. WILSON, MILTON, ONT., P. O. AND STATION. C. P. R. AND G. T. R.

MONKLAND YORKSHIRES

are the easily-fed, quick-maturing kind. The sort the farmers want. All ages for sale. 100 sows bred now.

JAMES WILSON & SONS, FERGUS, ONTARIO

Newcastle Stock Farm

I have a splendid lot of TAMWORTH SOWS well forward in pigs, all well with looking after; also grand selection of boars, 3 months to 10 months old, several prize winners, and a lot of dams that have been prize winners. Also a lot of Tamworths, I have also a few good Shorthorn and Clydesdale sows ready to breed. All sows will breed with a minimum.

A. A. COLWELL, NEWCASTLE, 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.

OHIO IMPROVED CHESTER WHITES.—Largest strains. Oldest-established registered herd in Canada. Young sows in farrow. Choice pigs 6 weeks to 6 months old. Pairs furnished not akin. Express charges prepaid. Pedigrees and safe delivery guaranteed. E. D. GEORGE Putnam, Ont.

"Ideal" Fence has features that shrewd buyers appreciate

That's why our Agents are so successful

Taking orders for "IDEAL" fence is far easier than you may think. The "IDEAL" has features that shrewd buyers appreciate. The railways buy "IDEAL" because of its weight and quality, because of the gripping tenacity of the lock on the

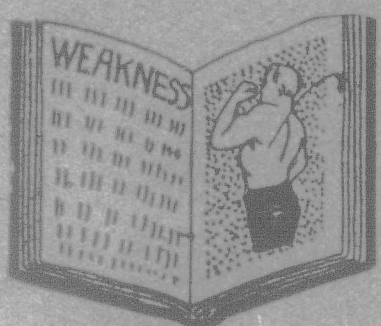
"IDEAL" WOVEN WIRE FENCE

It is undoubtedly the strongest fence lock in existence. The farmers buy "IDEAL" for the same reasons as do the railways. "IDEAL" fence is easiest to sell. That is why our agents are so successful.

Don't you think it would be wise to write us for complete particulars in regard to becoming the "IDEAL" fence agent in your locality? Do so to-day. If you wait until to-morrow you give your neighbor a chance to get in ahead of you.



The McGregor-Banwell Fence Co. Limited
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Doctor's Book Free TO WEAK MEN

To the man who wants to regain his youth, who wants to feel like he did when he was budding into manhood, I offer a book which will show him the road to happiness—a book of 80 pages, which is brimful of the things he likes to read, and will give him courage and enlighten him as to the cause and cure of his troubles. It will point out the pitfalls, and guide him safely to a future of strength and vitality. It is beautifully illustrated. It tells what other men have suffered and how they have cured themselves. It is free. I will send it, closely sealed, without marks, if you will mail me this coupon. If you are not the man you ought to be, SEND FOR IT TO-DAY.

Dr. McLaughlin's Electric Belt

is no longer an experiment. It is hailed by thousands with loud praise because it cured them. "It cured me. I am well and strong as ever. What more could one ask?" writes a man with a heart full of gratitude.

Read what some of them say who have used this wonderful appliance:—

RONALD LEITCH, Osprings, Ont., says: "Your Belt made me a well man. It is certainly worth more praise than I know how to give it."

WILLIAM FREDA, Chester, N.S., writes: "My kidneys and heart are well again, and I have no more of these fainting spells. Night losses have ceased, and I do not have those pains in my back. I am glad I took your advice."

ROBT. COMBE, St. Catharines, Ont., has this to say: "I am pleased to say that I have not felt any return of my ailments, and have not felt better for some years than I have done this winter, for which I thank you and your Electric Belt."

WM. S. CARTER, Box 14, Mapleton, Ont., is pleased. Read his letter: "I have worn one of your Electric Belts for three months, as directed. I am very much pleased with it, as it has done more for me than I expected. I feel at present that I am thoroughly cured. I cannot speak too highly of it, and I hope it will do as much for others as it has done for me. I will strongly recommend it to all who suffer from any aches and pains."

WM. BROCK, Listowel, Ont., writes: "It is the best thing I ever saw for Neuralgia and Rheumatism and I can heartily recommend it to all who suffer from these troubles. I consider it was worth many times what I paid for it, as I had tried many kinds of medicine and many doctors, and they had all failed to even give relief."

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This book tells in plain language many things you want to know, and gives a lot of good, wholesome advice for men.

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

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PURE BONE MEAL IS THE CHEAPEST FERTILIZER

THIS PLANT FOOD IS ALL FROM OUR CANADIAN SOILS AND SHOULD ALL GO BACK

SEND FOR PRICES, ETC

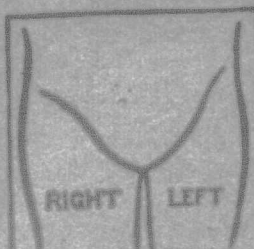
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FREE to the RUPTURED
A Quick New Cure



I have made new and important discoveries in the cure of Rupture and for the next 30 days I will give every ruptured person who follows these directions a chance to try this remarkable Home Cure, FREE.

Mark on the diagram the location of the rupture. Answer the questions and mail this to

DR. W. S. RICE, 75 Main Street, Adams, N. Y.

Age _____ Time Ruptured _____

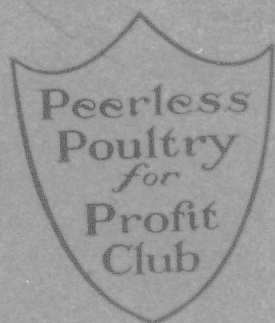
Name _____

Address _____

Does rupture pain? _____ Do you wear a Truss? _____

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EVERY farmer in Canada should raise poultry.

You will never realize what big money there is in this department of your farm until you start raising poultry right.

It has been estimated by an authority that the value of the table-poultry and eggs produced by Canadian farmers during the year 1908 amounted to \$25,750,000.

Yet the supply was not sufficient to meet the demand.

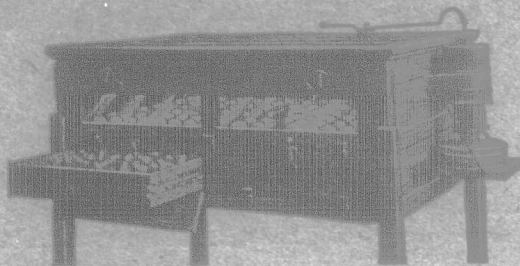
You should get your share of this money. You can if you raise poultry right—raise poultry under the advice and with the help of the Peerless Poultry-for-Profit Club.

Every purchaser of a Peerless Incubator—every one who owns a Peerless Incubator now becomes a member of the Peerless Poultry-for-Profit Club without paying one cent, and is entitled to advice and help absolutely free.

This advice deals with every problem that may come up in poultry raising, and is given by experts who are raising poultry now and making money out of it.

The first step towards becoming a member of the Peerless Poultry-for-Profit Club is to write for our booklet "When Poultry Pays." Write for it to-day, and start raising poultry right—profitably.

The Peerless—the most successful Incubator because it is built to suit Canadian conditions and climate.



WE who make the Peerless Incubators are closely allied with the largest and most successful poultry farm in the Dominion—the Poultry Yards of Canada, Limited.

It was raising poultry on this farm, looking for every means to make it more successful, more profitable, that induced us to produce the Peerless Incubator.

We tested every incubator on the market—gave each one a thorough and careful trial.

Not one of them came up to the standard which we were looking for. The best United States machines failed because they were not built to suit Canada's climate. The Canadian incubators were mere copies of obsolete United States machines—built to sell, not to hatch chicks.

So we built the Peerless Incubators and brooders out of the knowledge and experience which actual poultry raising in Canada taught us.

Write for our booklet "When Poultry Pays"—it tells the whole story.

Why don't you try for one of the 103 Cash Prizes which we offer Canadian Farmers?

WE want to help the farmers of Canada raise more poultry and make more money out of it.

We want them to investigate the poultry department of their farms, and see what big money they can make out of it if they go about it right.

For this reason we offer 103 prizes to the farmers of Canada who meet with the best results in poultry raising.

The prizes are as follows:

First prize	\$100.00
Second prize	50.00
Third prize	25.00

Ten prizes of \$10.00 each, twenty prizes of \$5.00 each, twenty prizes of \$3.00 each, twenty-five prizes of \$2.00 each, and twenty-five prizes of \$1.00 each, making a total of \$510.

Professor A. G. Gilbert

Chief of the Government Poultry Department at Ottawa, has kindly con-

sented to act as judge, and when the winners are decided upon, the names will be published in this journal. This competition is open to every owner of a Peerless Incubator.

Write to-day for full particulars of the contest.

We ship the Peerless Freight prepaid.

LEE Manufacturing Co., Limited, 444 Pembroke St., Pembroke, Ont., Can.