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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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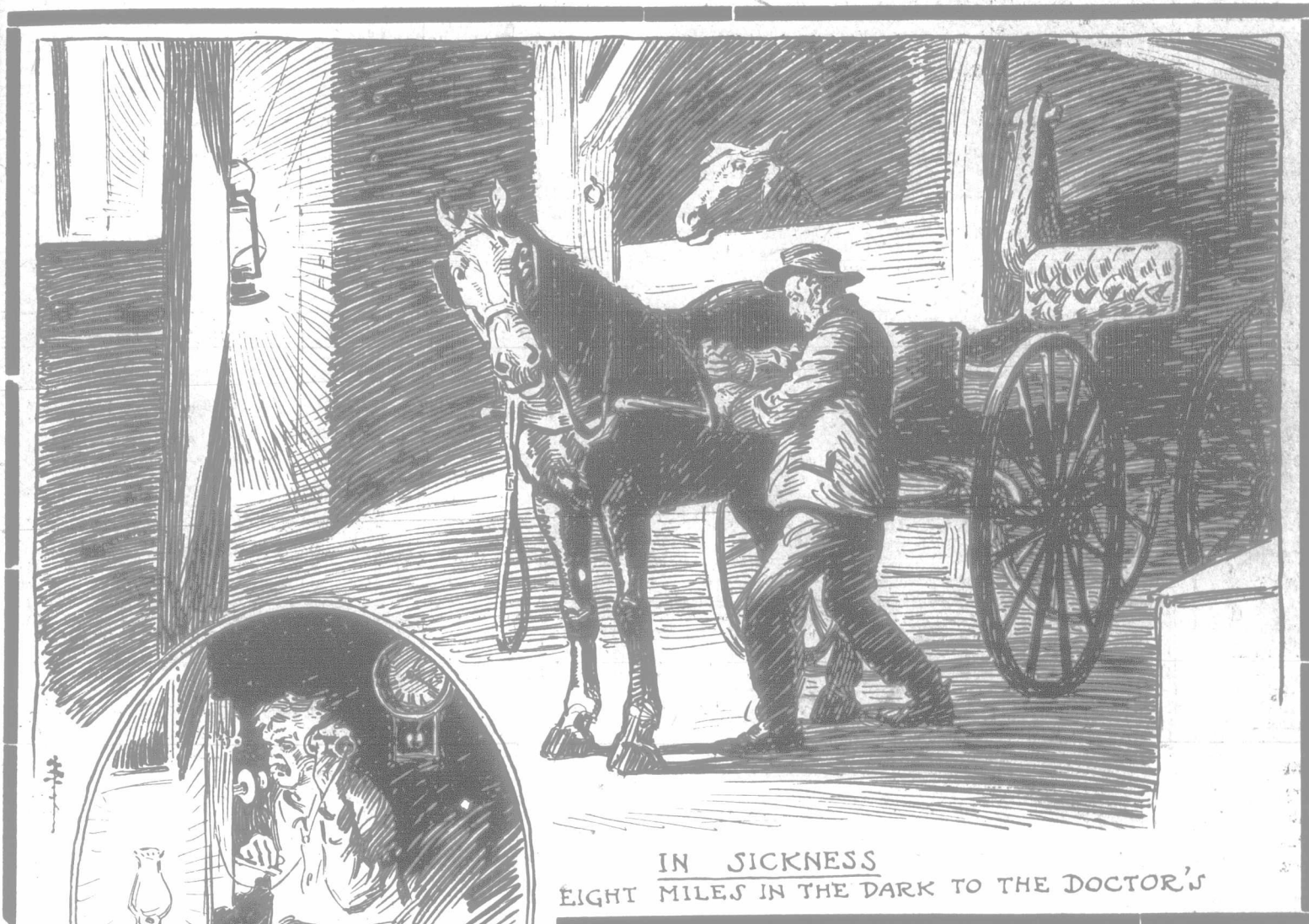
AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.

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VOL. XLVI.

LONDON, ONTARIO, FEBRUARY 23, 1911.

No. 961



IN SICKNESS
EIGHT MILES IN THE DARK TO THE DOCTOR'S

This drawing is one of the thirty-two graphic pictures drawn by a leading artist for our book, "Canada and the Telephone."

"DOCTOR,
CAN YOU
COME OUT AT
ONCE. MY WIFE
IS PRETTY BAD"

Free Trial If you have never used Canadian Independent Telephones on the lines of your company, write for our Free-Trial Offer.

Just Why You Need Independent Telephone Service

in your locality is fully explained in our book, "Canada and the Telephone." This book is as interesting as a story, yet every sentence is instructive. You really ought to be reading it now. We will hurry a copy along to you just as soon as we learn your name and address.

Do not hesitate to ask us for any information you may desire about building and incorporating telephone lines, telephone equipment, or anything pertaining to telephones. We are glad to be of service to you. And we have a staff of competent engineers who will give you expert advice free of charge.

The quality of our telephones and equipment cannot be too strongly emphasized. Last year our sales were double the previous year. This increase was the direct result of the high standard of quality of Canadian Independent Telephones.

Canadian Independent Telephone Co., Ltd., 20 Duncan St., Toronto, Ontario

Alfalfa Clover. The Money Maker.
 The best of all clover, producing abundance of feed.
 No. 1 Fancy \$15 00 per bush.
 Choice (Gov. Standard) 14 00 "
 Red Clover, Choice 10 00 "
 Timothy, Choice No. 1 7 00 "
 All above f. o. b. Guelph. Bags extra, at 25c. each.


Oats, Regenerated Abundance, 1910
 This new Reg. stock did well last year in this section. One grower in Eramosa says: "Best oats I ever grew. Very early variety, yielding 70 bush. to the acre last season." We have a very fine sample. Price \$1.00 per bush., f. o. b. Guelph. Bags extra.

O. A. C. No. 21 Barley
 Fine sample \$1 25 per bush.
 10 bush. lots at 1 20 "
 f. o. b. Guelph.

Daubenay Oats
 We have a few left at 80c. per bush. Ripens with barley. Samples sent if desired.

THE HEWER SEED CO., Guelph, Ont.

FARMERS, FRUIT, AND VEGETABLE GROWERS



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

KINDLY ANSWER THE ABOVE

PURE BONE MEAL IS THE CHEAPEST FERTILIZER

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

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

STOCK MEN

When you are wanting any cuts of Poultry, Live Stock, or for Advertising, try our specially deep-etched plates.

PRINT CLEAN WEAR LONGER PRICE REASONABLE

Write us your wants.

ROBERTS ENGRAVING COMPANY LONDON-CANADA

MR. FARMER!

We want to get in touch with good, live, hustling barn-framers to act as agents for our

"GALT" Galvanized Steel Shingle

The shingle that is building up trade on its merits. We manufacture a reliable line of goods, and we want an agent who has your confidence, and the confidence of your neighborhood, a man with whom you would be willing to do business.

Will you recommend or bring this to the notice of such a man, and have him fill out the coupon below:

Name
 P. O.
 Occupation and send to
The Galt Art Metal Co., Ltd., Galt, Ont.

WORLD'S GREATEST SEPARATOR

Standard Cream Separators



DON'T
 Whip the cream.
 Froth the milk.
 Clog when milk is cold.
 Let slime and disease germs go out in the cream or skim milk.

DO
 Skim perfectly with milk cold or warm.
 Give cream that churns easily and makes good solid butter.
 Purify the cream.
 Retain all foreign matters in the bowl.
 Protect the calves from many diseases

If you have 500 lbs. of milk to skim at once, the **STANDARD** will skim the last 100 lbs. as well as the first, and still thoroughly cleanse the cream and milk.

"Standard"
 Sizes, prices and terms on application.

WANTED
 Inquiries from every farmer interested in separators. Good agents in unrepresented districts.

The Renfrew Machinery Co. Limited
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A good Cream Separator made at home is of more value to you than a good Cream Separator made abroad.

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Large areas of rich agricultural lands, convenient to railways, are now available for settlement in Northern Ontario. The soil is rich and productive, and covered with valuable timber.

For full information regarding homestead regulations and special colonization rates to settlers, write:

The Director of Colonization, DEPARTMENT OF AGRICULTURE, TORONTO.

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Winter Tours
 TO Mexico, Colorado, California and Pacific Coast Points.

The Grand Trunk Railway System is the popular route from all points east through Canada via Chicago.

FEATURES.
 Double track; fast service; finest roadbed; modern equipment; unexcelled dining-car service. All elements of safety and comfort.

TO THE SUNNY SOUTH.
 No more desirable route than via Grand Trunk and connecting lines.

VERY LOW RATES.
 Full information, tickets, etc., from GRAND TRUNK AGENT.

The "BACON" Seed Drills and Cultivators

The only Rear-Wheel Driven Seed Drill on the market. The feed in the "Bacon" handles seed without bruising or breaking, and seeds evenly to the last seed. Machines and seeds converted from a regular seed sower into a hill dropper. Feed Out prevents waste of seed when turning rows.

For sowing Sugar Beets, Turnips, Radishes, Carrots, Onions, etc., the 1908 model of the "Bacon" is unequalled for strength, lightness, easy running and good work. Write for our complete catalogue.



THE BUREKA PLANTER CO. Limited Woodstock, Ont. E.

AGENTS 100% PROFIT

15 IN ONE

Most perfect and valuable combination of tools ever invented. Sold at sight to Farmers, Plumbers, Machinists, Automobile Owners, in stores and the home.

Made of Drop Forged high grade carbon steel. One agent in Essex County, N. Y., after a 6 days' canvass ordered 100 tools. His profit \$100.00. Big snap for agents. Sample free to workers.

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Corn that Will Grow

Canadian-grown seed corn. Your money back if not satisfied.

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NEW PATENT SNOW PLOUGH

One man with this machine can do the work of 50 men and give the best road.

STONE AND STUMP PULLER

Can raise, carry stones, easily put them into 4 1/2 feet high wall. SILO of many dimensions.

For particulars, apply to
A. LEMIRE, Wotton, Que.

Choice Seed Grain Grown, harvested, our personal supervision. Guaranteed No. 1 Government standard. Mandschuri Barley, per bush., 75c.; Thousand-dollar Oats, per bush., 65c.; Improved Crown Peas, per bush., \$1.10. Bags included. Free on board Minesing. Foyston Bros., Minesing, Ont.

BRANTFORD GLUTEN FEED

Is guaranteed to contain a combined percentage of **25% of Protein and Fat**

A specially-adapted feed for dairy herd.

Easy of Digestion Rich in Nutriment
A Splendid Milk Producer

HAVE YOU TRIED IT?

Present prices: \$22.00 per ton, f.o.b. Brantford. Packed in 100-lb. sacks.

The BRANTFORD STARCH WORKS, Limited Brantford, Ontario.

GOOD PAYING CROPS FOR 1911

MUCH DEPENDS ON A GOOD START WRITE AT ONCE FOR

MCDONALD'S SEED CATALOGUE

CONTAINS VALUABLE INFORMATION

KENNETH MCDONALD & SONS OTTAWA ONT

DEPT. C.

Cheap Enough For A Barn— Fine Enough For A Cathedral

“The Roof That’s Good”

For any permanent structure, whatever its cost or use, the modern metal shingle is the ONLY roofing worth any man's consideration. For it, and it alone, has every good quality a roof should have, and it, and it alone of all roofings, lacks every bad quality. But there are degrees of goodness in metal shingles. You must choose wisely. You will not go wrong if you roof with



Preston Shingles are made from heavy and imperishable metal, thickly and smoothly galvanized with a coating that contains 98 per cent. of pure zinc. Thus they easily pass the rigid bending and acid tests of the British Government. That insures them against rust, and their buyer against roof-troubles. No other metal shingle is made so well, and none will last longer. Ask us what this test is. Preston Safe-Lock Shingles make a roof that is absolutely proof against fire—a roof that the wind cannot rack a little bit—a roof that moisture cannot get

through at all. For these are the shingles, and these alone, which positively LOCK ON EVERY EDGE with a grip that is so strong and tight it almost makes nailing needless. Next to the galvanizing—which is the most vital thing about a metal shingle—the lock is a point you should most carefully look into before you invest. Let us send you a “Preston Junior”—a little shingle imitating closely the construction of OUR REGULAR OUTPUT. Study it, and you will admire the patented Safe-Lock that only we can use. Ask for it.

Fire Defying

Never Leaks

This Is The Roof That Meets Every Need

Preston Safe-Lock Shingles are easily laid. No special skill or unusual tools are necessary. Fewer nails are needed than other metal shingles demand—the safe-lock cannot spring nor the shingles warp or twist. Every nailhead is covered. Therefore these roofs never leak—because rust simply cannot get at the nails. Preston Safe-Lock Shingles are sold with the warranty that—if properly put on, according to simple directions—LIGHTNING CANNOT HARM THE ROOF WITHIN TEN YEARS. These roofs are easily good for fifty years' reliable roof-service. Thus they are the cheapest good roofs money

can buy. Wood shingles actually cost—in cost-per-year—many times our price. “Ready” roofings are a wretched make-shift, and their cost per year is downright extravagant. Don't waste your money on a roof that can't last. You should send for, and read, before you roof anew, a truth-telling FREE book that many have read to their profit and satisfaction. It tells about EVERY kind of roofing. It goes into the subject fully and in plain words. You would be willing to pay for it after you've read it—but you are welcome to it for nothing. To-day would be a good day to write and ask for it. Use a postcard if you wish. Address—

Edolph Manager
Metal Shingle & Siding Co., Limited
Queen Street Factory, Preston, Canada

Branch Office and Factory: Montreal, Quebec.

The confidence felt by farmers and gardeners in Ferry's Seeds to-day would have been impossible to feel in any seeds two score of years ago. We have made a science of seed growing.

FERRY'S SEEDS

always do exactly what you expect of them. For sale everywhere. FERRY'S 1911 SEED ANNUAL Free on request.

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

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2000 MILES

Think of it! Over 2,000 miles of this fencing is already in use on the farms and along the highways of Canada and in Foreign Countries, and every foot of it is giving good service. All the good points in every kind of Fence are incorporated in the manufacture of

“RELIANCE”

ALL NO. 9 WIRE FULL GAUGE

Write for your copy of our catalog of Fence, Gates, Lawn Fences. Agents wanted in unoccupied Territory.

The Empire Fence Export Co., Ltd., Walkerville, Can.

EVERY ROLL OF RELIANCE FENCE IS BUILT TO SELL ANOTHER!

THE FENCE MAN

TORONTO, CANADA

Sells his Crown Wire and Iron Fences and Gates at factory prices; also barbed, coiled and plain wire, fence tools, etc. Ask for free catalogue.

Make Your Own Will

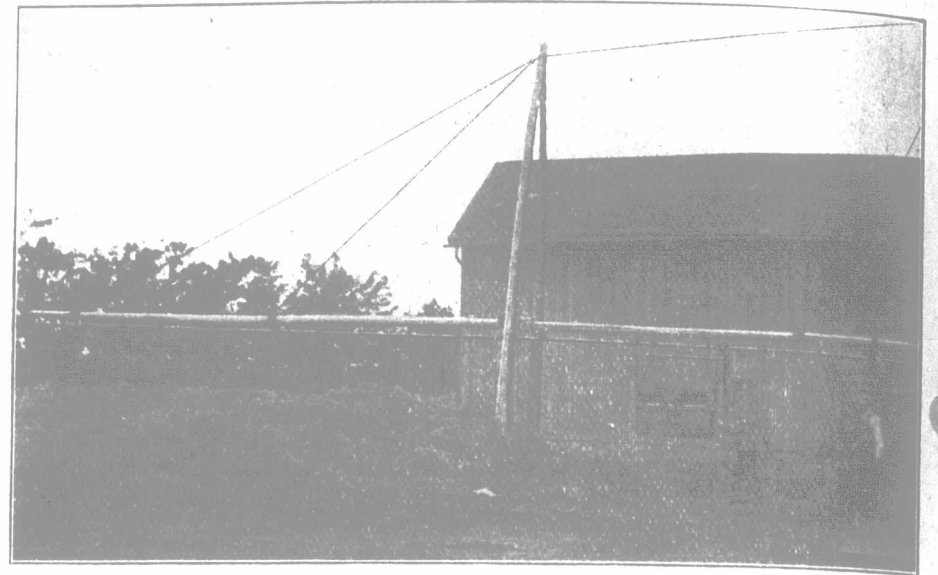
Bax's Legal Will Form enables you to make your own will as legal and binding as any lawyer can do it for you. Insures privacy and saves costly law fees. Each form has full and plain instructions, also specimen will properly made out for your guidance. By mail, 35c., postpaid.

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YOU WILL APPRECIATE A LITTER CARRIER IN THE SPRING



HARD WORK AND A FILTHY BARNYARD.



LIGHT WORK AND SANITARY SURROUNDINGS.

WHICH DO YOU PREFER?

We Have a Special Proposition for Farmers Buying Litter Carriers Now. Let Us Tell You About It.

At no other time of the year will a Litter Carrier outfit be as much benefit to you. Before very long you will be rushed getting in your seed, your cattle will still be in the stable, and your yard will be muddy. Every moment saved at such a time is money in your pocket. The interest on the cost of a Litter Carrier would be a small item compared to the saving effected by the use of an outfit in the spring months alone.

With a "BT" LITTER CARRIER you can clean

your stables in less than half the time it now takes you, and you will not have to work so hard. Isn't this something to be considered? There is no machine on the farm that will save you as much hard and disagreeable work as a Litter Carrier.

Here is what one of our many satisfied customers writes:

Dear Sirs,—Enclosed please find cheque for Litter Carrier, which I hope will be satisfactory. I might state that we erected the Litter Carrier in good order, and the amount which I put into it has proven

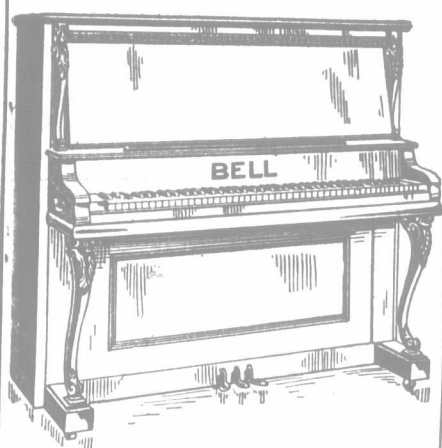
to be well-spent money. We clean our stables in half the time we could previously, and consider the Litter Carrier the greatest labor-saver about the farm. Yours truly, W. L. DRAFFIN.

We receive many such letters as the above, and there are thousands of satisfied users of the "BT" LITTER CARRIER.

WRITE US TO-DAY FOR OUR SPECIAL PROPOSITION. Let us know how many feet of track you will require.

BEATTY BROS., FERGUS, ONTARIO

WE ALSO MANUFACTURE STEEL STALLS, STANCHIONS AND HAY TOOLS.



Known throughout the world. Used and recommended by master musicians.

The only piano containing the illimitable Quick-Repeating Action and the Bell Tone-Sustaining Frame.

The Bell Piano possesses several other valuable features, as described in our (free) catalogue No. 40. Send for it.

THE BELL PIANO & ORGAN CO.
(LIMITED),
GUELPH, ONTARIO.

Agents are Coining Money

selling this Combination Tool. Sells at sight. Farmers, farmers' sons and others having time at their disposal this winter should write to-day for our Agents' offer.

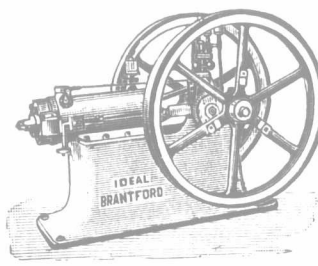


MAY MFG. CO.,
ELORA, ONTARIO.

IDEAL GASOLINE ENGINES

1 1/2 TO 40 HORSE-POWER

Windmills
Grain Grinders
Pumps
Tanks

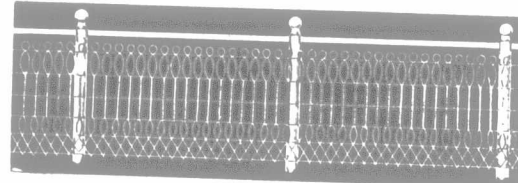


Water Boxes
Concrete Mixers
Etc., Etc.

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BRANTFORD, CANADA.

AN ORNAMENTAL AND DURABLE WIRE FENCE



Cheaper than wood. Nothing will improve the artistic appearance and enhance the value of your property like

CYCLONE WIRE FENCES

Our many styles of Ornamental Fences, one of which is shown in the above cut, are made from heavy No. 9 steel spring wire uprights. CYCLONE Ornamental Fences are dipped in green or white enamel. These fences have a special distinctive feature, which totally removes the chance of sagging or bagging. This has been arrived at by the use of two No. 12 wires twisted together to form the lateral wire: thus making a perfect lock or joint at the intersections. Booklets describing our full line of farm fences and gates suitable for lawns, parks or gardens will be sent you free on request.

The CYCLONE WOVEN WIRE FENCE CO., Ltd.,
137 Youville Sq., Montreal, Que. 1170 Dundas St., Toronto, Ont.

When Writing Advertisers, Please Mention "The Farmer's Advocate."

Do You Want a Reliable Man?

THE SALVATION ARMY Immigration & Colonization DEPARTMENT

For several years recognized as the leading Immigration Society in Canada, will, during next season, 1910-11, continue its efforts to supply the demand for

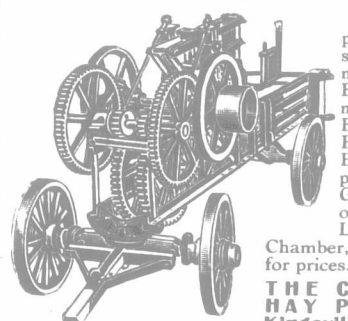
FARM HELP

and Domestic Servants. Conducted parties are now being organized to sail early in the spring. Apply at once for application forms and information to

BRIGADIER H. MORRIS,
Head Office: James and Albert Sts., TORONTO, ONT.
or Major J. M. McGillivray,
Office for Western Ontario,
396 Clarence St., London, Ontario
Correspondence Solicited.

The Columbia Hay Press

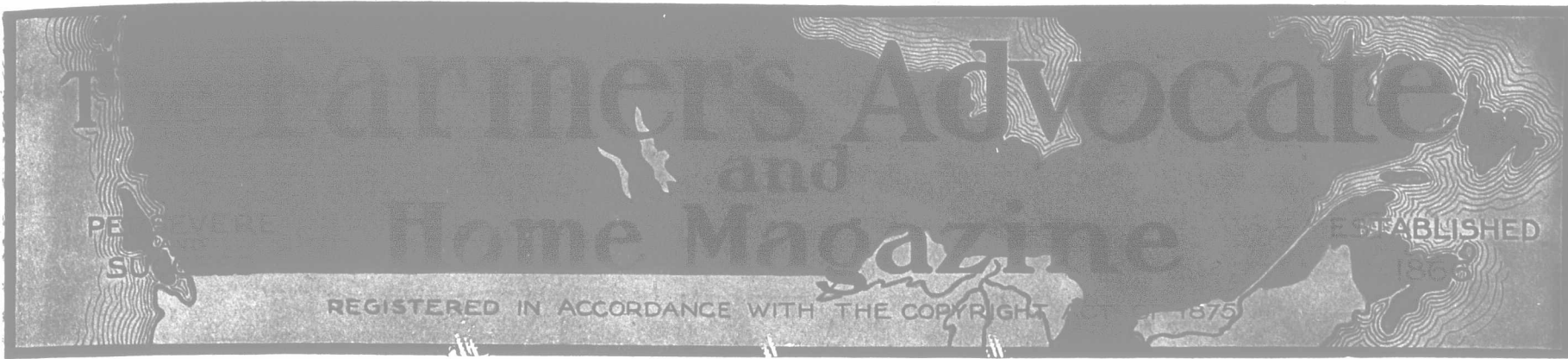
BAILED 68 TONS IN 10 HOURS.



It has the points that sell: Automatic Self Feeder, Automatic Safety Fly Wheel, Handiest Block-dropper, Double Gear through-out, Extra Long Tying Chamber, etc. Write for prices.

THE COLUMBIA HAY PRESS CO.,
Kingsville, Ontario.

Seed Grain for sale
Seed oats (white), Crown Jewel variety, early and good yielding. O. A. C. No. 21 barley, good sample, and only a limited quantity. Mandschuri barley, a good sample and good grain, just grown 3 years since received from Guelph. This grain was grown on good loam soil, free from impure weed seeds, re-cleaned and graded. Grain in quantities, and can ship C. P. R. or G. T. R. to suit purchaser. Prices, samples, etc., on request. Write: **Andrew Sinclair, McIntyre, Ontario.**



EDITORIAL.

Would it not be a paying branch of live-stock husbandry to make the rearing of dairy heifers a specialty on certain farms in every dairy district?

"We view with apprehension." How often we see this phrase used in petitions, and how appropriate it is! Nine times out of ten the apprehension is pure nervousness.

At the present rate of forest destruction in Ontario, said Peter McArthur, in a recent address, a woodpecker flying across this country will have to take his provisions along with him.

Everybody we have ever spoken to who has kept individual daily milk records states that the information thus gained about his cows surprised him. Especially is this the case where milk is periodically tested for fat, as well as weighed.

Canadian wool producers, says Dr. Rutherford truly, must exercise vastly more care in growing, washing, shearing and marketing. Wool produced in Canada to-day is full of all sorts of foreign bodies. Success consists largely in the little things.

The annual drovers' chase all over Ontario for cows to supplement the herds in the dairy districts is now in full swing. As a policy, this may suit the dealers and the railway companies, but is it a good and economical plan for those dairymen who might rear their own cows? And most of them believe they could raise better ones.

In moving a vote of thanks to T. B. Caldwell, of Lanark, who addressed the Dominion Sheep-breeders' annual meeting so acceptably, a naive suggestion was thrown out that Mr. Caldwell should acquaint fellow manufacturers who use nothing but Canadian wool with the fact that they would be equally welcome to address the Dominion Sheep-breeders' meeting another year.

Read over once in a while the standing announcement on the second page of reading matter in each issue. Many readers apparently never look at it, and consequently ignore rules, to their disadvantage. For example, hundreds of questions a year make a fluttering descent to the waste-paper basket because unaccompanied by the full name and post-office address of a subscriber. Read the rules.

The fact that wool was not placed in the reciprocity schedule, while wheat was, is attributed to power of the organized United States woollen manufacturing industry. In order to retain their own greater protection, the woollen men stand to sustain the smaller duties of the wool producers, who are, in effect, used as a cat's-paw. But the day is coming when, organized or unorganized, the axe will fall upon the woollen tariff in the interests of the woollen wearers.

Free trade is fair trade. There are some meritorious arguments against a young nation like Canada adopting free trade, while an older, contented nation, like the United States, maintains high duties, but these arguments do not apply to reciprocal free trade. Subject only to the wise necessity of conserving our natural resources, the more freely we trade with all nations, the better. Reciprocity in farm products is an unquestionable advantage to Canadian agriculture.

By means of the Canadian Railway Commission, service and transportation rates have been materially improved in this country; but it will probably be found that reciprocity will prove a still more effective spur in accelerating a downward tendency in East and West transcontinental rates and improved freight and express service, particularly needed in the live-stock and fruit-growing interests.

The resources of fuel in the peat bogs of the central Provinces of Canada are enormous, says Dr. Eugene Haanel, Director of Mines, Ottawa. He estimates that there is contained in the known bogs, covering 12,000 square miles, fuel sufficient to supply over 5,000,000 families for 100 years. A peat-fuel plant, such as is used in Sweden and Russia, has been erected on a bog near Alfred, Ontario, which last season manufactured 1,600 tons of peat fuel in fifty days. The cost of this fuel on the field should not be more than \$1.50 per ton.

According to friendly newspaper reports, the packers of Ontario and Quebec expressed to the Government a fear that, in seasons of high prices across the line, they would be unable, under reciprocity, to secure a supply of hogs in Canada, and would have to close down their plants. They had better not said that aloud. If the United States tariff is preventing us making the most out of our hogs, it is another good argument for reciprocity. We'll take all chances with the Big Four. American farmers find them first-class customers.

One of the best incidental advantages of the reciprocity discussion in the United States is that it is further disrupting one of the established political parties. We would welcome in every country a state of flux that would re-align political parties, causing electors for once to cease adhering to certain groups merely because they were born into them, but to make choice according to their judgment. Even though the judgment be warped, it is better to exercise it than to follow vacantly for life the crack of the party manager's whip. Parties do make fools of us all.

Every time we travel over the Grand Trunk between Brantford and Hamilton, those steep, bald hills fairly shriek out the word "alfalfa." There is no shadow of doubt but that it would do magnificently on those clay hillsides, protecting the soil from destructive erosion, obviating the gymnastic exercise of cultivating them, and furnishing an immense quantity of the best hay or pasture produced on our farms. There are a few moderate-sized hills of this kind on "The Farmer's Advocate" farm, and they will grow alfalfa as soon as they can be gotten into proper condition for seeding.

As illustrating the tendency of commerce to flow towards certain heart centers, which act as grading and distributing points, Dr. J. G. Rutherford, discussing the question of wool-marketing at the Dominion Sheep-breeders' meeting in Toronto, remarked, incidentally, that when the foot-and-mouth embargo was applied a couple of years ago, he found that they were closing down the tanneries in this country, and also boot and shoe making establishments. It developed that the calf skins were purchased from the other side. Manufacturers complained that they could not buy Canadian calf skins with any satisfaction, but that all the calf skins in America go to New York State, and are sorted and graded there.

The Farmer's Park.

In a certain city park of considerable size, situated a few miles outside of the corporation limits, there are several large blocks, and many smaller clumps, of natural timber—maple and beech, oak, cedar, and other sorts—each left to grow pretty much as it will. A great deal of tree-planting has been done on the sections of the park that were bare when taken over by the city, and there are also many large and well-kept flower-beds, laid out, no doubt, in the most artistic style. It is interesting to watch the crowds who go there for an outing select the place where they shall have their picnic meal. The groves of natural timber are invariably preferred to the situations which have been adorned artificially. There seems to be a charm in nature which all the art of man cannot equal. The flower-beds are admired, of course; so are the rows and clumps of planted trees; but for quiet rest and enjoyment, the city dwellers, and those from the country, as well, instinctively choose the places less adorned and trimmed, where nature has largely had her own way. The ground is not level, the trees are not of even size, some of them are gnarled and ugly, and they stand utterly without regularity; but, in spite of these seeming defects, or, perhaps, rather because of them, such spots are preferred. As Goldwin Smith used to say, "No one wants the world rolled flat and painted red."

Letters and articles have appeared in our columns pointing out the fact that merely from a monetary standpoint, it would be a good policy for a farmer to spare and care for his wood-lot. As in the early days pine timber of the finest quality (now worth a fortune) was thoughtlessly cut and used for the commonest purposes, as if the supply were inexhaustible, so a similar mistake in regard to removing hardwood timber is being made when a farmer decides not to wait for the inevitable rise in price, but to realize on it at once. But sentiment should also have weight. To slaughter a block of forest is to take away a great deal of the charm from a landscape, and to blot out a spot of natural beauty which cannot for generations be replaced. A rich man will spend great sums in order to have his gardens and grounds kept neat and trim, no money return being looked for. A block of protected natural forest, with its tall tree-trunks and dense shade, its tender undergrowth, and the varied flowers and herbage of early spring, needs no gardener to keep it beautiful, and yet it exceeds in charm the finest artificial surroundings, no matter how expensively kept up. Such a luxury is open yet to most farmers. Is there any reason why they should not enjoy it?

These remarks have been called forth by a private letter from an esteemed contributor who bewails the fact that in his neighborhood "several good wood-lots have been sold outright this winter, and other farmers are thinking of selling theirs." He confesses that, "I value the trees more from the aesthetic standpoint than any other, but I would like to see more done to get the mass of the people, the farm-owners, interested in the preservation and improvement of the wood-lot; in short, alive to their all-round well-fare. Here and there," he says, "throughout the township a man will be found who has shut the stock out, but the vast majority have their eyes too close to the dollar to see the wealth that lies farther away." He does not object to the selling of mature timber, but has been roused by the thought of those "who are contemplating the destruction of their woods at one fell sweep." He would be glad "if some special influence could be

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greatest labor-
L. DRAFFIN.

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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. It is handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and homemakers, of any publication in Canada.
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Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, CANADA.

brought to bear on such, to enable them to view the matter less narrowly."

"The Farmer's Advocate" most heartily agrees with this correspondent in his regret at seeing whole farm forests sold and cleared off, and in his fear lest such a practice should become even more common than it is. It would strongly urge that those who wish Ontario to remain a country with forests should busy themselves in inducing municipal councils in Ontario to pass by-laws exempting protected wood-lots from taxation, as provided for in the Downey Act. The agitation necessary to secure such by-laws would be highly educative, and make the question a live one.

Apple-growers Want Reciprocity.

It would be a great mistake to assume that Canadian fruit-growers as a whole are opposed to reciprocity. Apple-growers realize that they have much to gain thereby. Jas. E. Johnson pointed out, upon the occasion of the farmers' tariff delegation to Ottawa, that the opening of the American market would be a fine thing for Canadian apple-growers, particularly in some seasons, as there are certain varieties, such as Greenings, Belleflower and Talman Sweets, which sell to better advantage in the American than in our own Western markets. J. G. Mitchell, manager of the Georgian Bay Fruit-growers, of Clarksburg, writes to the Toronto Globe that, in view of the proposed changes, there is more interest taken in the apple industry in the Georgian Bay section than for many years. Hundreds of acres will be planted with varieties of apples suitable to the American and Western markets. Also, as to plums, they have had many inquiries in September from such cities as Cincinnati, Baltimore, Washington, New Orleans, New York and Chicago. So, if under reciprocity, Canadian consumers get the benefit of early fruit at reasonable prices, Canadian growers will have an improved opportunity to market some of their later fruit across the line. This goes to emphasize the view we have expressed, that, under reciprocity, Canadian fruit-growers would be little, if any, disadvantaged in the long run, while consumers on both sides of the line would be benefited.

Landlord-and-Tenant Bill.

A bill has been introduced by I. B. Lucas, M. P. P., in the Ontario Legislature, consolidating the Landlord and Tenant Act, the Overholding Tenants' Act, and certain other statutory provisions affecting the rights of landlord and tenant. There are many verbal changes intended to clarify the law, and an effort is made to cut out all obsolete provisions and generally to revise the law up-to-date. It practically introduces no new principle. Under the old law, treble damages were recovered against any person guilty of pound breach, or rescue; this is to be modified, and the penalty proposed is twenty dollars and actual damages. Before the Act finally goes through, there will probably be some alteration in the clauses as they now exist, providing for damages for seizure where no rent is due. The new clause will probably provide that the damages shall be whatever the court may determine as reasonable, rather than the arbitrary amount of double the value of the goods shown.

Best in the Empire.

I enclose you £1 4s. 0d. money order to pay for "The Farmer's Advocate" to Jan. 30th, 1912. I may say that I get agricultural papers from Australia, New Zealand, England, Scotland and Ireland, and not one of them has the practical information that I find in "The Farmer's Advocate." THOS. BRADSHAW.
Orange Free State, South Africa.

Two Great Problems.

Two things must be done if we are to keep a reasonable proportion of the wide-awake, educated children of this modern generation upon the land. First, we must cultivate a deeper appreciation of country life, imparting, at the same time, a business and scientific training that will enable our sons to make more money on the farms, and make it more easily than we have done; and secondly, we must suffuse through the rural districts as many as possible of the advantages of city life adapted to rural conditions. Both these problems are immense. Both must be matters of evolution or growth. At present we are so far short of either that the heights of future attainment look dizzy in the distant blue.

To say that the real fascination and beauty and wholesomeness of agriculture are not half appreciated by the people engaged in it, is to utter but a fraction of the truth. Even to-day we hear the independence of the farmer's life held up as one of its chiefest privileges. As a matter of fact, this advantage is generally overrated, and, at any rate, it is so far transcended by several others as to be worthy of but secondary mention. Whenever we hear anyone laud the farmer's independence, we know at once there is a person who has not begun to appreciate its great cardinal advantages. "The Farmer," declares N. P. Hull, of Michigan, "is first lieutenant of the Maker of this world." No occupation is more dignified. Out on the farm men's hearts grow strong and characters develop mightily, if given a chance. And what other great occupation permits one to dwell in such intimate contact with the sublime, rugged and exquisite beauty of nature? To observe the unfolding of the embryo seed, the up-stretching of the plants and trees, the gradual development of living, companionable animals—all creatures of one's own ambition, thought and care—to hold reverie in the cathedral silence of the woods, to work for the upbuilding of a home, to watch the natural development of the children, companions of the placid creatures of the farm—these are some of the pleasures of country life.

To be sure, there is the sterner side, else strong lines of character would never develop. Life everywhere has its trials and drawbacks, but the strong-hearted, wholesome, rational man or woman finds probably a greater combination of attractions on a well-ordered, well-situated farm than in any other spot on God's green earth. In the city, man moulds wood and brick and stone;

on the farm, he moulds Nature. "Nature Idealized," should be the motto of every country home.

But if the attractions of the farm are so great, why do so few people appreciate them? The answer is simple; they have not been trained to appreciate them, and few possess the discrimination to value most highly in youth the things that are best worth while.

Two great influences moulding the aspirations and conceptions of youth are the home and the school. Few homes have exerted a rational influence towards a wholesome appreciation of country life, because the parents themselves did not feel it, except half-heartedly. And as for the schools, they have directed the ambition and thought of youth into any other channel but the farm. Even yet, the most advanced schools are making but lame and feeble efforts to repair that obvious lack. It will be at least a generation, probably longer, ere the schools are wholly freed from the cityward bias. School-gardening, nature study, manual training and domestic science should be introduced into every school, and persistent effort made to relate the whole school work as intimately as may be to the conditions of the country and the problems of the farm. The state has nothing officially to do with the home; it does have to do with the school, and should endeavor to so modify its curriculum that it may cease educating so many of the brightest boys off the farm. Then, after about two or three generations of remodelled schooling, we may expect to see a race of farmers develop who will not only see more in the farm, but will make more out of it.

The second problem, how to take city advantages to the country, is much the easier of the two, and will be partly solved by the solution of the former problem. Already it is being solved to a considerable degree in many instances.

If it be sane and wholesome to appreciate the peculiar advantages of the farm, it is likewise sane to appreciate certain educational and social privileges—not to mention creature comforts—which the city offers. It is not well for man to live alone, nor for a family, nor yet a neighborhood. Character may grow strong under such conditions, but it also grows narrow and eccentric. A broad sphere of human contact is essential to the highest development of human intellect and character. Unless country life can promise a reasonable measure of these things, the children will be wise to leave it. It is not so much necessary to connect the country with the city by good roads and electric lines, though this is very desirable, but we must evolve in the rural districts, through school and church and institute and club, a social life of the country, by the country, and for the country—something germane to rural conditions. Of course, we want good roads, rural telephones, free rural delivery when we can get it; neat, well-planted homes equipped with modern conveniences; and last, but most important, plenty of good periodicals, music, pictures and books. But these things alone are inadequate to appeal to a well-balanced mind. Not one thing, but many, must be done.

And this leads up to a question upon which we have pondered not a little in the past. Why is it that in so many of the more progressive rural homes the boys have shown even a more marked propensity to leave the farm than the boys in the humbler homes? Is it not partly because the former lads got merely a taste of the educational and social privileges that could be enjoyed more abundantly in the town? If so—and we believe this is one fundamental explanation—it follows that the thing to do is improve our country homes and country society a great deal more than we have already done. It cannot be accomplished all at once; some of us have not the means to do much more than we have already done. But all of us can set before ourselves high ideals of country farms, country homes, and country social organization, working toward these as best we may.

Certainly, that is the direction in which to face, though the change will come not by revolution, but by evolution. And again we say the state must work through the school. Let the state busy itself forthwith. Take no stock in any easy panacea for improvement of rural conditions. Progress must be slow and cumulative. The problem is one of generations.

A Plea for Hope's "Quiet Hour."

Editor "The Farmer's Advocate":

How many of the readers of "The Farmer's Advocate" read the "Quiet Hour"? I venture to say that one-half of them know nothing about it. Well, if you have never read it, begin now, and begin by reading up some of the back numbers. If you can't get to church, just read one of these sermons. If you are trying to follow in the steps of the Master, you will find a great impetus from these discourses; or, if you find they have no interest for you, then you have good reason to doubt if you have ever known Him who is the Way, the Truth and the Life.

What a soothing effect such reading as we get in Hope's Quiet Hour column would have on the brain that has been racked with business six days of the week, but how often we see such a one poring over the columns of the daily paper all day Sunday. Is it any wonder that so many have come to the conclusion that life is not worth living?

BRUCE CO., Ont.

HORSES.

Preparing Horses for Spring Work

Many horses that will soon be required for regular and hard work in the fields have spent the last few months in comparative or complete idleness. As a consequence of such idleness (while they may be fat and apparently in good condition), they have lost muscular and respiratory tone. From want of function, the muscles have become soft and flabby, and the respiratory organs have become weakened, and the animals are not in fit condition to do a day's work. If this be allowed to continue until spring work commences, it will be found that the horses will tire easily, and for the first week or two they must be handled very carefully, and worked very easily, else they will become entirely incapacitated. In order to avoid such undesirable and expensive conditions, preparation for the work should be commenced at once. A horse that has been idle for a few months cannot be quickly fitted. It requires time, knowledge and patience. In the first place, daily exercise or light work should be given. Even though there be no work to do with the horses, and the time of the men is required for other purposes, it will pay well to have the men spend part of their time each day in exercising the horses. At first, a little exercise, say three or four miles daily, will be sufficient, and the amount of exercise should be gradually increased. As the exercise is increased, the grain ration should be increased in proportion. This will gradually give tone and strength to the muscles, the respiratory and digestive organs, and by the time the horses are required to do a hard day's work in the field, they will be at least in fair condition; and at that season, time of both men and horses is too valuable to be spent without being able to show reasonable returns. During the preparation, the harness that the horses will wear when doing regular work should be worn, and care should be taken to see that it fits well. This applies especially to the collars. It is quite possible that a collar that fits well at first will soon be noticed to be too small. The constant pressure upon the muscles of the shoulder when the horse is working has a tendency to harden and at the same time lessen the bulk of said muscles. This is noticed even in cases where a horse does not fail in flesh. Hence, the collar becomes too large, or, more correctly speaking, the neck becomes too small for the collar. In open-topped collars the size can to some extent be regulated, but this kind of collar is not popular, and is not generally used. If this condition occurs, and is not rectified, the rolling motion of the collar will soon cause sore shoulders, which will necessitate a rest, or the working of the horse under conditions that should not be allowed. Hence, the teamster should be careful to thoroughly clean the face of the collars every morning, and, if he notices that they do not fit sufficiently close, he should either procure collars that will fit properly, or wear sweat pads to fill up. Where proper attention and precautions are observed, sore shoulders should not be seen. In addition to the precautions mentioned, the removal of the collars at noon, or other times when the horses are standing in the stalls for an hour, or even less, allows the shoulders to cool and become dry, and tends to prevent trouble. Even the lifting forward of the collars on the horses' necks, when they are allowed to stand for a few minutes in the field, is a great relief to them when there is any tenderness, and, when there is no tenderness, it tends to prevent such. When this is done, of course, the collars should be readjusted, and the mane moved from under the collars before the team is again started. The horses, of course, should be fed grain in proportion to the amount of working done, but in no case should the change of food be violent. As to entering the theory that, "when a horse is

thirsty, he should be given water," should, with few exceptions, be carried out, the exceptions being: when very warm, the amount of cold water allowed should be limited; also, a horse that, owing to weakness of digestion, or other causes, will become colicky if watered after a meal, or if worked immediately after being watered. These exceptional cases must be treated accordingly. On general principles, we think that horses should be given water both before and after meals, and at all other times when they are thirsty.

"WHIP."

A Percheron Merger.

Perhaps the most important move that has taken place in the history of American Record consolidations took place on February 9th, when an amicable arrangement was reached between the

to Wayne Dinsmore, Secretary of the Percheron Society of America, Union Stock-yards, Chicago, Illinois. All members of the Percheron Registry Company will receive a share of stock, which constitutes membership in the Percheron Society of America.

Benefits of Stallion Licensing.

From an address given by Dr. J. G. Rutherford, at the Ontario Fairs and Exhibitions Convention, 1911.

The proposition that licensing stallions should improve the classes at shows is self-evident, as can be easily demonstrated by reference to the conditions already existing in various parts of our own country. In the admirable report on the special investigation into the status of horse-breeding in Ontario, organized by the Provincial Department of Agriculture in 1906, are to be found a number of proofs of the truth of this broad statement. In the whole Province of Ontario there were at that time 1,615 registered stallions, serviceably sound, being 60 per cent. of the total number examined, which was, as nearly as possible, a complete census. There were also 169, or 6 per cent., registered stallions which were unsound. Of the grade or non-registered stallions, there were classed as sound 740, or 28 per cent. of the whole; while of such animals in the unsound category there were 163, forming 6 per cent. of the total number examined, the same figure as that quoted for the registered horses. At first glance, this would appear to put them on an even footing as regards soundness, but when the totals in each class are considered, the result is altogether in favor of the registered horse. The number of unsound pure-breds, viz., 169, is only a shade over 9 1/2 per cent. of the class, while the 163 unsound grades constitute over 21 per cent. of the 740 unregistered sires.



A Superannuated Team.

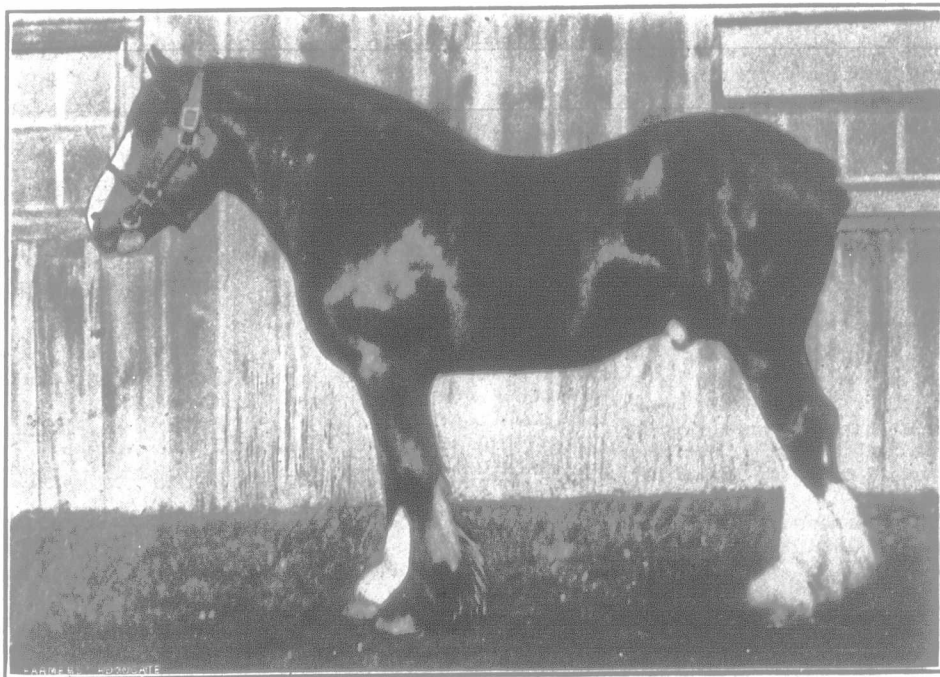
The accompanying picture shows a team owned by Isaac Willson, of Aldborough Township, Ont. They will be 31 and 32 years old in the spring, and are in good condition and good life, and did most of the work last year on one of Mr. Willson's hundred-acre farms, but will be turned out to pasture next season. They have earned a holiday, and it is hoped will enjoy the coming season's herbage.

representatives of the Percheron Society of America and the representatives of the Percheron Registry Company.

By the terms of this agreement, the Percheron Society of America has taken over all the books and records of the Percheron Registry Co., and recognizes as pure-bred the horses recorded by said Percheron Registry Company, for which certificates have been issued, bearing the name of William Bell, President, and Charles C. Glenn, Secretary.

It is a matter of common knowledge that the horses produced in the counties shown to have the highest percentages of pure-bred, registered sires are, as a rule, infinitely better and more valuable than those produced in the counties which show the opposite conditions, and in which the breeders are content to produce inferior horses through the use of grade or mongrel stallions.

A large percentage of farmers continue to use the scrub stallion, the result being that the country is flooded with shapeless and often useless misfits and nondescripts, for which it is difficult to find a profitable sale; while there is always a ready demand for the well-bred, good-looking, special-purpose horse, whether heavy-draft, express, carriage, hunter or cob. Some of this perversity may be attributed to a short-sighted desire to economize in the matter of service fees, but, after many years of observation, I am convinced that by far the most important factors are the mendacity and misrepresentation resorted to by the owners of grade stallions, who do not care what they say or print so long as they succeed in making a good season.



Gay Sprig (imp.) [7794] (13849).

Clydesdale stallion; bay; foaled 1906. Second to Craigisla at Ontario Winter Fair, 1910. Exhibited by Graham-Renfrew Co., Bedford Park, Ontario. Sire Refiner, by Baron's Pride.

While the number of animals recorded by the Percheron Registry Company is not considerable, amounting to but 4,823 head, all told, the fact that they have been recorded by a separate company has worked hardship to many breeders.

A letter has just been issued by the Percheron Registry Company, calling attention to the fact that the Percheron Registry Company has joined with the Percheron Society of America, and directing that all mail from now on should be sent

The pedigrees printed on the route bills and cards of many of the worst mongrels travelling the country are so adroitly twisted, and so cunningly worded as to puzzle anyone but an expert in such matters. It is not unusual to see a horse masquerading as its own sire or grandsire. I recollect one case in which a horse was credited not only with the lineage, but also with the performance of his great grandsire. I have in my possession an extensive collection of pedigrees of

this kind, some of which would be amusing were it not for the fact that they were deliberately devised for the dishonest purpose of obtaining money under false pretenses.

Experience in the West, where stallion-licensing legislation has been in force for a number of years, has shown that the grade stallion not only does not increase under a license system, but, on the contrary, soon shows a marked tendency to disappear from the field.

The smooth-spoken owner, or the even more glib-tongued groom, deprived of the immoral support of his lying route bill, and forced to exhibit his license, which at once places his horse in the category to which he belongs, soon becomes discouraged; and when, in addition, he is prevented from entering at fairs and exhibitions by the application of the rule now practically universal in the Western Provinces, that none but pure-bred stallions can be shown, the victory of the pure-bred sire is complete, and the mongrel is relegated to the collar which he should have worn from his youth up.

Associations which do not enforce this rule are deservedly considered non-progressive and out-of-date. After all, the only really sound reason for the existence of an agricultural fair or exhibition is to increase and develop the knowledge of the farmer and his family, and it is a mistaken principle for an organization of this kind to lend countenance to such a rank and undesirable impostor as the grade stallion invariably is.

So far as the stallions themselves are concerned, there is absolutely no comparison in point of interest and attraction to either exhibitor or spectator between a ring filled with high-class, pure-bred stallions, and one in which the competitors belong to the mongrel class.

It is true that some of the latter are good-looking horses, excellent individuals, and perhaps well adapted for some particular class of work; but what of their progeny? Nowadays the grade stallion is practically always the result of a first cross between a pure-bred sire and a non-registered dam, though occasionally he may be from a dam of another pure breed, in which case he is more correctly known as a "cross-bred." Both are evil, but the last is perhaps the less harmful. The first mentioned or grade stallion is always from a pure-bred horse, because the grade horse, no matter how handsome or symmetrical he may be, cannot, from a grade female, even as good as himself, produce a colt that, in point of looks, quality or substance, will be the equal of either sire or dam. Colts so bred are, therefore, seldom good-looking enough to be kept entire, even by the most ill-informed or prejudiced breeder.

It being admitted that the stock from pure-bred sires, intelligently used by intelligent men, is superior to stock of the mixed or "cocktail" variety, no great perspicacity is required to see that in a district where good colts and young horses abound, and where farmers, and especially their sons, are keen on the improvement of stock, there is certain to exist a friendly rivalry which will tend to largely increase the entry at local fairs and shows, as well as at the larger exhibitions.

The Manitoba Licensing Act, which I had the honor to introduce in 1893, stood for twelve years practically without amendment, and it was not until 1906 that the present fairly comprehensive measure was adopted. It, however, embodies most of the provisions of the old bill.

In 1899, the Territorial Government enacted what was known as the "Horse-breeders' Lien Ordinance," replacing this in 1903 by the more comprehensive "Horse-breeders' Ordinance." This latter legislation is still in force in Alberta and Saskatchewan, having been, on the division of the Territories, in 1905, continued by the Governments of both Provinces.

Legislation of a fairly advanced character, providing for the licensing of stallions by Provincial Departments of Agriculture, is now in force in each of the three Prairie Provinces, while the Government of British Columbia has so far been content with the enforcement of a replica of the original Manitoba Act.

It is, as can be readily understood, much easier to secure the passage of legislation of this kind in a new country, where conditions are in a state of flux, and where the vested interests are comparatively unimportant, than in a community whose beginnings were in a less-advanced age, and in which custom and prejudice may at times block the path of progress.

It is, however, scarcely fitting that Ontario, which has led the Dominion in general and professional education, as in commercial and industrial enterprise, should lag behind her younger sisters as she is doing in this and several kindred matters. On the other hand, it is scarcely fair to blame the whole Province for the apathy or indifference shown by the inhabitants of its less progressive and well-informed districts. Any law should be, and generally is, merely a public opinion which has gradually developed strength until the demand for its authoritative expression in a concrete form can be no longer disregarded. This being the case, it is only a matter of time until the more backward sections of the Province, fol-

lowing the lead of those districts which have already demonstrated their belief in the pure-bred sire, will join with them in insisting that grade stallions, if not banished altogether, shall be known for what they really are.

General-purpose Horse on the Farm.

Editor "The Farmer's Advocate":

The general-purpose horse, according to most horsemen's ideas, comes under 1,350 or 1,400 pounds. I notice that most speakers advise farmers against raising such a class of horses, and some have gone so far as to say the time is almost at hand when there should be no class for them at the shows. Now, as far as the draft horse is concerned, I am free to admit that it pays better to raise this class for sale than any other, but I can't agree with the idea that the drafter is the most useful on the farm in this part of the country.

I have been driving horses for twenty years, have been running a farm of my own for fifteen years, and keep two pairs of work horses all the time. At present I have a pair of mares bred from a Hackney horse; the dam was pretty much Percheron. They are clean-limbed, carry no extra flesh, weigh 2,400 pounds, can road eight miles per hour and keep it up; haul big loads both on the road and farm. I might say that, since harvest commenced, till the present time, they have not had a day off, are in good condition, and I don't know of a heavy team that has done as much work. Now, the point for which I contend is that there is a place on the farm for this class of horses.

Renfrew Co., Ont.

W. E. R.

One thing I considered my subscription price well paid for was in the help given on joint-ill in colts. I followed the preventive treatment, and I know of farmers near-by who lost colts this year which might have been avoided had they been taking your paper.

"BEGINNER."

LIVE STOCK.

Sheep-Breeders' Association Finances.

Following is the financial statement of the Dominion Sheep-breeders' Association for the year ending Dec. 31st, 1910, as reported to the annual meeting in Toronto:

RECEIPTS.	
Cash on hand, as per last report.....	\$2,551.07
Memberships	300.00
Memberships, American Shropshire Asso.	15.00
Registrations	1,364.65
Interest	58.10
Miscellaneous90
	\$4,289.72
EXPENDITURES.	
Directors' expenses	\$ 70.60
Grants:—	
Ontario Sheep-breeders' Association.....	394.65
Quebec Sheep-breeders' Association.....	143.77
Alberta Sheep-breeders' Association.....	69.26
British Columbia Sheep-breeders' As.	37.00
Maritime Sheep-breeders' Association	28.34
Saskatchewan Sheep-breeders' Asso.	12.72
Manitoba Sheep-breeders' Association	6.95
Expenses, Record Office for 1909.....	488.65
American Shropshire Association, fees... ..	433.40
Printing: General, \$3.90; Records, \$1,-	
225.00	1,226.90
Travelling expenses of Committee, re-	
tariff on wool.....	132.65
Rent of hall for annual meeting.....	5.00
Purchase of sheep records.....	4.50
Cash on hand	1,233.33
	\$4,289.72

45 Pounds per Day.

Editor "The Farmer's Advocate":

I notice, in your issue of February 2nd, Mr. Baty, of Middlesex Co., says he feeds 25 pounds of silage a cow per day, and says he would not think of feeding 40 pounds. Now, we have been feeding silage for 14 years, about 45 pounds a day, in two feeds, with straw or hay at noon, from Nov. 1st to May 1st, and are fed the same amount whether milking or dry, or if they have just freshened, and have never had a case of garget or a cow off her feed.

Our silage is of good quality, with a large amount of ears which are well glazed at time of cutting. We would not like to do without the silo or "The Farmer's Advocate."

Stormont Co., Ont.

FARMER'S SON.

Quick Hog-fattening.

Editor "The Farmer's Advocate":

I take pleasure in giving my experience in hog-raising, seeing that others have done so. I bought a sow of my father on March 1st, 1910, for \$25, which farrowed nine pigs on June 21st, of which one died. At the age of 5½ months, I turned out the best female for a brood sow. I sold remaining seven Jan. 12th, 1911, at \$7 per cwt. They weighed 2,150 pounds, returning me \$150.50. Valuing the one kept for a brood sow at the same as the others averaged, \$21.50, makes a total value of hogs, \$172.00.

From 21st of June till 12th of January, there are 204 days. The average weight was 307 pounds, showing gain from birth of 1½ pounds per day.

EXPENSES.

Sow's feed from March 1st to June 21st. \$	4.00
600 lbs. shorts for sow and pigs, at \$1.20	7.20
1,700 pounds chop, at \$1.25	21.25
300 bushels ear corn, at 28 cents	84.00
One-half hour per day for 200 days, at 5c.	10.00
	\$126.45

It is estimated that the whey fed would be balanced by the value of the manure.

Total value of hogs	\$172.00
Expenses	126.45
	\$ 45.55

Profit

This is my first experience in pig-feeding, as I started farming for myself March 1st, 1910. At that time I bought the sow and \$4.00 worth of unhusked corn, which, along with swill and whey for drink, furnished food for sow until two weeks before farrowing, when the corn was dropped, and, instead, a little shorts and oat chop was stirred into the drink. When pigs were born, the sow was running in a slashing, and, seeing me only three times a day, was rather wild. The feed was poured into a trough, and she ate when she got ready. When pigs begin to eat well, I put a small trough on the other side of fence, and opened a hole for them to get through. When six weeks old, I took the mother away, and getting all the shorts and fine oat chop mixed with whey into a thick batter that they could clean up, they never missed her. When corn got glazed, about Sept. 1st, I started feeding it along with oat chop and shorts. By the middle of September I dropped the shorts, and fed corn mostly. Would go into the field, and, sniping the ears, hauled them into the yard and spread them off by the wagon load. This was continued until the end of October, when, the weather becoming too cold for them outside, I moved them to the hopen. Here, the corn being stored overhead, and coming down a chute into a feeding compartment, they had corn always before them. In this way, with oat chop stirred into their drink, they were fed until sold. I believe no other cross of hogs but Tamworth and Berk would have stood so much corn. Once, when I was out of chop for a month, they did get a little stiff. Would have preferred a little more chop. I believe that corn not too hard for fat, and oat chop for bone and muscle, make the best feed for quick fattening.

Elgin Co., Ont.

ROY NEVILL.

A Simcoe County Hog Account.

Editor "The Farmer's Advocate":

I am moved to address a few words from my experience to your readers by Mr. Colpitt's letter on hogs. Of course, circumstances alter cases, and what is easy to me might be impossible in some other part of the country. I usually keep three to four sows, having them all to pig in the spring, from end of March to middle of May; then I breed one or two for a fall litter. Last winter I kept three sows over; they were Yorkshires; two of them farrowed about first of April, and one on 30th of May. They raised 30 pigs. I sold one to my man when weaned. Of the rest, I sold 12 on 5th of October, at \$8.50, and 15 on November 30th, at \$6.75. I also killed one and kept one, so that now I have four sows for next spring's trade. I winter the sows on roots, with a little chop of any kind. I give the cost and proceeds of these hogs as follows:

PROCEEDS.

Oct. 5th, 12 hogs, at \$8.50	\$187.00
Nov. 30th, 15 hogs, at \$6.75	211.65
One killed, 160 lbs., at 10c.	16.00
One kept	16.00
One sold as sucker	2.50
	\$433.15

COST.

Wintering three sows	\$ 20.00
Sows and pigs till harvest	45.00
1½ acres peas, say 30 bush.	24.00
200 bush. barley, at 52 cents	104.00
Boar fees	3.00
	\$196.00

Leaving a profit of \$237.15.

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raise all my calves, and sometimes buy one or two extra, so there is none for the pigs. I feed my sows through winter six beets per day each, and about a gallon of oat chop, so I think \$20 a fair estimate. While suckling, they get three gallons each of chop per day; after weaning, the sows get nothing but grass. The pigs eat about one ton of barley chop till harvest; then they go on stubble for about a month, which, with lots of young clover and grass, brings them to September, when I begin feeding again.

I notice someone inquiring about feeding turkey hens over winter. Well, the best thing is pulped roots; they will not starve with them. Simcoe Co., Ont. T. F. GAVILLER.

Preparing Corn for Hogs.

The increasing growth and use of corn in Canada invests with special interest the methods of feeding it to hogs. It has long been shown that cooking is not only a waste of time and fuel, but an actual detriment to the nutritive qualities of the grain. An exclusive corn ration has not been commended in Canada, being considered unfavorable to the production of fine, lean bacon, but, at the same time, corn has so many advantages that its use in connection with other coarse grains, or on clover pasture, will continue to increase, and would undoubtedly do so more rapidly were it not for the popularity of the silo, which absorbs so much of the whole corn crop. Iowa is the State in which corn-feeding to hogs is of the greatest interest, because it produces more than 3,000,000 hogs above any other State, and, at a conservative estimate, her 7,908,000 hogs in 1908 consumed 100,000,000 bushels, or one-third of her corn crop. To have shelled and ground it would have cost at least \$3,000,000, and the hog-feeder naturally asks would it pay? For two years past, the State Experiment Station has investigated the question of grinding and soaking with 312 hogs of all ages, from young, weaned, spring pigs, to old, thin sows. The results are given in Bulletin 106, by Prof. W. J. Kennedy, B. S. A., the Canadian who holds the chair of Animal Husbandry there, and an assistant. The cost of grinding corn meal was found to be 2 cents per bushel; corn-and-cob meal, 6 cents; and shelling corn, 1 cent per bushel. The animals were all of the fat-hog breeds. Corn-and-cob meal proved so unsatisfactory the first season that it was ruled out of the experiment, and feeding dry corn meal was found the most wasteful of feed. In a general way, the experiment proves that the fastest and most economical gains were secured by feeding dry ear corn until the hogs were about 200 pounds in weight; above that weight, soaking proved advantageous. The reason given is the more thorough mastication by the younger hogs, with their smaller jaws and perfect teeth, permitting a more perfect action of saliva on the corn. (Moral: Let the hogs grind their own corn.) The feeding was done in 32 lots, on .9 of an acre grass pasture plots, with small, movable houses for shelter and shade. The four principal rations used were dry ear corn, soaked shell corn, dry corn meal, and soaked corn meal. In case of one lot of 40 hogs fed for the whole period of 133 days, the cost of 100 pounds gain was: Dry corn, \$4.78; soaked shell corn, \$5.07; dry corn meal, \$6.08; and soaked corn meal, \$5.71; or, as a selling price of corn per bushel, hogs selling

at \$5.75, the results were, respectively, 80 cents, 75 cents, 61 cents, and 66 cents. In the other lots the returns corresponded approximately with these. The Duroc-Jersey spring pigs fed won first prize and reserve championship at the International Live-stock Exposition. The average results for two years showed that, for spring pigs, during their first summer and fall, there was a saving of over 6 per cent. of the corn by feeding it in the ear, instead of soaking and shelling, and of 18 to 24 per cent. saving, compared with shelling and grinding. For hogs over 200 pounds in weight, soaked shelled corn, while giving a trifle slower rate in gain than soaked corn meal, made the most economical gains of all the forms in which corn was fed. When fed in the form of meal, beside other expenses, troughs must be provided, whereas whole corn is fed on the sod.

Silage for Sheep.

H. P. Miller, a noted farmer and sheepman, of Ohio, who has been in Canada since the middle of January investigating our sheep industry for the United States Government, has given "The Farmer's Advocate," in the form of an interview, the benefit of some observations casually formed while travelling through the country. With the buildings, improvements and general thriftiness evident upon Canadian farms he was most favorably impressed, while the men whom he met appeared prosperous and intelligent. His principal criticism of feeding methods had reference to the way the feeding cattle are tied or stanchioned in dirty stalls, from which, in many cases, the manure is laboriously wheeled out in barrows. On his own farm, he years ago adopted the practice of never moving manure except when loading it on wagon or spreader to be hauled out to the field. All his cattle are fed loose, both beef and dairy, and are kept much cleaner than the majority of cattle confined in stalls.

The sheep business is not nearly so large or important an industry as he would have expected to find it, judging by the prominence attained by Canadian exhibitors of pure-bred sheep at the leading shows. In Ohio, it is not unusual for a man in the sheep business to have one head to the acre, besides a certain amount of other stock. He himself keeps more than one breeding ewe per acre.

His farm of 366 acres is stocked with 20 head of horses (all ages), 25 to 30 head of Jersey cows and heifers, all bull calves being vealed; 8 to 10 brood sows, raising two litters of six or seven pigs each per year; and 350 to 400 breeding ewes of Dorset and Merino breeding. He had started with delaines, but introduced Dorset blood and is making a specialty of "hothouse" early lambs. One octagonal silo, 12 1/2 x 26 ft., is used altogether for the sheep, being filled with Leaming and Clarage (a yellow dent) corn, sown usually in drills for convenience in harvesting with corn binder, but not thicker than if planted for husking. When planting in hills, they take care not to have over three stalks to the hill, hills 42 in. apart. The corn for silage is cut at the same stage as for husking. Of this silage a hundred-pound ewe may be fed about four pounds per day, in two feeds, with a little cottonseed meal sprinkled on it, not to exceed one-quarter pound per head per day, usually less. In addition, the

sheep are fed clover hay, to the amount of perhaps 1 1/2 pounds per head, and Mr. Miller is getting into alfalfa, of which he now has nine acres. He has also grown and fed soy beans, which correspond in feeding value to peas, though somewhat richer.

When he first began feeding silage to sheep, fifteen years ago, he lost some sheep, and also some horses one winter from allowing them to eat bad silage, but now he has no more fear of feeding sheep good silage than of feeding oats and hay. He also feeds silage in moderate quantities to his horses, considering it pretty safe to feed half a bushel to a feed twice a day.

That, even under the present very unsatisfactory conditions of wool-marketing in Canada, there is some reward for painstaking effort, is indicated by the experience of the well-known flockmaster, John Campbell, of Victoria Co., Ont., as mentioned at the Dominion Sheep-breeders' meeting, Toronto. Mr. Campbell reported having consigned his wool to a Canadian manufacturing establishment, and after some delay while the firm was seeing how the wool would scour out, he had received a report complimenting him on the quality of the wool, and remitting him two or three cents above the current price for Canadian wool.

THE FARM.

Maple Sap Pail-covers Essential.

Editor "The Farmer's Advocate":

I always have at least a year's supply of good dry wood on hand, as it does not pay to try to boil with wet or green wood. When it begins to look like sugar weather, I distribute my buckets to the trees, with the bottom up, so as to keep the snow out if it should happen to storm. By doing this, I put all my help to tapping when the right time comes, so as to get the first run, as it is always the best. I use all large tin buckets, ten quarts being the smallest, and up to fourteen quarts, as with the small buckets there is too much waste in the case of a big run. The spout I use altogether gives me more sap than other kinds. I tried 100 spouts a few years ago, with good results; so much so, that I sold all my old ones for what I could get, and bought the new ones. They do not injure the trees nearly so much as the old metal ones, are easy to put in and take out, and do not leak the sap, and the buckets do not blow off easily. I have a 6 x 20-foot evaporator, which gives me good satisfaction. Last year I boiled for 2,350 trees in daylight; did not have to boil any at night, as I always had to do other years with a 4 x 16-foot evaporator. I use galvanized storage tanks, and strain all the sap from the gathering tank into the storage; then it is all strained into the evaporator. I use a four-barrel gathering tank on sleigh while snow lasts, then put it on a low-truck wagon for the rest of the season. I always try to gather the sap every day, as I find that the sooner it is boiled after it leaves the tree, the better flavor and color you have. I have a few covers for some of my buckets, which I find to be a good thing, as in bad weather there is no waste of sap from the rain running down the trees and dropping in the buckets, and coloring the sap so



Commencing to Gather Sap.

as to make it useless, and the labor and time of emptying all the buckets is saved. The covers also keep the millers out of the buckets and the pieces of bark that blow from the trees. They also keep the sun from beating in the buckets and coloring the sap.

I usually have four men besides myself, as I have a big lot of chores to do. If we do not get enough sap to keep us busy, we cut wood for another year, or do other work to fill up the time. As to boiling, I keep the sap as shallow in the pan as possible, so as not to burn the pan, as it boils quicker and makes a better article. I sell direct to the consumer. I put up my syrup in one-gallon cans, and crate them to suit my orders and ship direct to customers. I label all the cans, "Guaranteed Pure Maple Syrup," with my name and address, and find it very satisfactory.

I might further say that I strain all the syrup as it leaves the evaporator into a milk can, then let it settle over night, when it is ready to can up. I remember, when a boy going to school, that my father used to tap 300 trees, and used to boil with a potash kettle hung on a pole, and had to work night and day to keep the sap boiled up, and burn nearly as much wood as I now use for the 2,350 trees with my outfit, and could not make nearly so good syrup.

Huntingdon Co., Que. R. T. BROWNLEE.

Alsike for Seed.

Editor "The Farmer's Advocate":

As seeding will soon be with us again, I will give my method of seeding and handling the alsike crop. I sow seven pounds to the acre—some sow four—but a thick seeding does not grow so large and rank, and fills better than a rank growth. I always seed with spring grain, and on my poorest field, as seeding on wheat gives a larger growth than I like. As a rule, I sow ahead of tubes on drill, as any clover on clay land seems to stand drouth better with a light covering of earth. Alsike does not produce two crops a year, as red clover does, but I think it stands the frost and heaving as well the first winter as red clover. Some leave it two, three and four years, and, as the clover gets thin, the blue-grass fills in, as it is a natural grass in this section, and they get a crop of hay, if no seed. But I think a new seeding each year pays better, and keeps up the land much better.

It is in the cutting and handling that one can lose very heavily, if not careful, as the seed shells much more easily than does red clover. Alsike gets ripe about the last of haying, and just before wheat is ready, and sometimes all three need your attention at once. When most of the heads are brown, and it shells in your hand, it is fit to cut. It must not be cut, raked or shaken around when dry, as it shells very easily. A head of alsike is made up of countless small pods, shaped like a bean or pea pod, and several seeds in a pod.

There are different ways of handling the crop. Some start the mower at four or five o'clock in the morning, and rake up at eight or nine o'clock at night, and coil up as long as they can see. But I found that, after a heavy haying, to start in for twenty-four hours a day in alsike, with harvest to follow, the long hours were more than my health would stand. My method is to start the mower as soon as convenient, say, from six to seven in the morning, and cut what I can draw in an afternoon; then rake in small windrows and coil in small bunches, just a nice forkful in each, after it has settled. I cut, rake and coil it all the same forenoon, and try to finish by eleven, or earlier. If it gets to shelling, leave it till the dew is on, and then finish, and cut less the next morning. As it is ripe, and, therefore, drier than hay, it will usually be ready to draw in the following day in the afternoon. My reason for putting in small coils is that, if it gets wet, it can be turned, and will dry without being shaken out. Alsike should not be threshed while sweating in the mow. A clover mill does better work than a grain separator. About a load an hour is fast enough threshing, as the sieves cannot separate the seed from the chaff if put through too fast. It costs from \$1.25 to \$1.50 an hour for machine, and you furnish your own hands. The yield is from one to eight bushels per acre, the average being about two bushels, and the price runs from \$5 to \$8 per bushel. The one sure thing is a lot of good feed for cows and young stock, as there is plenty of blue grass mixed with the alsike usually. But the seed yield is rather uncertain; some years it does not pay to thresh it, and other years it pays extremely well. Two different farmers here threshed eight bushels per acre this fall. That means \$400 and more for a field, and lots of good feed.

Norfolk Co., Ont. V. A.

I tried sowing my hill corn a peck to the acre, and that I never will do again, as the drill ground the seed, as I found out, and I lost a good deal by it. I believe, as the man said just lately in your paper, be sure to sow enough, and then thin it out.

BEGINNER.

Syrup-making.

Editor "The Farmer's Advocate":

If you have a good maple grove, there is no doubt you can make as good a return from it as from any other branch of farming, and at a time when there is not much other work doing on a farm. The first thing is the location of the camp, which should be built about the center of the grove, in a dry place, by the side of a four-foot elevation; if you can't get one naturally, you will have to make one. I built my camp about five feet from a large rock which slopes both ways—an ideal place to drive up on with the



W. D. Monk's Syrup Camp.

sap. I have a platform placed from the camp to the rock for the receiving tank. When a load of sap comes in, all you have to do is to turn down the pipe from the gathering tank, and the sap runs freely into receiving tank. My camp is 24 feet square, 8-ft. posts, with a good big ventilator and plenty of windows. It is a good plan to have a large camp, as it won't get too hot, and you can keep enough wood in it for the season. The wood should be gathered in the fall; it must be dry; hardwood does very well; bass-wood is good; almost any kind will do if it is

dark syrup, except the last few days' run, and I don't see any help for that, as the sap is colored, and, naturally, the syrup would be, also. I have two men gather the sap once a day, with some exceptions; if it rained at night, they would probably have to go around twice; they can do the whole thing in about three hours. I do the rest of the work myself.

It is a good plan to evaporate as quickly as possible. If you have to keep the sap over night, keep it cool. In making syrup, always have a good thermometer, and you will have every lot alike. Put your syrup into cans, as you draw it off, to settle; allow it to stand for twelve hours, then draw off and can. Always strain the sap before entering the evaporator, and strain the syrup through felt strainers as you draw it off. I have had no trouble so far in selling all my syrup in past; I could not fill the orders last year. I put my syrup up in Imperial-gallon cans, labelled, and guaranteed pure, and sell direct to consumers. In a good season I think a person should make at least 50 cents per tree.

Carleton Co., Ont.

W. D. MONK.

How a Farmer Built His Own Silo.

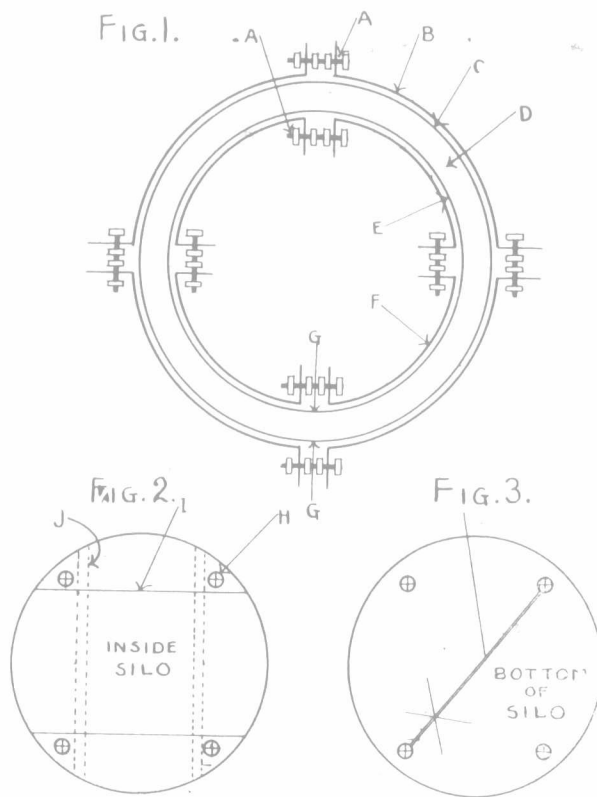
Editor "The Farmer's Advocate":

Scarcely a week passes without questions being asked in the different agricultural papers regarding the building of silos. It, being a very live question, demands due consideration. As the country is becoming dotted here and there with silos, the farmers are becoming wise to the fact that they cannot afford to do without them. It has long since been proven that corn is the cheapest food that can be grown on the farm, and the silo the ideal way of curing it.

Taking everything into consideration, it is calculated that the cement-concrete is the most profitable one to erect. But when a contractor asks such unreasonable prices for building, it may often cause procrastination. This being the case with the writer, last spring he decided on building himself, which was done with entire satisfaction in every detail (price included). The method we shall describe as clearly as possible. Location is a very important point, for, once built, it is hard to move. Convenience for feeding should be the aim. Next, the foundation requires to be solid, and, if drainage will allow, should be down three or four feet below the stable floor. It is just as easy to throw silage out of the bottom as up to any of the other doors.

When excavating for the one in question, which was placed in the gangway of the barn, a great many stones were removed, and it was thought wise to build the foundation of stone, which was done to the height of nine feet; started at the bottom about 18 inches thick, and built against the earth wall on the outside, and the inside form was used inside, and three or four inches of cement-concrete rammed in between stone and form. At the top of stone wall the outside form was set 9 inches clear of inside form, and filled with concrete and field stone, layer about, care being taken to keep stones clear of face of wall on either side. A rather straight-handled spade was used to work fine grout out against forms and force coarse material to center of wall. This process was followed until 30 feet in height was reached, two or three strands of barbed wire being laid in about every two feet. The outside form was drawn in one-half an inch every time forms were raised, which tapered into six inches at top. Inside was kept as plumb as possible.

At the juncture of stone and concrete wall a scaffold was required, which was obtained by erecting four poles in center of silo, about the size of barn rafters. They should be eight or ten feet higher than top of silo when finished. Place so as to form a square, and about four inches from the wall, and stay in position; cut two poles to reach from one side to the other (as shown in diagram); hang to uprights with four strong chains with timber hook hitched around uprights at proper heights to hold scaffold poles level. Now place two planks across those poles on inside (as shown in diagram), and spike. Such is the frame of scaffold, with uprights in outside corners, and anything suitable may be used to complete it. Short props can be used between uprights and wall, which makes scaffold very solid. For raising scaffold and forms, place a pulley at top end of each upright, through which run ropes with hooks on one end, to hook to forms or scaffold, as the case may be. The other ends of ropes run down inside of silo to windlass made of a piece of timber five or six inches square, between two uprights, as shown in diagram. Bore two holes, and use crowbars for levers. For scaffold, hook ropes to it, raise, and one man on scaffold can unhook and rehook supporting chains, and scaffold is again in position. For raising forms, loosen nuts, using ropes in same manner as for scaffold, raise to position, and tighten nuts. For washing or plastering inside of silo, start at top when wall is completed, and let scaffold down with ropes just as required; shove crowbar through into the ground and it is secure. Scaffold can then



Home-constructed Silo.

dry. I have a room 8 feet square in my camp for canning and storing syrup, etc. My evaporator is a 3 x 12 Champion; it will do the work from 700 trees in daylight. I use two 15-barrel storage tanks, placed outside the building, with a shed roof. I use 10-quart buckets, with covers. I like the Grimm spile very much, it is so easy to put in and take out, and does not seem to hurt the tree in the least.

Open your camp early. The first run is generally the best. I never had any trouble with

be taken apart, and put out through bottom door.

Mixing board was set close beside silo, and concrete was hoisted on a gin pole (also a few feet higher than silo), with pulley on top, and small windlass at bottom with crank. Buckets were used that a man could carry and dump into form, thus saving unnecessary handling. Mixing was all done by hand, and three men could build three feet per day. When filling last form, eight bolts were built in to bolt plate on with. Plate was made of sixteen pieces 2 inches thick, cut the proper curvature; a bolt through every second one. Then a one-inch plate was made in the same way, placed on top, joints broken, and nailed solid, the top inch being beveled to nail roof to. For roof, cut four rafters (allowing no projection at the eave), the point at plate just flush with bevel on plate. Take rim of light wheel and cut notches in rafters for rim to set in, which will make purline. Get lumber cut proper length and ripped cornerwise, placing pointed end up; nail to plate and purline, and nail together where they are narrow enough. There should be a gothic or some kind of door in roof for blower pipe. Cover with felt roofing, as shingles cut to waste greatly, and are slow to put on. The door frames, which were placed in every other form, were 20 x 26 inches. They were made tapering, so as to come out from inside easily. Then, over this one is placed another frame of 2 x 2 inches, of the proper curvature on the inside, and flush with inside wall, and tapering, also. When frame is taken out, this will leave a countersunk place in which to place door, leaving no wood wall to rot, which it does very quickly. Doors are made of two thicknesses, of one-inch matched lumber, with paper between, nailed to cleats of the proper curvature. When placing doors at time of filling, plaster around edge with mud, which will make it air-tight, the corn holding door in place.

The moulds, or forms, consist of two circles, one for inside, and one for the outside, and each circle divided into four sections (see plan). The sections consist of six inch boards, three feet long, bolted with small bolts on two bands of iron (old wagon tires will do), the top band 7 or 8 inches from top, the other 6 inches from bottom. The ends of bands should turn out, in order that they may be bolted together with bolts made of 3/4-inch iron, with thread cut full length, and three nuts, and a head, to tighten or loosen forms, as desired. At joints where sections meet, some strips of band iron are required to fill any space that may be left between sections.

Explanation to Plans.—Fig. 1: A, 3/4-inch bolts with three nuts and head, 12 inches long for outside, and 8 inches inside; B, band iron; C, inch lumber; D, concrete wall; E, inside lumber; F, inside band; G, band iron at joints. Fig. 2, circle representing silo: H, uprights; I, scaffold poles hung to uprights with chains; J, or dotted lines, planks on top of poles to form frame of scaffold (note the four uprights in the outside corners). Fig. 3: K, windlass in bottom of silo.

Those uprights can be taken out of silo when completed, with gin pole and rope, by hitching 10 or 12 ft. from bottom, and hoisting over top. Put guy-rope on bottom, and three men can take them out in 15 minutes.

If I have missed anything, Mr. Editor, I will be pleased to give it, as far as my ability will allow.

COST OF SILO.

Mason, building foundation, passageway to barn, and filling forms first time.....	\$ 21.00
One man helping mason, six days, at \$1.50 per day	9.00
Lime, \$3; gravel, \$3	6.00
Cement, 15 barrels, at \$1.80	27.00
Three men, six days, building 18 feet, at \$1.50 per day	27.00
Roof	20.00
Total	\$110.00

If building again next year, I could not suggest anything more satisfactory. JOHN R. PHILP. Grey Co., Ont.

\$275 from Maple Bush.

Editor "The Farmer's Advocate":

I will give you a few hints as to how I handle my sugar bush of 1,100 trees. Our camp is situated on a side-hill. It is 14 x 32 feet, large enough to hold nearly a season's wood. Our storage tanks, made of galvanized iron, hold 16 barrels each, and are placed on up-hill side of camp, high enough to feed evaporator, and driveway is high enough for our four-barrel, galvanized, self-emptying gathering tank to empty into storage tanks, thus saving all dipping or pumping of sap. We use all tin buckets, as wooden ones are inclined to discolor and taint sap. We use No. 2 tin spouts—the best we have ever used; they are better to tap, do not injure the tree, as you do not have to take off any bark, and they will last longer in the season. We use a 5 x 16-foot evaporator, which we think is the best machine on the market for making syrup, both for saving

fuel, time, and making a first-class article. We start to gather as soon as buckets are about one-third full, as this gives us nearly an even start with flow of sap, avoids a large rush, and does not allow sap to stand any length of time before being boiled into syrup, nor is it so liable to be rained into. Two men and a team are required to gather sap and do chores on the farm, and another man to run the evaporator; and, when not making syrup, are doing other work on the farm, which brings the cost of hired help in the bush much cheaper. Our syrup, which we finish in an evaporator, by using a saccharimeter for testing, we can make all just the same weight of thirteen pounds two ounces per gallon, which is standard syrup. It is then taken to the house, settled in large cans, and then put up in cans of from one to five gallons, labelled "Pure Maple Syrup," and shipped both to consumers and grocers. We never sell in bulk unless shipping to the Northwest; then we use barrels. Our bush yields on an average of about 25 cents per tree, which amounts to about ten dollars per acre. CARL SMITH. Lambton Co., Ont.

Be Busy in Time.

Editor "The Farmer's Advocate":

It will not be many days before spring work will begin in earnest. Then there usually is a rush. Then it is that one realizes that much could have been done in the long winter months to lighten the work of spring. Why not begin to do some work now?

It is poor policy to leave everything till the last minute. It causes a lot of unnecessary worry and hurry, and many disappointments. There are little things every day that one could do that would mean wonders when the battle begins. Plan the campaign now. Do not put off an hour longer ordering your seeds and plants, if you have not already done so. You are more likely to get better goods, and oftentimes seed-houses run out of certain lines; then, if you have waited till the last day, you will surely be disappointed. By all means, do not sow poor seed. Look yours over at once, and decide now what you are going to do about it, and then either clean it well or get some that is good. You will certainly reap as you have sown.

How about the implements? When one wants to start work with them, will something be out of order or missing? Let us see to it at once. Every part should be carefully examined, and a note taken of things needed, and first time we go to town let us get what is wanted. It may happen (and often does) that the dealer has not on hand the parts you need, and must send for them, which always takes some time. It is annoying to wait for a casting when your neighbors are out in the fields, when you could have had the desired piece had you ordered it sooner. Yet such is frequently the case.

When horses are gay in spring-time, after months of rest, many accidents happen through rotten and neglected harness. Test every piece, especially the lines, snaps and bits. Replace all that needs replacing, and have on hand a supply of buckles, snaps, staples, cockeyes, etc. Hardly a season passes without several of these wearing out or breaking. It is best to replace worn parts before some accident happens. Wash and oil harness every spring. It greatly lengthens the life of the harness; in fact, they will last thrice as long. Harnessmakers are very busy in early spring, and often the work they do is done hastily and not any too well. Try to get ours in before there is a rush, or, by investing in a few tools, thread, etc., one can do it himself some day when too-stormy to work outside.

By the way, no farmer, whether large or small, can afford to be without a little repair shop of his own, where he can save much time and expense in doing odd jobs for himself. No need to work in a cold room. An old stove to heat it, will also serve to heat water on for washing harness and for drying same afterwards. Driving to town to get every little thing done is wasted time. One could often do the same work in half the time in his own workshop. It is better to spend half a day at home fixing a thing oneself than in waiting for it at the bar. A workshop should have at least these few tools; get these as soon as possible, use them, and in time more can be added to the list: Hand saw, claw-hammer, brace and a few auger bits, pliers, chisels, plane, files, rule, gimlet, wrench, awls, screw-driver, etc. Besides this, have assorted screws, bolts, rivets, nails, wire, thread, etc.

Suppose we ask ourselves this spring, "What have I accomplished the past winter?" Will we have to answer, "Not much"? Many a one is killing time in the town or village, sitting around the store or inn, gossiping, or preaching about what he has been doing at home, or what he is going to do, forgetting that his animals at home, though dumb, speak louder than he can. The barn, the stables, and the whole farm, go to show whether one practices what he preaches. Besides, the habit of going to town too often is hard to break, and many a farm has changed owners just through this apparently small matter.

Better visit the neighbors and the school occasionally, but do not neglect to take with you your wife. It is sad to think that so many live side by side, almost, and yet never visit each other. "It is getting out of fashion," some will say. Others remember a dispute of long ago; some even are jealous, and some do not care to associate with inferiors. It often happens, though, that they will gather at a neighbor's house when he is carried to the hearse. Then it is too late. How much better it would be to do as two neighbors I knew did. For years they had hard feelings against each other, till one day one thought it was time for a change. He immediately strolled over across the fields, and found his neighbor busy in his yard. "My friend," said he, "let's be friends while we have the chance. Let us forget the old line fence. I have much work at home, and you are busy, too. Come over with the family this evening and have a friendly chat." They said more, but it was with tears in their eyes, not with curses, as in their former meetings. Shortly after that they built a good strong wire fence along the line, one helping the other in that work. Do you see the point?

Have you visited that poor family down the road, and done something that will make them more cheerful? Do you go to see your sick and old neighbors? Have you tried to make friends with them that are not now your friends? They are just waiting for you to come half way. It is very likely that you are missing some of the greatest joys in life.

But, in doing this, do not neglect your own family and home. See to it that your wife has no need of working far into the night; that she has leisure to share the pleasures of life with you. Are you sure that there is wood enough split for her use? If possible, split enough to last till the spring rush is over. When a man says he can't see anything to do these days, he means he doesn't want to do much.

Did you ever try carrying a small note-book in your vest pocket, in which to jot down little things which you are apt to forget? Such a book is worth more than its weight in gold. Enter these notes in your diary or other book every evening, for fear of losing the booklet, and with it your memoranda.

Brother farmers, 1911 will be a record year, if we try to make it so. To make it so, we must go to work in earnest, determined to succeed. We cannot expect to reap much by planting poor seed, or by doing anything carelessly, such as sowing in soil that is not fit, or when too late. Be ready to sow when the time comes. The soil, the seed, the implements, the horses and the men must be in shape; the weather we cannot control. By all means, let us not worry about it. Worrying will not make the sun shine. Rest assured someone else will attend to the weather better than any one of us could.

Do not fail to have a good garden this year. I do not mean that the women are to attend to the digging and weeding, but have the garden in some well-fertilized spot in the field where it can be cultivated with the root crop. If the women prefer to have the garden to themselves, why, then, let them have it, if they have plenty of time to attend to it. I have frequently found that seeds purchased in country stores are old, and only a small percentage will germinate. I have found it profitable to order seeds and plants early from some reliable seedsman.

In conclusion, let me say to one and all, "Be Prepared" always, and let me ask you to be sensible, manly, sweet-tempered, kind and thoughtful to others, for we have a grand and noble profession—that of farming. A. PLOWMAN. Waterloo Co., Ont.

500 Bushels Mangles on One-third Acre.

Editor "The Farmer's Advocate":

Having seen the subject of root-growing discussed several times in your valuable paper, subscribers giving their experience in growing from 500 to 800 bushels per acre, I thought I would give my experience on the subject. Root-growing is no strange business for me, as I was born and raised in one of the famous root-raising counties of England, namely, Shropshire, where it is not an uncommon thing for 30 to 200 acres of roots to be grown by a single farmer. Having some knowledge of the methods there employed, I put them in practice in raising a small field for my employer. On this one-third-of-an-acre patch I raised 500 bushels of Royal Giant sugar beets, good large-sized, sound roots, ranging from 10 to 20 pounds each. I never cleaned nor tested seed for germinating power, but sowed it as I bought it direct from a local seed merchant. The ground, oat stubble and potato ground, was manured with fifteen one-horse loads of green manure, 400 pounds salt, and 150 pounds nitrate of soda (applied soda in three applications). Plowed manure under in May; sowed beets May 15th, on the level, 30 inches between rows, 12 to 14 inches apart in the row. Hoed June 17th (once), and

scuffled three times. Pulled the crop the last week in October.

I might state that salt and one-third of the soda was applied on plowed ground, and harrowed in before sowing.

The yield is even larger than the heading indicates, for, by measurement, the plot is 125 feet in length, by 101 feet wide, an area of barely 46 square rods. To be accurate, the crop yielded at the rate of 1,700 bushels per acre. I have grown as much before, and have known larger crops grown in England. But, as the piece has always been called one-third of an acre, we may leave it as stated first. I calculate the cost of growing these roots at 6 cents per bushel, including manure, fertilizer, seed, rent and labor, which amount to \$30. Valuing roots at 10 cents per bushel, or \$50 for the whole, leaves a profit of \$20; or, otherwise, \$60 per acre.

Middlesex Co., Ont. J. C. NAGINGTON.

Cleanliness and Speed Make Gold-like Syrup.

Editor "The Farmer's Advocate":

As the sugar season is approaching, it might not be out of place to specify some of the little things, also some of the more-important needs, in order to succeed in the production of maple sugar and syrup. To begin with, a good sugar orchard is certainly of the first importance. I think sugar-trees growing on gravelly soil produce, as a rule, the clearest and sweetest sap. Next comes the need for a sufficient equipment for the conversion of the sap into syrup. During the past eighteen years I have used a modern equipment, complete in all its parts, and the material of the best quality. This outfit consists of a tapping-bit, reamer, spiles, buckets, gathering-can, storage tank, evaporator, and last, but not least, the covers for the buckets. I think that, by using covers, probably one-tenth of the season's sap will be saved. Rain and snow occasion much loss to the sugarmaker using uncovered buckets. Our gathering can holds three barrels, our storage tank thirty barrels, and our evaporator is 5 x 18 feet, with two corrugated pans, each 5 x 7 feet, and two small pans 2 x 5 feet each.

As the corrugations double the surface of the pans, with this great boiling surface, under favorable circumstances, I can draw off a gallon of syrup inside of every fifteen minutes. The spile is made so it will fit a 7-16-inch or half-inch bore. It gives more sap, and is less injurious to the tree than any I have ever seen; it also holds the cover (which is easily attached) perfectly secure.

Our sugar-house is 20 x 32 feet, and 12-foot side walls, giving ample room for the attendant's free and easy movements. The wood-shed is 18 x 24 feet, and holds sufficient wood for the season's use. Our method of gathering the sap is very simple. I have a sled made for the purpose, steel shod, upon which I place the gathering can, holding three barrels. This can is self-emptying, thereby saving the slow and heavy labor of lifting the sap with a pail. The moving of this sled requires a pair of horses, and the filling of the can occupies the time and attention of two or three smart men, or grown-up boys answer the purpose very well. The sap flows from the storage tank through an inch tin tube into the regulator, which opens and closes as evaporation takes place, or as the sap rises and falls in the evaporator.

Perhaps it is not necessary to remind the reader that the man in the sugar-house during the sugar season must be active in his movements and constantly on the alert, as the pans, with a strong fire under them, are very easily injured by the sap getting too low in the evaporator. Our sugar woods is very scattering; the trees are all second-growth, low, and very branchy. Such trees produce a large quantity of the richest sap. The soil is gravelly, with south-eastern exposure. I have 200 buckets, mostly ten-quarts, with covers, and tap about 1,000 trees, putting two buckets each to about 100 trees.

A very important item in the manufacture of maple syrup is its color. If dark, why should it be so? Does the sap not contain in itself, when it comes pure from the tree, that bright and gold-like color, with that mellow, rich maple flavor, which pleases the eye and palate of every lover of maple syrup? We think it does. Then, why have a dark product? I will tell you, first, our plan for making a nice, bright article. It is very simple, but very profitable, for it not only brings a higher price, but it brings customers, anxious to secure your goods. This plan is to gather every day's sap at least once a day, or, better still, twice, if you can. This sap is boiled as soon as gathered, using good dry wood, and not more than half an inch in depth of sap, or as near that as possible, above the corrugations. Quick, shallow boiling of nice, freshly-gathered sap will produce a fine article. Again, if you want a dark brown or jet-black syrup, hard to sell, gather your sap every second or third day; let it stand over night in the storage tank; boil

next day, slowly, and with wet or green wood, and your object is accomplished.

Sell? Why, yes; I could sell a great many more gallons than I make. As a rule, I have always sold my syrup to regular customers, and most of these are customers for the past eighteen years (which, in my estimation, speaks well for the quality of the syrup). I have shipped small quantities to Winnipeg and Regina; have had orders from Alberta and Muskoka summer resorts, and different other places nearer home, but none of these orders could be filled, as I never could supply the home demand. I put the syrup up in neat packages, nicely labelled. Although this costs a little time and expense, still, I find it pays. I might, in this connection, say that I am one of the very few in this district honored by the Dominion Government with a gold-medal certificate for sample of syrup sent them for their make-up of exhibit at the St. Louis Exposition.

On account of the scattered condition of the trees in my sugar-bush, it is impossible for me to even approximate what the profits per acre might be. But, as regards the profit from each tree, I can speak more decidedly—not on what is made from each tree, but what might be made. I think that an average of half a gallon per tree is a conservative estimate. It is an indisputable fact that none of our sugar-woods give the returns they should, on account of waste. This waste is occasioned by lack of promptness in gathering, allowing the bucket to run over; also rain and snow mixing with the sap, thereby rendering it useless.

S. MONTGOMERY.
Huntingdon Co., Que.

than 10 minutes a month for each cow, are the only expense necessary. The benefits derived from weighing each cow's milk I think amply pay me for all trouble. I have not done much culling yet, as I find, by comparing the results of the past two years, that some cows need more than one or perhaps two years to show what they are. Two of my cows, in 1909, stood second and third in the herd, No. 2 giving only about 400 pounds more than No. 3; while, in 1910, No. 2 increased her yield by 1,371 pounds, and No. 3 decreased her yield by 1,505 pounds, making a difference in 1910 of 3,276 pounds milk. Both cows, apparently, had equal chance in each case, each freshening at practically the same time each year. I also find that my whole herd of the same cows as in 1909, raised their average yield in 1910 by 800 pounds, largely due to better care and attention, as a result of weighing each cow's milk twice every day. After two years' trial of keeping daily milk records, I would not on any account think of going back to the old method of guessing what each cow is doing.

Oxford Co., Ont.

A. E. BISHOP.

A B. C. Gold-medal Dairy Farm.

As announced in "The Farmer's Advocate" for January 26th, the farm of J. W. Steves, of Steveston, had the honor of winning the cup and gold medal in the British Columbia Dairy Farm Competition. The accompanying illustrations and notes will afford the reader an idea of the appearance of the buildings and farm, and how conducted. Mr. Steves' parents, with their family,

settled in the district thirty-two years ago, on Lulu Island, which is formed of rich delta land, at the mouth of the Fraser River. At that time, the nearest neighbor, except one bachelor, was three miles away. The land was neither drained nor dyked, and was covered with tule and wild crab-apple trees. Each settler had to dyke and drain his own land, but now they have big canals dug through and around the island for drainage and dykes. The Steves farm embraces about 200 acres. The herd consists of about 80 pure-bred Holstein females. From 30 to 50 cows are milked the year around. Most of the feed is raised on the farm, consisting of clover, timothy hay, mangels, oats and barley. The feed is chopped by electric power supplied by the British Columbia Electric Light & Power Company, Ltd., and there is electric light in cow stable and dairy. The cow stable is 100 feet long, by 36 feet wide, contains fifty stalls, and has concrete floors, and the walls are plastered with concrete. The stalls are made of heavy steel fence wire, woven in frames of 2-inch iron piping,

with chains across behind the cows. The water supply is pumped by electric power and conveyed to the stable and dairy, for watering the stock, washing the stable, cooling the milk, etc. The milk is bottled on the farm, and shipped to the City of Vancouver.

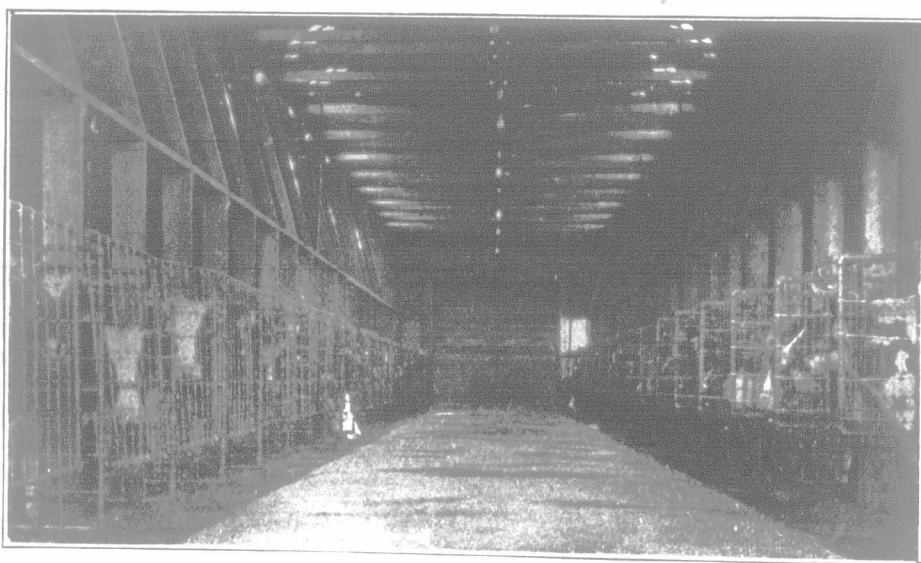
Pure-bred Suffolk-Punch horses are raised on the farm. The fertility of the land is indicated by one of the photogravures, which shows a field of timothy from which Mr. Steves baled over five tons to the acre.

The President of a Creamery Company in Eastern Ontario asks that other creamerymen give, through "The Farmer's Advocate," a statement of how they manage in dealing out the skim milk where the whole milk is delivered at the creamery.

For each new subscription to "The Farmer's Advocate and Home Magazine" that you send in to us, accompanied by \$1.50, we will credit you with eight months' renewal of your own subscription free.



Four and a Half Tons Per Acre.



Stable Interior.

THE DAIRY.

Average Yield Raised, Over, 800 Pounds.

Editor "The Farmer's Advocate":

I have been keeping a daily milk record of each of my cows since March 1st, 1909. I applied to the Department of Agriculture at Ottawa for a supply of daily milk-record sheets, which they supply free to all who ask for them. By having the scales and record sheets convenient to where I empty the milk, I find the time it takes to weigh and mark each cow's milk is so small as to be hardly worth noticing. I add up the totals of each cow at the end of each month, and record it in a book especially for that purpose, which the Department also sends free. As to the cost of equipment, the scales are ordinary spring balances, costing 50 or 60 cents. They apart from my time, which I would estimate at not more

Milking-Shorthorn Record.

Editor "The Farmer's Advocate":

I have been keeping milk records for four years. Began with grade Shorthorns, and, after weighing one season, concluded to try pure-bred Shorthorns, as I thought I could get as much milk and have better steers. In 1907 my best cow milked 5,716 pounds; my poorest, 4,574 pounds; best two-year-old heifer, 4,350 pounds. In 1908 sold all but four cows, and bought six pure-bred heifers. One two-year-old, milking, gave 2,822 pounds; best cow, 6,627 pounds; poorest cow, 4,831 pounds. In 1909 sold my poorest cows, leaving but three of original herd—three pure-bred and three grade heifers. Best cow, 6,650 pounds; second, 6,500 pounds; third, 5,000 pounds; pure-bred three-year-old, in seven months, 3,236 pounds, sold for beef Nov. 1st. Pure-bred three-year-old, first year, 4,886 pounds; pure-bred three-year-old, first year, 4,600 pounds. Best grade two-year-old, 3,700 pounds; second, 3,300 pounds. In 1910, the old cows gave: First, 5,763 pounds; second, 5,744 pounds; third, 4,766 pounds—to November 1st, when I sold all three. Pure-breds, four years old: First, 6,920 pounds; second, 5,205 pounds. One three-year-old gave 4,685 pounds, and one two-year-old gave 4,732 pounds. One grade four-year-old, milking eleven months, gave 7,374 pounds, and one three-year-old 5,300 pounds.

You will see, by comparing these figures, that, while I have definitely improved the breeding, I have also advanced the milking qualities. These cows received no grain, except from time of freshening until grass and green corn in the fall. I am well pleased with my method of weighing and the interest it gives to milking. As to cost of equipment and methods, may say I bought a 40-pound draw-scale, and a 5-cent slate, which I ruled with a nail, leaving a margin on left-hand side for cow's name or number, and made the balance into 14 squares for each cow. This gives me space for two weeks' weighing; and, by boring two holes on either side of slate frame, hang it on two nails in the wall. My scale hangs on a short rope from ceiling of stable. It takes about 5 minutes per day to weigh the milk of ten cows. This time is amply paid for by contests between milkers, and, also, it gives you a sure means of finding any slighting of work by hired help. I hope some time in the near future to be able to give you a summarized statement of a dual-purpose herd worthy of publication.

Elgin Co., Ont. ROY CHARLTON.

"My Experience in Cow-testing."

Editor "The Farmer's Advocate":

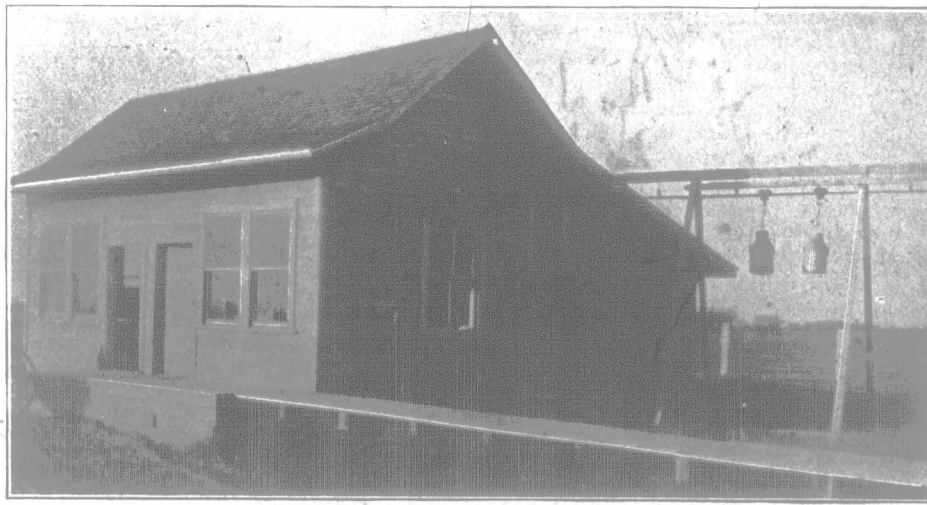
Two years ago, the Wallace Cow-testing Association was organized by Joseph Burgess, in connection with the Wallace Cheese and Butter Manufacturing Co. I became a member, having come to the conclusion that some of my cows, if not all of them, were not yielding reasonable profits. They were grade Shorthorns—a kind of dual-purpose cattle. The rules of the association were that each member weigh evening's and morning's milk of each cow three times a month, at fixed dates, and send samples monthly to the maker of the company, who takes the test and forwards the report sheets to the Department of Agriculture, where the total amount of milk and butter-fat is calculated, and a summary sent to each individual member in a sealed envelope. I did not think weighing only three times a month was a very accurate way of finding out the amount of each cow's production, although it involves little labor, and is better than not weighing at all, so I decided to take daily weighings of each cow's milk. To do it in the quickest possible manner, I adopted the following system: I procured a pasteboard file, with thumbscrew fastener at one end, and on this I place a pad of daily sheets, supplied by the Department; the thumbscrew fastener serves to keep the sheets in place. This and the scales are taken to the place of milking, and the weight of each cow's milk is marked down as we milk. On the sheets are spaces for name and number of each cow, and each sheet is ruled for one week. At the end of each week I total up the weights of each cow's milk, and at the end of each month it is a very easy matter to get the total yield of each cow for the month. I take samples of each cow thrice a month. The total yield of each cow for the month is marked on a sheet supplied by the Department for the purpose, and this, with the samples, is sent to the one who makes the test. Taking the daily weights of twelve cows under this system does not require three minutes at one milking, and I know it is a few minutes well spent, and I find, when once a person is in the habit of doing it daily, it is similar to any other fixed habit—hard to give up. We become interested, and anxious to know what each cow is doing, and it finally becomes an important factor in progressive dairying.

The first year I tested, the cows averaged 4,000 pounds each for period of lactation, and an average test of 3.8, under ordinary feeding, which average did not surprise me; in fact, they

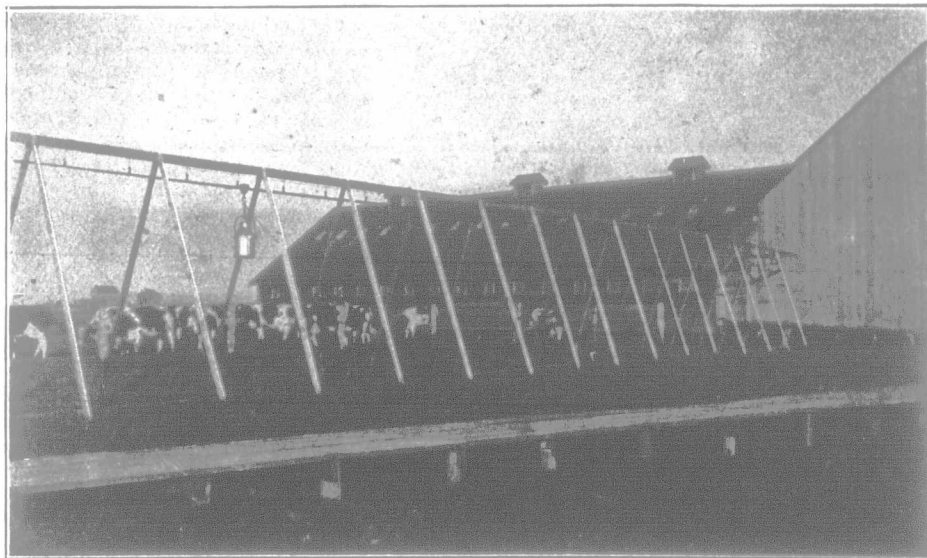
averaged better than I anticipated. The next year they were fed a little better, and, after weeding out one of the poorest, the average was 4,250 pounds, test 3.7. Had I weeded out four more, the average would have been 4,700 pounds. The highest individual average the first year was 5,800 pounds; the second year, 6,200 pounds.

Figuring the cost of feed per cow at about \$30, and milk worth 90 cents per cwt. at the factory, the profits, on the average, are not an enticing remuneration for time and labor involved in feeding and milking. A number of the poor ones are being fattened for market, as I believe this to be the right and proper way to dispose of them, and not attempt to sell them as fair, good milkers to neighbors and dealers, for they have poor cows enough. Am replacing the poor ones with pure-bred Holsteins with good ancestral records as to quality and quantity of milk, no leaking udders, and good quarters, headed by a pure-bred sire, whose dam and grandams were noted for large milk production. I firmly believe in keeping a well-bred sire; far too many scrubs are being kept, which only tends to deteriorate the stock, which I found by experience.

I do not believe in mixing the beef and dairy types to get a dual-purpose cow; have had all the dual-purpose cows I care for—cows that put a little on their back and a little in the pail.



Milk-bottling House.



Milk Track and Cows.

Feeding such cows in only an aggravation. Some cows will assimilate certain kinds of foods and lay it to their backs; this is the beef type. Another will assimilate the same food, and return it in the pail; this is the dairy type. Another will take the same food and, no doubt, assimilate it, but in what form I am at a loss to know, only that she helps to increase the supply of barnyard fertilizer. The latter type includes the majority of the dual-purpose cows.

The test and scales are the only accurate way of finding out the unprofitable cows, and it surprises me that so many intelligent farmers deem it too much bother to do a little systematic work in this all-important branch of agriculture; so they are content in working along in the same old rut, keeping cows that are only a bill of expense, thinking they know which are their best cows, when, in reality, they do not, as a thorough test would surprise them. Start right now and weed out the poor ones, but use first the test and the scales, for otherwise you might part with a good one.

Perth Co., Ont. SINCLAIR ADOLPH.

Unless at top figures, dairymen who understand their business are not likely to part with their best cows for the use of a milk-producer at the other end of the country.

APIARY.

The Anatomy of the Honeybee.

Morley Pettit, Provincial Apiarist, O. A. C., Guelph.

I wonder how many people who have seen bees at a safe distance have had the courage to examine one of them at close range. In order to do this in safety, it is best to have what the naturalist calls a cyanide bottle, made by putting a little potassium cyanide in the bottom of a large-necked bottle and covering with a thin coating of plaster-of-Paris. A druggist will prepare it for you.

Now catch the insect, place it in the bottle, and close the bottle with the stopper. The fumes of the cyanide very quickly kill the insect. To examine it properly, one needs a small lens and a needle. Even many experienced beekeepers have not gone to this trouble to get a close acquaintance with the appearance of these little workers.

Contrary to the animal custom, the bee carries its skeleton on the outside of its body. It is not composed of bones, but of thin plates and rings fitted nicely together so as to form a flexible coat of mail. Almost every part of the body is covered with hairs, each one of which has a particular use. Like "All Gaul," the body of the bee is divided into three parts. These are called the "head," the "thorax," and the "abdomen."

The Head carries the customary organs for taking food, and for seeing, hearing, smelling, tasting and feeling. But beyond this the animal resemblance ends. The jaws work sidewise, not up and down, and, instead of having teeth, they are bevelled inside so as to form a hollow, when joined together, as two spoons would do. The bees use them to manipulate the wax, to grapple with a robber, or to tear a way rough fibres, and throw out refuse from the hive. Their food is mostly taken in liquid form, sucked up through the long tongue with the assistance of four appendages which surround it. It is not a tube, but it is easily rolled into that form at the will of the bee. Like our little companion the house-fly, the bee has a large eye on each side of its head, composed of thousands of little eyes crowded together like the cells of a honeycomb. There are also three simple eyes on the top of its head. The nose is used only for

smelling, and you would not recognize it at all; in fact, you could not see it without a microscope. It consists of "smell-hollows" located on these wonderful little feelers called "antennae." The substitutes for ears are also thought to be located on the antennae.

The Thorax, or middle division of the body, has a much harder shell than either the head or abdomen. It supports the legs and wings. When flying, a bee practically has but two wings; but when it comes to rest, these become four, in order that the hindermost and lesser pair may be tucked away beneath the foremost and greater pair. These double wings, when closed, are a great convenience in exploring flowers and moving about the crowded hive; but it would be disastrous if, when set for flight, they were to separate. This they never do, however, as they are locked together with ingenious little hooks which the bee can instantly fasten and unfasten at will. As convenience also requires the wings to be short in proportion to the load carried, they are geared up to an enormous speed, it having been calculated that during their swiftest flight they make upwards of four hundred vibrations per second. Powerful muscles are necessary to maintain such high speed, and the thorax is a mass of muscles, perhaps the most remarkable of its kind in the world. By listening

to the tone of the bee's wings, one can soon learn the state of her mind, for the low hum of happy industry is very different from the high-keyed note of fear or anger.

The six feet are all alike; but, while the legs share equally in the labors of walking, running, jumping, clinging and climbing, each pair has its own individual duties, different from all the rest. The foremost pair is the smallest and shortest. They are the servants of the head, keeping it and its important organs clean. One of the prime functions of the legs is to keep the bee clean. A cat does not make nearly so elaborate a toilet, nor keep herself so neat as a bee. The front legs are used for this purpose particularly, and the middle legs also help. On the third pair of legs are the baskets for storing and carrying home the pollen; these are borne by all the workers, but not by the queen and drones. The worker gathers the pollen from the anthers with the legs, mixing it with a little honey to make it form a ball and adhere to the pollen baskets.

The Abdomen contains the two stomachs and the intestines, the principal organs of respiration and circulation, the reproductive organs, the wax pockets of the worker, and the sting. The nectar obtained from blossoms, after mixing with saliva and passing through the mouth and gullet, enters the honey stomach, which is located in the front of the abdomen. Nectar contains "cane-sugar"; honey contains "grape-sugar"; the change is effected by the digestive fluids of the bee. When she returns to the hive, she inserts her tongue into a cell of the comb, and forces the nectar back through it into the cell. She can also, at will, keep a supply, to be digested at leisure. For this purpose, the honey stomach is supplied at its lower extremity with a stomach-mouth, which opens with a complex valve into the digesting stomach. From this on, the process of digestion is similar to that in animal life.

The heart, formed of five elongated rooms in the abdomen, extends into the thorax and the head. The breathing organ is also spread out through the whole body, and the air comes into purifying contact with the blood throughout the whole system. On each side of the abdominal cavity there is a large air-bag, which varies in size according to the quantity of air it contains. Bees breathe through tiny holes on each side of the body which open into the air-bags and passages. Filling these with air puts pressure on the intestines, and enables them to discharge the refuse from the digestion of food. The air-bags can only be distended when the bee is flying, hence perfect cleanliness is maintained in the hive. As there are long periods in winter when bees cannot fly and discharge feces, the necessity will be seen of providing the conditions under which there is the smallest accumulation of refuse in the intestines.

The wax pockets of the worker are eight in number, four on each side of the abdomen, and the wax is secreted in the form of delicate scales. Whenever wax is needed for comb-building or capping, the younger workers fill themselves with honey, and hang in festoons in a warm part of the hive until the wax scales grow on them. It takes about twenty-four hours for a bee's food to become wax.

THE STING.

The last organ in the abdomen is the one which creates the most interest—the sting. It is the honeybee's weapon of defence, and is indispensable to her preservation. Without it, the attraction which honey presents to man and animals must have caused the complete destruction of this precious insect years ago. The organ is composed of a poison sac, and a firm, sharp sheath which supports the sting proper. The latter is composed of two spears of a polished, horny substance, which, supported by the sheath, makes a very sharp weapon. In the act of stinging, the spears emerge from the sheath, about two-thirds of their length. Between them and on each of them is a small groove, through which the liquid, coming from the poison sac, is ejected into the wound. Each spear of the sting has about nine barbs, which are turned back like those of a fish-hook. These constantly catch hold of the object stung, and the sting is torn from the bee and remains in the wound. The organ has an involuntary muscle attached, which, by a sliding motion, continues to shove first one spear, then the other into the wound; the barbs prevent either from slipping back, and all the time other little muscles are pumping in the poison, which makes the otherwise simple operation so painful. The sting usually tears away other organs from the poor bee, who loses her life in what she considers to be the defence of her home.

A Necessity.

I have been taking "The Farmer's Advocate" for years, and feel that it is one of the necessities in good farming. W. W. MARSHALL, Welland Co., Ont.

POULTRY.

Crate-fattening at Pembroke.

Editor "The Farmer's Advocate":

I notice, in your issue of Jan. 26th, a correspondent desires some further information from me with reference to my personal experience in the crate-feeding of poultry.

The question of how long it should take to fatten fowls in crates is frequently asked, and there seems to be considerable diversity of opinion on this subject, even among successful poultrymen. At our plant here, the period varies from ten days to two weeks, but others who have expressed their views on the subject, place the time limit as high as three, four, and even five weeks.

It is probable that varying conditions, and even the varying aims of feeders, are largely responsible for this diversity of opinion. With us, business is conducted on a strictly commercial basis; and, while many experiments are made, they are for the purpose of leading to conclusions intended to govern those who raise poultry for profit, conceding nothing to fads and fancies.

At some stations, experiments are designed to cover a wider range of practices in the rearing and fattening of fowls. They undertake to teach the farmer not only how to fatten mature birds, but how to develop and market broilers and chickens in all stages of immaturity. Occasionally a poultryman may find himself in a position to profit by such experiments; especially should he find himself closely in touch with a good metropolitan market; but in the vast majority of instances the poultryman will find it to his interest to confine himself to the straight commercial proposition of developing and fattening poultry for profit along the lines of least resistance. He will let his fowls mature in the open, and then rush them through the crate-fattening process as rapidly as practicable. The Poultry Yards of Canada is an establishment which takes this view of the situation, and bases its methods upon it. We believe that, as long as a chicken is growing, he should be allowed light and air, and all the exercise he is disposed to take, thus developing a strong and vigorous constitution which will splendidly serve him when he shall be called upon to undergo the trying ordeal of crate-fattening. In this way, a big, strong frame is built up upon which to lay a heavy coat of rich, tender, juicy flesh as rapidly as possible.

From a purely commercial point of view, it looks like a waste of raw material to take a chicken when only one or two months out of the shell, and put him in a crate for fattening; but at the same time, it is improbable that such a little fellow, weighing not more than a pound and a half or two pounds, might, if possessed of a strong, sound, vigorous constitution, go on growing in the crate, as well as fattening, and thus make an appreciable gain in weight after the third, or even the fourth week in the crate; but from a business viewpoint, the proposition does not look at all attractive.

Cockerels five months old may be looked upon as having attained their growth, or, at least, having sufficiently approximated maturity to be ready for the fattening crate; and these, with hens one year old and upward, and old roosters, may be expected to fatten in from ten days to two weeks.

It should be borne in mind that, while there should be a distinct and appreciable profit on the gain in weight made in the crate-fattening; that is, that the bird should make money for his owner by turning grain and other feed into marketable flesh, this counts for less than the increased market price per pound which the fattened bird will command, as compared with the unfattened one.

Thus, a four-pound, unfattened cockerel, at ten cents a pound, would bring forty cents.

Put a pound and a half of flesh on this bird, even at a cost of fifteen cents, and because he has been fattened and loaded with fine-grained, juicy, tender flesh, in the place of muscle hardened and toughened by exercise, he will bring twelve cents a pound, instead of ten, and so he becomes worth sixty-six cents.

In making one's calculations upon the profits of crate-fattening fowls, one must never lose sight of this improvement in quality for a moment. The healthy bird, while eating heartily in the crate, will not only give a profitable return in the increased weight of flesh for all the rations he will consume, but the difference between the respective prices of the fattened and unfattened fowl-flesh will represent a net gain.

In view of this, it looks like a poor business proposition to permit fowl to take up crate room any longer than is necessary, even supposing some gain in weight could be made after the second or third week. During the first two weeks the fowl are gaining in both weight and price per pound, but later, when it comes to merely putting on additional weight, the creation of profit is materially diminished. To make the maximum of profit out of poultry-feeding, it is, of course, nec-

essary to work our plant at high pressure, so that keeping birds which are past the period of highest profit-making is a more serious matter than one might suppose at first sight. The fattening season is not long, and it should be utilized in working the plant to its fullest capacity. In such an establishment as ours, it would be a costly experiment to keep one batch of fowls crated for five weeks. The average daily receipts are one thousand birds, and this would mean having on hand thirty-five thousand birds tucked away in something like three miles of crates, before the first killing.

In the case of a farmer who fattened his own fowls, and put them through in one batch, the fattening process might be extended for the sake of marketing any surplus rations which he happened to have on hand, especially if the fowls were sufficiently robust to stand up under the confinement and the gastronomic pressure; but, as a sound and sane commercial proposition, fowls five months old and upwards should reach the most profitable stage for killing in from ten days to two weeks after crating.

The published experiments which have been made at the various poultry stations throughout Canada, although many of them have been with chickens not more than two months old, and very few with really mature birds, readily point to this conclusion: The gains in proportion to the feed consumed after the end of the second week have materially diminished, and, at the same time, in none of these experiments have the items of labor, interest on capital invested, and rent of plant, been permitted to enter into the estimates. All these are items which must be taken into consideration. The fattening plant cannot be worked all the year round, and it behooves the owners to make hay while the sun shines. Even the farmer who finds that he can put through all his fowls in one batch should be led to one of two conclusions: he has not enough birds, or he has too much plant.

As to the rations for crate-fattening birds at the Poultry Yards of Canada, considerable latitude is permitted. One which has produced good results is the following:

Ground oats, barley and shorts, in equal quantities, mixed with milk, plenty of grit and water.

Another, which is in still greater favor, is as follows:

Equal quantities of ground oats, barley and shorts, mixed with soup made of bones and scraps, with tallow in the soup made of bones and of half an ounce to each bird, or the tallow may be melted and mixed in the feed. Of course, plenty of grit goes with each ration, but in the case of this last, the birds are given milk to drink, instead of water.

It will be seen that, in considering the subject of crate-feeding, the poultryman should remember that it has a twofold purpose:

1. Improving the quality of the flesh to be marketed.

2. Fattening with profit; that is, turning the rations worth two cents per pound into flesh which is worth vastly more by the pound, and making the correlation between the weight of feed consumed and the weight of flesh produced as close as possible.

THOMAS W. LEE.

Renfrew Co., Ont.

GARDEN & ORCHARD.

Peaches vs. Apples.

Editor "The Farmer's Advocate":

We hear considerable talk about the lowering of the tariff, and whether it will be beneficial to the farmer, or not. And we hear of the peach-growers and gardeners being up in arms for fear of their trade being ruined. Now, let us consider whether they have much to complain of. They say the Americans will flood the market with early peaches. Now, what proportion of farmers can grow peaches? Does one in one hundred grow them? Anyway, we should think of our city cousins, who, in time of sickness, or when they get hungry for peaches, have to pay such prices for the juicy fruit.

If I am rightly informed, our neighbors across the line, in New York State and Michigan, grow peaches under the same climatic conditions as Ontario, and compete with their more southern brethren. At any rate, I think, wherever peaches will grow successfully, apples will, also.

And I rightly informed, Mr. Editor, that your demonstration orchard near London is an apple orchard, and, that, valuing the land at \$1,000 per acre, you declared a dividend? And when Mr. Johnson, of Forest (who seems to think the admission of free peaches is going to ruin him) was asked as to his opinion of the value of the orchard, said, if it were his, he would not take even the above price for it. Now, I would like if such men as Mr. Johnson would be satisfied with apples, if need be, and give his brother farmers an open market for their farm produce into the United States.

We farmers in the southern part of Lambton County, who ship out yearly thousands of tons

of sugar beets and hay would like to have an open market. The Michigan sugar-beet companies say, if the duty is taken off, they will give us fifty cents a ton more for beets. Farmers in Michigan are getting \$12 per ton for hay, while we get \$8. Land in Michigan is worth one-half more than here, all things considered. Lambton Co., Ont. PETER CAMPBELL.

[Note.—Our correspondent is correctly informed as to the points about which he asks assurance. So far as our friend Mr. Johnson is concerned, we fear that his generosity induced him to lend the weight of his official position to a request on behalf of his brother fruit-growers that self-interest would never have prompted him to support.—Editor.]

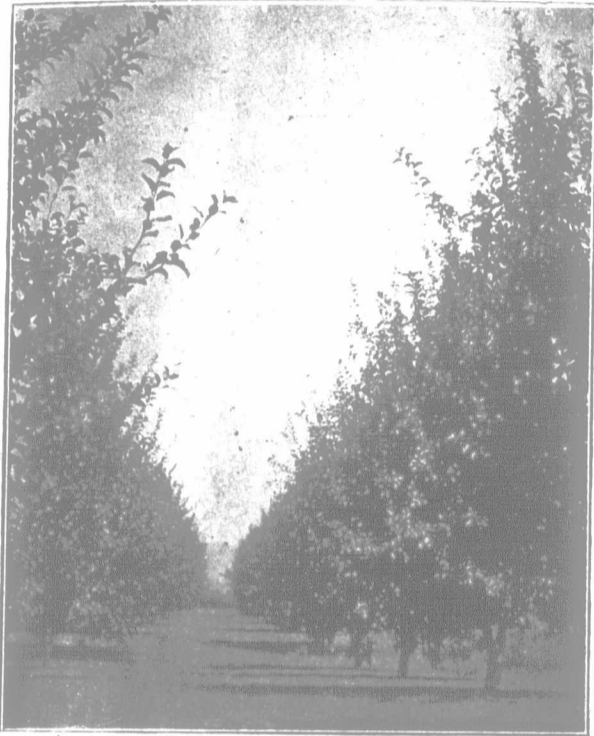


Fig. 1.—View in apple orchard, Hood River, Oregon, showing upright habit of growth of low-headed trees. The trunks vary in length from 15 to 20 inches. Contrast this with the form of apple trees as they grow when headed high, and it will be seen that these low heads are not as much in the way as one might expect.

Pruning.

J. W. Crow, Professor of Pomology, Ontario Agricultural College, Guelph.

Various reasons for pruning have been given from time to time, and numerous attempts have been made to express in concise form all the reasons there may be for the pruning of trees and plants. If we accept the dictionary definition of a principle: "A law comprehending many subordinate truths; a law on which others are founded, or from which others are derived," then it seems possible to express the fundamental principles of pruning in these three statements:

1. We prune to modify the form of trees and plants.
2. We prune to regulate (in part, at least) the production of fruit.
3. We prune to improve the quality of the fruit.

I am quite aware that, in undertaking to present an article on the subject of pruning, I am expected by the majority of readers to deal with the matter in a purely technical way. Most fruit-growers wish to know how to prune and



Fig. 2.—Short trunks, but high heads—no bearing wood within ten feet of the ground. Most of the missing branches have died for lack of light. The dense top simply requires thinning out. Watersprouts should be allowed to grow from the lower part of the main branches. These in a few years would add very materially to the bearing area of the trees.

when to prune. Comparatively few men are interested in learning why we prune, but it seems to me that a man of intelligence, who understands the fundamental reasons for pruning, will be much more capable of carrying out the technical part of the work than a man who understands nothing more than what to do and when to do it. The necessity of understanding the reasons for doing a thing in a certain way lies in the fact that one is being continually confronted by new problems. One who does not understand the fundamental principles which underlie the operation is entirely at a loss with regard to finding for himself a solution of a new problem, whereas one who comprehends the underlying reason will be able to invent for himself a satisfactory method.

In this article we shall deal with the form of trees, leaving the other phases of pruning to be considered in succeeding issues. We may state that the natural form of the tree may be modified for the purpose of securing greater convenience in handling. It requires no demonstration in order to make plain the fact that a tree with a low head is easier to prune, spray, thin, or pick, than one with a high head. The formation of the head of a tree close to the ground is simply a matter of saving dollars and cents in carrying on these operations. The majority of trees in Ontario are headed at from three to five feet in height. This may be quite satisfactory from the standpoint of the farmer who does not wish to invest in a special line of orchard machinery; but, as a matter of actual fact, trees can be cultivated satisfactorily, even with ordinary tools, when the trunk is restricted to two feet in length. An orchardist who cares to provide himself with implements specially built for the purpose will be able to cultivate, with perfect satisfaction around trees headed as low as eighteen or even fifteen inches. It must be borne in mind that the natural growing habit of a tree headed low is entirely different from that of one headed at the ordinary height of four to five feet. The shorter the trunk, the more upright is the direction of growth of the branches, and, as the matter actually works out in practice, it is not appreciably harder to cultivate low-headed trees (provided the head has been properly formed) than it is to work around ordinary trees with trunks four or five feet in length, the branches of which have been allowed to take a horizontal direction of growth.



Fig. 3.—Open-headed trees (Tolman Sweet). Other varieties of this type are Duchess and Wealthy. They normally develop fruit spurs, and bear fruit to the very base of the main branches, for the simple reason that abundance of light reaches those parts of the trees. Should have been headed back at the points indicated, so as to increase the number of branches, and thereby provide additional area for fruit bearing. Spreading growers, such as the Tolman illustrated, should be pruned to inside buds, or to branches having an upright direction. Upright growers, such as most varieties of pears and many kinds of apples and plums, should be pruned to outside buds, or to branches growing outward.

It must not be thought that a tree with a short trunk is necessarily low-headed, and, contrariwise, it must not be imagined that a tree with a long trunk is necessarily high-headed. It is possible, in the first case, to keep the lower branches of the head cut away, and to form in that manner a tree, the lowest bearing branches of which may be several feet from the ground. On the other hand, it is possible, in the case of a tree with a long trunk, to give the branches a downward direction of growth, and to make a tree the bearing branches of which may reach nearly or quite to the ground. So far as convenience in handling alone is concerned, the ideal form of head is broad and flat-topped. Such a head is much more easily constructed on a short trunk than on a high one. Many of our peach-growers are growing trees with trunks scarcely more than a foot in height, and many of our apple-growers are adopting the low-heading idea in greater or less degree. In the West, apple orchards are headed as low as fifteen inches. The

proper method of forming a broad, low head on a short trunk will be described in detail in a succeeding article, and need not be more definitely mentioned here.

For the sake of convenience in handling, it is also necessary, in some cases, to head back the branches of closely-planted trees. It is not, of course, desirable to plant trees so closely that the branches will interlace, but correct pruning will in many cases obviate the necessity of cutting out any trees.

Another reason for modifying the natural form of a tree is that in some cases greater mechanical strength can be secured. Serious injury frequently results from allowing branches to come off from the trunk in such a manner as to form

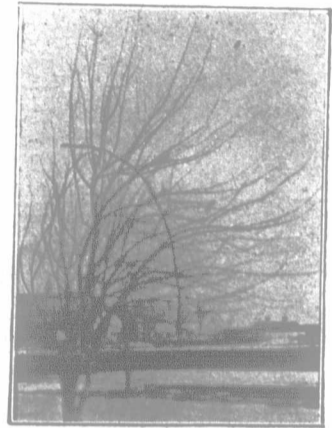


Fig. 4.—Pear tree badly deformed by winds. Should be headed off at point indicated, but such treatment is likely to delay fruit bearing for a time, or prevent it altogether.

a fork. Branches should leave the main trunk at a broad angle, if possible, and it is desirable, as well, to have them spaced at least two or three inches apart on the main trunk.

There are two general types of trees, one being known as the open-center or vase-form, and the other as the central-leader type. As a rule, trees of the latter style suffer less from the breaking down of branches than do trees of the open-center type. We might have stated in a preceding paragraph that vase-formed trees are broader and permit of the construction of a wider and lower head. We can certainly state here, however, that the trees of this form are open to serious objection on the score of mechanical strength. It is much more difficult to secure a proper distribution of the main branches up and down the trunk in the case of the open-centered tree; and if the pruning is continuously aimed towards the production of trees of the open-centered habit, it is even more difficult to keep the scaffold branches in their proper place. It is probable that artificial support will be found necessary when the extreme type of this tree is adopted, owing to the fact that, after having been borne down by the weight of a fruit crop, they seldom regain their normal position if left to themselves.

A second point in which trees may be so formed as to give additional strength is with regard to the number of main branches they are allowed to possess. If too many are allowed to spring from the trunk, they are necessarily crowded, and therefore slender and incapable of bearing heavy weight. It is better to start with



Fig. 5.—Was in similar condition to No. 3. Illustration shows first year's growth after heading back.

Fig. 6.—No. 4 after pruning. Shoots growing against the wind were left wherever possible, and these in all cases were pruned to buds on the windward side.

a smaller number—from three to five—and, by heading these back, cause them to branch out, until the requisite number is secured. Stouter and stronger branches can be developed in this way.

A third reason for modifying the form of trees is in order that the maximum area of bearing surface may be developed. Some varieties naturally produce very few branches, and grow, consequently, with very open heads. Additional



Fig. 7.—Northern Spy tree in summer. Head very dense; impossible for light to penetrate to center of tree.

bearing area may be secured in such cases by heading back the branches at the proper stage, in order to increase their number, thereby filling up the head of the tree to the desired extent. On the other hand, a good many varieties produce so many branches that it becomes necessary to reduce their number in order to admit light to the center of the tree in sufficient quantities to insure the development of fruit buds. Well-developed leaves are necessary for the production of well-developed fruit buds, and it is a matter of



Fig. 8.—Same tree in winter—before and after pruning. The dense habit of growth of this variety undoubtedly delays fruiting very considerably. Light must reach the area within the dotted line before fruit buds can be expected to develop. Trees of this type should not be headed back more than is absolutely necessary in order to start the head properly. These trees will be referred to next week, in connection with summer pruning.

common observation that the development of leaves depends very largely upon light conditions.

Where high winds prevail, it is sometimes found necessary to prune in such a way that the growth of the tree may be directed towards the wind, instead of away from it. If this matter is disregarded, trees become unsymmetrical in shape, and considerable areas of bearing surface may be lost.

In Victoria, Australia, the demonstration-orchard idea is being vigorously worked on a new principle. The fact that numbers of varieties of valuable fruit trees refuse to bear good crops in certain localities or situations; or that they bear irregularly; and, also, that many fruit trees do not carry the crops that their size and age demand they should carry, has led fruit-growers and experts to consider that the whole question of the stock and stock management should be reopened. In these orchards, not only will apple trees on Northern Spy and Majetin stocks be planted, but trees will be worked on as many kinds of stock as may be obtained. Already, in the nursery, the usual dwarfing stocks, the French Paradise, and Cole's Blight-proof Paradise, are planted out for testing, as well as stocks from England, Spain, and Japan.

THE FARM BULLETIN.

Our Scottish Letter.

THE GLASGOW STALLION SHOW.

This must of necessity be a horse letter. The week is that of the Glasgow Stallion Show, and so much was crowded into the one day that many books might be written concerning it. The judges were somewhat numerous, because the purposes for which Clydesdale stallions were being looked for were numerous. The opinions of the judges were almost as varied as their numbers, and in the end of the day we enjoyed the rare spectacle of seeing the Cawdor Cup, almost the supreme honor of the show, awarded to a horse which was only third in his classes, and these positions meant the decisions of five judges. Nothing like this has ever happened before, and the most remarkable fact connected with it is that the final award was generally conceded to be the right one. But in view of such things, is there not room for some codification of opinion as to the points of Clydesdale horses? The tyro who wished to learn something at the Glasgow Show could only have been bewildered, and the student who attempted to improve his knowledge must have wondered what had happened to his monitors.

To let the uninitiated understand the position we will explain. Two sets of judges (three each) are appointed to select a horse over three years old, and a horse rising three years old, to travel in the Glasgow district during season 1911. These judges must be directors of the society, and, if possible, probable users of the horses. This year these two benches were composed as follows: For the older horse—Messrs. Robert Hamilton, High Motherwell, Hamilton; John McAlister, Ardyne, Toward; and J. Cairns, Abercrombie, St. Monance, Fife. For the younger horse—Messrs. John Hastie, Eddlewood, Hamilton; Alexander Buchanan, Garscadden Mains, Bearsden; and Arthur Lang, West Kilbride, Kilmacollm. The horses chosen by these benches, out of respective lots of 23, were John Pollock's Montrave Viceroy 14278, rising five years old, and Wm. Renwick's Blackstone 15152, a black horse, rising three years old. Both are thick draft horses, of the lorry type, with good middlepieces, as well as the faultless feet and legs which are essential in a high-class Clydesdale. Both horses are out of mares by Baron's Pride 9122, and Montrave Viceroy has the unique distinction of claiming Cawdor Cup champions for both his sire and dam. This is conclusive proof that prize animals are not consistently disappointing as breeders. On the contrary, the history of modern Clydesdales proves that so far as they are concerned this theory no longer holds. Hiawatha 10067 is sire of Montrave Viceroy, and Marmion 11429 is sire of Blackstone. The reserves placed by these benches of judges were in the older class: (1) A. M. Simpson's High Merit 14677, a horse with marvellous action and very showy; and (2) Mr. Taylor's stylish horse, Sir Winston 14867, beautifully moulded, but a little hampered in his action. In the younger class: (1) Perfection, a roan horse, by Baronson 10981, and a good mover, with plenty of strength and substance; and (2) Mr. Marshall's Macaroon 15936, a stylish, quality bay horse, of the fashionable type, got by Baron Burgie 13345. This horse in the end of the day became Cawdor-cup champion. But of this anon.

These decisions came under review in what are called the open classes. These include all the horses entered to compete for the Glasgow district premiums, and any others that may be entered for ordinary class prizes. In the aged class four additional were entered, and the judges were Messrs. Robert Murdoch, Hallside, Newton, and William Spittal, Kenmuir, Tollcrops. These gentlemen did not seriously upset what the bench of three had done, although having one or two additional horses to deal with there were modifications in the results. Their awards were: 1, Montrave Viceroy; 2, Mr. Taylor's Sir Dighton 13760, which would have made a popular first; 3, the same owner's Sir Winston; 4, Mr. Simpson's High Merit; 5, Mr. Kilpatrick's Baron Belmont 13973; 6, Mr. Todd's Marcellus A. 15310; 7, Mr. Marshall's Royal Review 16036. It was in the three-year-old class that the upheaval took place. The open class contained ten more horses than the confined, and, of course, these had to be taken into the reckoning. But the two judges, Messrs. James Fleming, Frioeh Mains, Ambroath, and A. B. Matthews, Newton Stewart, did more than this; they overturned the previous decisions in a spirited wholesale fashion, as the following results show: They placed Wm. Dunlop's celebrated Dunure Footprint 15203, the champion of last year, first, and Mr. Taylor's Sir Rudolph 16086, a greatly-improved, handsome, dark-brown horse, which won several prizes last year, second. These had not been before the other judges. In third place they put Mr. Marshall's Macaroon; 4, Mr. Kilpatrick's Craigie Dorando 15186; 5, Mr. Johnston's Montrave Imperial, which the three judges did not include in their first four; 6, Mr. Pollock's Lord Archie 15285, and 7, Mr. Renwick's Rubio 15381, to both of which the

same remark applies, and they placed Blackstone, which the three had put first, eighth, and Perfection, which they had put second, ninth.

There were also classes for two-year-old and yearling colts. These were judged by Messrs. James Weir, Sandilands, Lanark, and Richard Fleming, Bent, Strathaven. In the former class there were 18 entries, and in the latter eleven. The winners in both classes were owned by



Fig. 9.—Mature Spy tree, badly in need of pruning—too many small branches. Can only be properly pruned by working on the outside of a tree from a ladder, using hand clippers and light hand saw. The area within the line is entirely unproductive, all the small branches having died for lack of sunlight. In northern districts trees of this type should be opened up gradually, as there is serious danger of sunscald occurring on the exposed sides of the large branches. In southern districts this tree should get a severe thinning out, and no injury would be likely to follow.

Wm. Dunlop, Dunure Mains, who thus won three first prizes, and all with sons of Baron of Buchlyvie 11263. The first-prize two-year-old is Dunure Index 15809, own brother to Dunure Footprint, and the first-prize yearling The Dunure.

There are two champion trophies at the show: the 50-gs. Cawdor Cup, which is open to registered horses of all ages, which have passed a veterinary examination, and the 100-gs. Brydon Challenge Shield, which is open to horses rising three years old and over, which have passed a

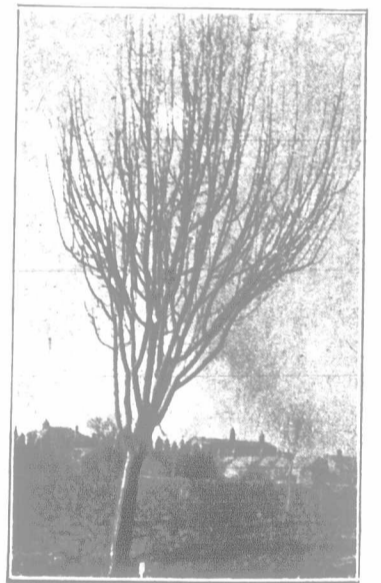


Fig. 10.—Upright habit, typical of many varieties of pears. This tree could be headed very low; in fact, it has no real need of a trunk. Branches should be reduced in number, and directed outward.

veterinary examination. All horses competing for the Cawdor Cup must be "vetted" before they compete; in the case of the Brydon Shield, a horse may compete which has not been "vetted," but he cannot win until he has passed as sound. No horse can win either trophy twice. Dunure Footprint, therefore, did not compete for the Cawdor Cup, which he won last year, and Montrave Viceroy did not compete for the Brydon Shield, which he won last year. Two new benches of judges awarded these trophies. The bench for the Cawdor Cup consisted of Messrs. James Weir, Sandilands, Lanark; J. Ernest Kerr, of Harviestown, Dollar, and Robert Murdoch, Hallside, Newton. The animals which came before them were Montrave Viceroy, The Dunure, Dunure Index, Sir Rudolph, Macaroon, and High Merit. This was practically a new class. One of the judges, Mr. Kerr, had never seen any of the horses before; Mr. Weir had only seen the two younger horses, and Mr. Murdoch had seen Montrave Viceroy and High Merit only. There were, therefore, possibilities of change in previous form, especially as neither of the five who had judged the three-year-old classes was on the bench. The

result was the placing of the supreme honor on Macaroon, with Montrave Viceroy reserve. After this came on the competition for the Brydon Challenge Shield. The bench this time consisted of Messrs. Cairns, McAlister and Fleming. Before them appeared the three-year-olds, Dunure Footprint, Sir Rudolph and Macaroon. Neither of the three had judged these horses before, and, therefore, it was again a new class. They placed Dunure Favorite first, Macaroon second, and Sir Rudolph third. As a cart horse of weight and substance, Sir Rudolph is the best type among the younger horses shown on Wednesday. He has improved more than any of the others since last year.

Clydesdale matters have occupied attention to the exclusion of almost everything else this week. The Clydesdale Horse Society had a most successful annual meeting on February 7th. The Society is in a most flourishing condition. The membership at the close of 1910 was 1,854, the capital stood at £7,235, and during that year the export trade reached 1,531 head. No such record of exports has ever before been made by a British breed. For 1911 the trade has opened well. Horses have already been exported to Russia, and between 60 and 70 head have been exported to Canada. Mr. Taber sailed with a fine lot a fortnight ago for Condie, Sask., and Mr. Curry, Medicine Hat, Alta., had also a large shipment of quite superior animals. Canada has been a good friend to the Clydesdale, and the Clydesdale Horse Society has, during the past year, invested its surplus funds in Dominion stock. The prosperity of the Dominion is cordially rejoiced in by the breeders of Clydesdales, who have every reason to thank Canada for what she has done for the breed. Our politicians have been discussing the recent commercial treaty which the Dominion has made with her big neighbor south of the lakes. I suspect Canada knows her own business best, and can be trusted to look after herself even in a deal with Uncle Sam. This kind of thing does not interest me, but I could wish that the whole world would be content to wage warfare in commerce and goodwill, and cease building Dreadnoughts and other engines wherewith to destroy one another.

"SCOTLAND YET."

The Seed-improvers' Meeting.

The annual convention of the Canadian Seed-growers' Association has passed into history. It is expected that a considerable aftermath will result, as the papers presented and the discussions which followed were not only interesting, but instructive.

The meeting, as usual, was held in rooms of the Seed Branch, Ottawa, and Dr. Robertson, its President, occupied the chair. In opening the convention, he remarked that the Association did not represent so much of a cash value as that it had awakened a great interest in agriculture and agricultural methods. Three great factors which contributed to this was the soil, management and good seed. In this country agriculture was greatly favored by climatic conditions, in that the rainfalls were regular and reliable, comparatively speaking, and the soil conserved much of its fertility by being frozen for considerable periods of the year. Knowledge in the management of the soil was important. Quality in seeds was indicated by their vigor of germination and growth and general adaptability. He thought the association was an effective agency for disseminating the best agricultural principles, and this in turn affected the quality of life, which this year was the Doctor's slogan, and around which all his observations revolved. He believes that the "quality of life" in plants, as in animals, can be improved. He rejoiced to know that the association's methods meant bigger and better crops.

The report of the Board of Directors was presented by E. D. Eddy, who, during the absence of L. H. Newman at Svalof, Sweden, acted as Secretary-Treasurer this summer. The sixth annual report was taken as read. Reference was made to a transaction in seed grain, by which 1,000 bushels of Banner oats, grown from registered seed on P. E. Island, was sold to farmers of Quebec at their annual Provincial Seed Fair, Quebec City, at a loss to the association of about \$125.00. The directors recommended that this privilege be extended to other Provinces. It endorsed the publication of a text-book on oats, for use in the Quebec schools, under the direction of Mr. Gigault, Deputy Commissioner of Agriculture, Quebec, last year, which was prepared by Messrs. Gibson, of the Normal School, and Newman, the Secretary-Treasurer of the association. It further recommended that an appendix to the general report be published on cereals, for the use of schools all over the Dominion. It was further recommended that the thanks of the association be extended to Dr. Nilsson, of Sweden, for the courtesy given to the Secretary-Treasurer, Mr. Newman, during his stay at Svalof.

From the chair committees were struck as follows:—Resolutions, Messrs. Klinck, Wheaton and Mooney; nominations, Messrs. Gigault, Moore and Macoun; and publication, Messrs. Eddy, Newman and Wheaton.

The report of the Acting Secretary, Mr. Eddy, showed that last year some 212 members had operated with about 424 crops, an average of two per member. Many of the members failed to send in complete reports; in fact, more than 50%. A large number of the potato men were among those who seemed to misunderstand the association's regulations, and failed to give complete reports. About 25 names were submitted to be received as members of the association this year. On the whole, the report was optimistic, and

tion exhibit at Amherst this year, in conjunction with the Winter Fair.

J. C. Coté, reporting for Quebec, said that as evidence of the value in selection, a number of farmers who had given up the work were re-enlisting, as they saw a marked difference in the results from the use of their selected seed and commercial seed. The field-crop competitions were growing in number and interest as well. Several societies were buying for their members some of the seed oats brought by the association from Prince Edward Island for sowing on their fields, which will be entered in the field-crop competitions this year.

Mr. Raynor said that he had inspected this year all the plots but one or two in Ontario, which meant that about 60 members were visited, and 110 plots inspected. He said some of the members were becoming very enthusiastic over the work, as they were getting results both in crops and ready sales at remunerative prices. One member had turned down \$400 worth of orders. He had sold one customer 100 bushels of fall wheat for seed this year at an advance over market prices, and this sale was based on a previous small sale to the same man, who found that the seed having selection behind it produced much better than his own seed. Another member had 4,000 bushels of Siberian oats to sell. In the past he had sold all he could grow and make into good seed oats for \$1.00 per bushel. He had found markets not only in Ontario and Quebec, but Scotland, Maine, Ohio and Michigan. It was also noted that, through the carelessness of another member in allowing barley to get in his Banner oat crop to multiply, he had lost the sale of 1,400 bushels this year for seed at \$1.00 per bushel, and would have to take feed prices now for what he sold. He had injured his reputation too to some extent, by selling some of this seed a year ago or more for \$1.00 per bushel which contained considerable quantities of barley. The idea was advanced that more enthusiasm should be evidenced, not only by members of the association, but by those who were promoting the extension of its work. An example was cited of how Prof. Moore, of the Wisconsin Experimental Station, was enabling many of the young farmers of that State to make anywhere from \$300 to \$2,000 a year growing some pure strains of corn, barley, oats, etc., he has originated at the Experimental Station there. The Canadian Seed-growers' Association exhibits at the Guelph Winter Fair were more numerous and of better quality than ever before. At the conference of members during the fair, some very useful and practical hints were obtained on seed improvement.

J. H. Reid, District Representative for Saskatchewan and Manitoba, sent in his report, which was encouraging, and emphasized one very important point, and that was, that this year of test out there had demonstrated the greater vitality of selected seed over ordinary seed, and even good crops were obtained in the one case where there were comparative failures in others. He spoke of the success of the seed fairs and field-crop competitions. Many of the prizewinning fields and lots of seed exhibited at the seed fairs may be traced to selected seed as its origin. In the discussion which followed, Mr. Briggs, of the Steele-Briggs Co., advanced the idea that a man had to be something of a mechanic to operate a fanning mill properly, and on the proper use of it depended much of the success of the members in their work, as well as in selection. Mr. Mooney, who had been a miller in Quebec before he went West, emphasized the use of a fanning-mill selection, and said he could get better results from a power mill. It was elicited from him that he was selling carloads of seed wheat now at \$1.50 per bushel more readily than he sold wagon loads a few years ago at \$1.25 per bushel.

The nominating committee reported and recommended that Dr. Robertson be President again; Prof. C. A. Zavitz, First Vice-President; Mr. Gigault, Second Vice-President; Mr. Mooney, Third Vice-President. For Board of Directors, Messrs. Zavitz, Gigault, Mooney, Clark, Wheaton, Klinck, Innes, Bracken, Harcourt, and Thomas Waugh. The report was adopted. This board has power to select as many more directors.

At the evening meeting, held in the Normal School Assembly Hall, there wasn't a large gathering, but two interesting addresses, from the Hon. Sydney Fisher and the President, were listened to. Hon. Mr. Fisher spoke in the place of Prof. C. C. James, who was detained through unavoidable circumstances. The other part of the programme consisted of two papers, by L. H. Newman, on his observations at Svalof on plant breeding, and the methods used for multiplying improved seed and disseminating it. Dr. Malte, of the Seed Branch staff, gave a paper on the improvement of fodder plants by selection. These papers and the discussions will be dealt with later. Suffice it to say they were not only interesting, but instructive. T. G. RAYNOR.

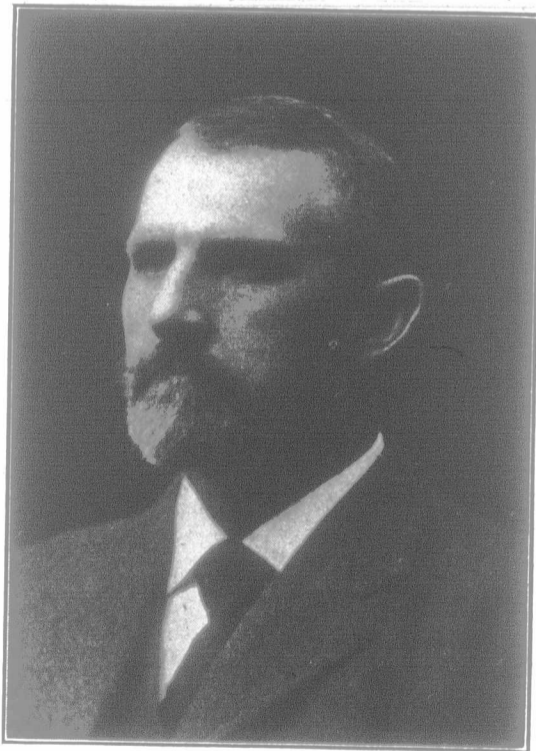
The C.P.R. directors have declared a dividend at the rate of 10 per cent. per annum on the common stock for the quarter ending December 31st, 1910.



J. H. Williams, Fletcher, Ont.
President Ontario Corn-growers' Association.

showed that much progress had been made during the year. The Treasurer's part showed that something over \$6,000.00 had been placed at the disposal of the association, and that about \$1,100 was left to close the year with on March 31st. This would, it was believed, be ample to defray all the expenses up to that time.

S. J. Moore, District Representative for the Maritime Provinces, then gave a summary of his work for the season. He had personally visited all but two of the operating members, and found



John McKee, Norwich, Ont.
President Canadian Ayrshire Breeders' Association.

them doing good work. He had not solicited every farmer to become a member, as he thought in the association membership quality should count. The chief object after all was for the members to produce good seed, and plenty of it. The field-crop competition work was extending. Arrangements were being made for competitions in every county in Nova Scotia this year. They had a very fine Canadian Seed-growers' Associa-

Reciprocity.

Editor "The Farmer's Advocate":

The constant vigilance on behalf of the farmer, and genuine interest in his well-being, are in unmistakable evidence, as found in the editorials of "The Farmer's Advocate."

A week or so ago, your readers' attention was drawn to the folly of "Selling the Birthright" away from the land, which showed the lack of business judgment on the part of some Quebec farmers, to the advantage of the United States farmers.

On April 30th, 1905, "The Farmer's Advocate" advised an "Export tax on the farmer's raw material," the following quotation being taken from the editorial: "It is universally agreed that, of all forms of fiscal protection, export tax on raw material is the best." This had direct reference to the exporting of ashes to the extent of \$117,326.00 during 1903 to the United States. With regard to the shipping of bran and other feed by-products, the editorial said: "Is it not time the farmer had a schedule framed in his favor? And what better move is there than an export tax on fertility and feeding stuffs?" Again, on the subject of "Tariff Revision and the Farmer," the following: "Farmers, so far as we are aware, are not desirous of increased duties on the commodities they produce, their interest being confined chiefly to opposing the imposition of increased duties on articles they use." It will be readily seen that your warnings were timely, and the wisdom of your suggestions cannot be gainsaid, for which the farmer owes your paper much.

But, when the tariff flood-gates are raised, will not only our bran and other feed by-products, as well as the raw material, be rushed over to the United States mills and factories? Is there no danger that the splendid and enviable position of the Canadian farmer may be injured?

The farmers of Ontario have been coming to their own. They are well pleased with the present state of things, and they have their ear to the ground, and are wondering whether it will continue. Twenty years ago our surplus horses found a market in Dakota, but to-day the best market Ontario has ever known is found in our own land, the Western Provinces. Easily three times the price is being paid now as twenty years ago. What a pity if the Montana mustang or United States ranch horse would displace even a portion of our heritage. The hog market to-day is very satisfactory; the price paid for butter, eggs, poultry, etc., for the last few years has been highly remunerative. I noticed a shipment of eggs from Chicago caused a drop in Montreal market lately.

In conclusion, a word with regard to cattle: A splendid home market has been built up in Canada during the past few years, and the amount of export cattle has become relatively small. The Old Country is the market for all the surplus cattle of America; those of Canada and the United States find a competing market there. If we can rely on quotations, the States steer commands a cent more than his Canadian competitor. Then, if those same steers held their competing market in Chicago, the Canadian steer would still be one cent lower, plus expense of delivering at Chicago, making the present Toronto market a little better for the Canadian than the present Chicago market. I have questioned a great many farmers, and I have not met one single individual in favor of the proposed reciprocity compact.

Huron Co., Ont.

M. LOCKHART.

[There are certainly grounds for commending export duties on raw materials when finished products are barred by import duties from their natural markets. But, seeing that the export duties on raw materials have not been imposed, and are not soon likely to be, we cannot but welcome an agreement that will throw open the lucrative markets of the United States to Canadian agriculture. To object to the agreement because it did not provide for export duties on ashes and bran, would be like refusing to trade a cat for a steer. We are aware that some of our readers conscientiously oppose the reciprocity pact, and we respect their convictions, but we believe the great majority, who say little, are delighted with the agreement, and only hope it will pass, while many present opponents would be converted by a few years' trial.—Editor.]

Manitoba Experimental Farm Superintendent.

Jas. Murray, B. S. A., formerly of the Seed Branch, Department of Agriculture, Ottawa, but for the past four years Superintendent of the Experimental Farm at Brandon, Man., has resigned that position to undertake the management of a 64,000-acre farming proposition west of Medicine Hat, for an English company. W. C. McKillican, B. S. A., representative of the Seed Branch at Calgary, has been appointed as his successor. Mr. Killican, who is a Glengarry farm-boy, graduated from the Ontario Agricultural College in 1905.

Packers and Reciprocity.

The meat packers of Ontario and Quebec are opposed to reciprocity. In a memorial to the Government, which was agreed upon by the pork-packers' deputation at Ottawa, recently, they state the case as it appears to them.

They draw attention to the large sums of money invested in packing-houses, which have a capacity greatly exceeding the aggregate supply of hogs, and are deeply concerned as to the effect upon these investments of any change in tariff relations at present. The export, and also the domestic trade, in cured pork products, has increased greatly, and a continuance of this trade, they believe to be vital to both packer and farmer in Ontario and Quebec. Under reciprocity, they claim they would certainly lose the Western market for pork.

They point out that prices for hogs in Canada, while less variable than in the United States markets, have, on the average, been higher. Under reciprocity, however, when a period of prices in the United States, higher than the export basis warranted should prevail, Canadian hogs would be marketed in Buffalo and Detroit, and the packing-houses for the time closed. As the continuance of our export bacon trade depends upon a regular weekly output, interference with this would mean, in time, practical extinction of the packers' business. In such case, prices of hogs here would be governed solely by the average lower prices of the United States, and farmers, discouraged, would go out of the business of hog-raising.

The memorial ends with a denial of the impression that commonly prevails, that Canadian packers have combined to hold down the price of hogs and raise that of the cured product sold in this country.

By way of rider, it is sufficient to add that the proposed reciprocity bargain still leaves the packers a protection of 1½ cents a pound—surely sufficient margin to guard against the trade disturbances they fear.

Ontario Milk Act.

The Ontario Milk Act, embodying recommendations of the Ontario Milk Commission, relating to questions of municipal milk supply, has been introduced into the Ontario Legislature by Hon. Jas. S. Duff, Minister of Agriculture. By it, the council of every municipality is authorized to pass by-laws regulating milk produced for sale within such municipality, as to

(a) The care of cows producing milk for sale for domestic consumption.

(b) The cleanliness, ventilation and sanitary conditions of the places in which cows are kept or milked, or in which milk is stored.

(c) The water supplied to cows.

(d) The care, cleansing and type of all utensils used in handling milk, whether by producers, carriers or vendors.

(e) The proper care, storage, transportation and distribution of milk by producers, carriers or vendors.

(f) The making of bacteriological tests as a guide to the wholesomeness of milk offered for sale.

(g) Such other matters regarding the production, care, transportation or sale of milk as the municipal council may consider necessary, such regulations to be approved in writing by the Minister of Agriculture.

Councils are authorized to enact by-laws regulating the granting of licenses to producers and vendors; and sale without license in municipalities where by-laws are in force is forbidden. The two subsections of clause 4, fixing standards of composition, seem rather conflicting, as subsection one, taken alone, would appear to forbid the sale of buttermilk or skim milk, while subsection two seems ambiguously to provide for the sale of such products. Whole milk sold for human consumption must contain 12 per cent. solids, of which 3 per cent. must be butter-fat. Municipal councils are empowered to appoint inspectors with broad power to inspect premises of licensed vendors, and prohibit the sale of milk which in their judgment is produced or handled contrary to the provisions of the act or any regulations thereunder.

Clause 6 prohibits the sale of milk from any cow which, upon physical examination by a certified veterinarian, shall be declared to be suffering from tuberculosis of the udder or milk glands, or whose milk, upon bacteriological or microscopical analysis is shown to contain tubercle bacilli, or which is known to be suffering from splenic fever or anthrax, or any other general or local disease which is liable to render milk from such a cow a menace to the public health. In case of doubt, the milk from a suspected cow must not be sold until a permit has been granted by the municipal Board of Health. No person suffering from or exposed to diphtheria, scarlet fever, typhoid fever, erysipelas, small pox, anthrax, or any infectious skin disease, shall assist in production, handling or vending of milk. The council of every municipality is authorized to establish and maintain, or assist in the establishment and maintenance of, milk depots, in order to furnish a special supply

of milk for infants. A standard is prescribed for certified milk, also for pasteurization, and provision is made for fines of from one to fifty dollars for violation of any provisions or regulations under the act.

Regarding certified milk, it is provided that no milk shall be sold as certified until a certificate setting forth that the necessary conditions have been complied with is obtained from time to time from the Medical Health Officer, or from an incorporated society of medical practitioners.

Want More Reciprocity.

The second annual meeting of the Canadian Council of Agriculture was held at Regina February 10th, representatives from the Grain-growers' Associations of the three Western Provinces being present. Among resolutions adopted were the following:

That we acknowledge the forward step of the Federal Government in proposing to appoint an elevator commission, but affirm that Government operation is necessary.

That the Government be asked to establish a meat-chilling and export system, with abattoirs, under Government control.

That the Council, while regretting that the reciprocity arrangements did not provide for further relief from the taxation on consumers levied by the customs duties, expresses its opinion that free trade in farm products would be very beneficial to the farmers of Canada, and would strongly urge the Parliament of Canada to ratify the agreement, and would continue to urge Parliament at this session to extend the British preference 50 per cent., and also that agricultural implements be placed on the free list.

Officers elected were: Pres., Jas. Bower; Vice-Pres., R. C. Henders; Sec., E. C. Drury.

Saskatchewan Grain-growers.

The membership of the Saskatchewan Grain-growers' Association doubled in the year 1910. There are upwards of 700 life members, who have paid the ten-dollar fee required; and when, to the large sum thus paid in, is added the general membership funds, it will be seen that the Association is strong financially. At the annual convention, held early this month, the main subject of discussion was the measure introduced into the Provincial Legislature by Premier Scott, called "An Act to Incorporate the Grain-growers' Elevator Company, of Saskatchewan." For some such measure the grain-growers have been agitating for four or five years. This act provides that farmers' elevators may be established at any shipping point in the Province where stock equal to the cost of the elevator is subscribed, of which 15 per cent. must be paid up, and where the said stock-holders represent a proportion of not less than 2,000 acres for each 10,000 bushels capacity of the elevator asked for. That done, the Government will loan to the local company 85 per cent. of the cost of the elevator, to be secured by mortgage on the elevator, and repayable in twenty annual installments. The directors of the elevator company, who will manage the concern, will be elected by the shareholders, and will have power to acquire or build elevators where deemed advisable, and may deal in grain, as well as handle it.

Better-farming Special.

PLACES AND DATES.

List of places to be visited on the Michigan Central Lines by Agricultural Demonstration and Instruction Train. The train will reach each place at the hour indicated, and instruction will begin at once, lasting from an hour and a half to two hours at each place.

Feb. 28th.—Essex, 8.30; Comber, 10.30; Leamington, 1.00; Fletcher, 3.30.

March 1st.—Charing Cross, 8.30; Ridgetown, 10.35; Rodney, 1.00; Dutton, 3.00.

March 2nd.—Muncey, 8.30; Melbourne, 10.25; Walker's, 1.00; Alvinston, 3.00.

March 3rd.—Inwood, 8.30; Oil Springs, 10.35; Petrolia, 1.00; Brigden, 3.10.

March 7th.—Kingsmill, 8.30; Springfield, 10.25; Brownsville, 1.00; Tillsonburg, 3.00.

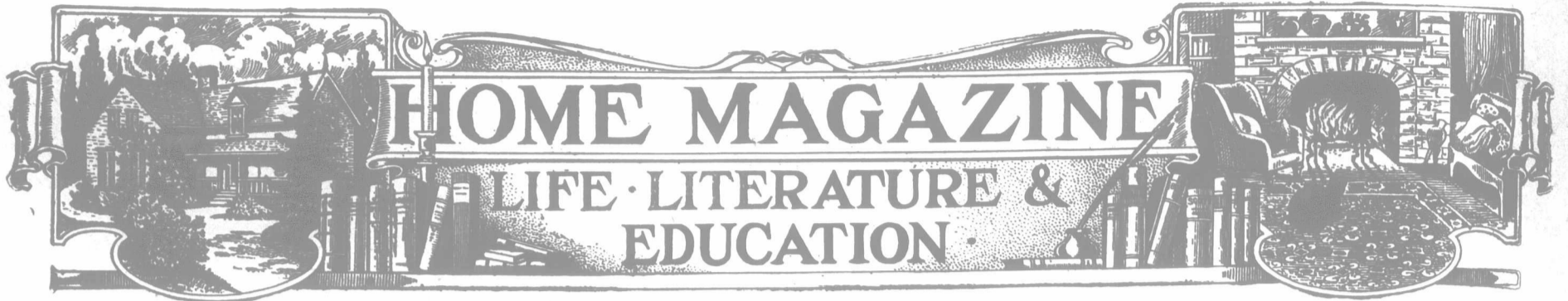
March 8th.—Hawtre, 8.30; Wyndham, 10.25; Waterford, 1.00; Villa Nova, 3.00.

March 9th.—Hagersville, 8.30; Cayuga, 10.25; Canfield, 1.00; Attercliffe, 3.00.

March 10th.—Perry, 8.30; Welland, 10.25; St. David's, 1.00; Niagara-on-the-Lake, 3.00.

Grange organization work is being pushed with considerable success. At a meeting held for that purpose in Wellington County, Ont., with about 25 farmers in attendance, a resolution expressing "approval of the Government re freer trade relations with the United States" was passed.

A bill has been introduced in the Ontario Legislature by Mr. Eilber, amending the act respecting traction engines on highways, to the effect that no traction engine shall enter upon or cross a bridge drawing behind it any tender, separator, machinery or vehicle.



Gleanings From Eminent Writers.

A Daring Deed.

From "Life on the Mississippi," by Mark Twain.

"Next morning I felt pretty rusty and low-spirited. We went blooming along, taking a good many chances, for we were anxious to 'get out of the river' (as getting 'out to Cairo was called) before night should overtake us. But Mr. Bixby's partner, the other pilot, presently grounded the boat, and we lost so much time in getting her off that it was plain that darkness would overtake us a long way above the mouth. This was a great misfortune, especially to certain of our visiting pilots, whose boats would have to wait for their return, no matter how long that might be. It sobered the pilot-house talk a good deal. Coming up-stream pilots did not mind low water or any kind of darkness; nothing stopped them but fog. But down-stream work was different; a boat was too nearly helpless, with a stiff current pushing behind her; so it was not customary to run down-stream at night in low water.

"There seemed to be one small hope, however: if we could get through the intricate and dangerous Hat Island crossing before night, we could venture the rest, for we would have plainer sailing and better water. But it would be insanity to attempt Hat Island at night. So there was a deal of looking at watches all the rest of the day, and a constant ciphering upon the speed we were making; Hat Island was the eternal subject; sometimes hope was high, and sometimes we were delayed in a bad crossing, and down it went again. For hours all hands lay under the burden of this suppressed excitement; it was even communicated to me, and I got to feeling so solicitous about Hat Island, and under such an awful pressure of responsibility, that I wished I might have five minutes on shore to draw a good, full, relieving breath, and start all over again. We were standing no regular watches. Each of our pilots ran such portions of the river as he had run when coming up-stream, because of his greater familiarity with it; but both remained in the pilot-house constantly.

"An hour before sunset, Mr. Bixby took the wheel and Mr. W— stepped aside. For the next thirty minutes every man held his watch in his hand and was restless, silent and uneasy. At last somebody said, with a doleful sigh:

"Well, yonder's Hat Island—and we can't make it."

"All the watches closed with a snap, everybody sighed and muttered something about its being 'too bad, too bad—oh, if we could only have got here half an hour sooner!' and the place was thick with the atmosphere of disappointment. Some started to go out, but loitered, hearing no bell-tap to land. The sun dipped behind the horizon, the boat went on. Inquiring looks passed from one guest to another; and one who had his hand on the doorknob and had turned it, waited, then presently took away his hand and let the knob turn back again. We bore steadily down the bend. More looks were exchanged, and nods of surprised admiration—but no words. Insensibly the men drew together behind Mr. Bixby, as the sky darkened and one or two dim stars came out. The dead silence and sense of waiting became oppressive. Mr. Bixby pulled

the cord, and two deep, mellow notes from the big bell floated off on the night. Then a pause, and one more note was struck. The watchman's voice followed, from the hurricane deck—

"'Labboard lead, there! Starboard lead!'

"The cries of the leadsmen began to rise out of the distance, and were gruffly repeated by the word passers on the hurricane deck.

"'M-a-r-k three! . . . M-a-r-k three! . . . Quarter-less three! . . . Half twain! . . . Quarter twain! . . . M-a-r-k twain! . . . Quarter-less—'

"Mr. Bixby pulled two bell-ropes, and was answered by faint jinglings far below in the engine room, and our speed slackened. The steam began to whistle through the gauge-cocks. The cries of the leadsmen went on—and it is a weird sound, always, in the night. Every pilot in the lot was watching now, with fixed eyes, and talking under his breath. Nobody was calm and easy but Mr. Bixby. He would put his wheel down and stand on a spoke, and as the steamer swung into her (to me) utterly invisible marks—for we seemed to be in the midst of a wide and gloomy sea—he would meet and fasten her there. Out of the murmur of half-audible talk, one caught a coherent sentence now and then—such as—

"'There; she's over the first reef all right!'

"'After a pause another subdued voice—

"'Her stern's coming down just exactly right, by George!'

"'Now she's in the marks; over she goes!'

"'Somebody else muttered—

"'Oh, it was done beautiful—beautiful!'

"Now the engines were stopped altogether, and we drifted with the current. Not that I could see the boat drift, for I could not, the stars being all gone by this time. This drifting was the dimmest work; it held one's heart still. Presently I discovered a blacker gloom than that which surrounded us. It was the head of the island. We were closing right down upon it. We entered its deeper shadow, and so imminent seemed the peril that I was likely to suffocate; and I had the strongest impulse to do something, anything, to save the vessel. But still Mr. Bixby stood by his wheel, silent, intent as a cat, and all the pilots stood shoulder to shoulder at his back.

"'She'll not make it!' somebody whispered.

"The water grew shoaler and shoaler, by the leadsmen's cries, till it was down to—

"'Eight-and-a-half! . . . E-i-g-h-t feet! . . . E-i-g-h-t feet! . . . Seven-and—'

"Mr. Bixby said warningly through his speaking tube to the engineer—

"'Stand by, now!'

"'Aye-aye, sir!'

"'Seven-and-a-half! Seven feet! Six-and—'

"We touched bottom! Instantly Mr. Bixby set a lot of bells ringing, shouted through the tube, 'Now let her have it—every ounce you've got!' Then to his partner, 'Put her hard down! Snatch her! Snatch her!' The boat rasped and ground her way through the sand, hung upon the apex of disaster a single tremendous instant, and then over she went! And such a shout as went up at Mr. Bixby's back never loosened the roof of a pilot-house before!

"There was no more trouble after that. Mr. Bixby was a hero that night; and it was some little time, too, before his exploit ceased to be talked about by river men.

"Fully to realize the marvellous precision required in laying the great steamer in her marks in that murky waste of water, one should know that not only must she pick her intricate way through snags and blind reefs, and then shave the head of the island so closely as to brush the overhanging foliage with her stern, but at one place she must pass almost within arm's reach of a sunken and invisible wreck that would snatch the hull timbers from under her if she should strike it, and destroy a quarter of a million dollars' worth of steamboat and cargo in five minutes, and maybe a hundred and fifty human lives into the bargain.

"The last remark I heard that night was a compliment to Mr. Bixby, uttered in soliloquy and with unction by one of our guests. He said:—

"'By the Shadow of Death, but he's a lightning pilot!'

Mark Twain's Account of His First Lecture.

From John Cunden Hatten's biography of the humorist.

At length the time came for Mark's return (from the Sandwich Islands) to San Francisco. He had spent several months in the islands in "luxurious vagrancy," to use his own expression; and his task as a correspondent of the Sacramento Union had been accomplished. The voyage back occupied nearly five weeks, and when he at length reached Frisco, the future before him seemed just about as blank and as uncertain as it was in those old mining days. He tells us himself that he landed "without means and without employment"; but it was not long before an idea occurred to him: he would try a lecture. He would describe what he had seen in various places, and he would scatter a few jokes through his discourse and make it go off well. Having written out the lecture, he next submitted it to friends; but, of course, like true advisers, who wish to be on the safe side, they unanimously shook their heads. As he was unknown, they were quite sure nobody would go to hear him; and then he had never spoken in public, and for that reason was bound to come to grief. This Job's comfort made Mark very disconsolate, and nearly knocked the whole scheme on the head. However, a friendly editor was at hand, one of those joyous souls with a big spirit. He slapped the would-be lecturer on the back, and told him to "go ahead." To give Twain's own account:—

"Take the largest house in the town," said the editor, "and charge a dollar a ticket."

"The audacity of the proposition was charming; it seemed fraught with practical, worldly wisdom, however. The proprietor of the several theatres endorsed the advice, and said I might have his handsome new opera house at half price—fifty dollars. In sheer desperation I took it—on credit, for sufficient reasons. In three days I did a hundred and fifty dollars' worth of printing and advertising, and was the most distressed and frightened creature on the Pacific Coast. I could not sleep—who could, under such circumstances? For other people there was facetiousness in the last line of my posters, but to me it was very

plaintive, with a pang when I wrote it—

'DOORS OPEN AT 7½; THE TROUBLE WILL BEGIN AT 8.'

"That line has done good service since. Showmen have borrowed it frequently. I have even seen it appended to a newspaper advertisement reminding school pupils in vacation what time next term would begin. As those three days of suspense dragged by, I grew more and more unhappy. I had sold two hundred tickets among my personal friends, but I feared they might not come. My lecture, which had seemed 'humorous' to me at first, grew steadily more and more dreary, till not a vestige of fun seemed left; and I grieved that I could not bring a coffin on the stage and turn the thing into a funeral. I was so panic-stricken at last, that I went to three old friends, giants in stature, cordial by nature, and stormy-voiced, and said:

"'This thing is going to be a failure; the jokes in it are so dim that nobody will ever see them; I would like to have you sit in the parquette, and help me through.'

"They said they would. Then I went to the wife of a popular citizen, and said that if she was willing to do me a very great kindness, I would be glad if she and her husband would sit prominently in the left-hand stage-box, where the whole house could see them. I explained that I should need help, and would turn toward her and smile, as a signal, when I had been delivered of an obscure joke,—and then," I added, "don't wait to investigate, but respond!"

"She promised. Down the street I met a man I never had seen before. He had been drinking, and was beaming with smiles and good-nature. He said:

"'My name's Sawyer. You don't know me, but that doesn't matter. I haven't a cent, but if you know how bad I wanted to laugh, you'd give me a ticket. Come now, what do you say?'

"'Is your laugh hung on a hair-trigger?—that is, is it critical, or can you get it off easy?'

"My drawing infirmity of speech so affected him that he laughed a specimen or two that struck me as being about the article I wanted, and I gave him a ticket, and appointed him to sit in the second circle, in the center, and be responsible for that division of the house. I gave him minute instructions about how to detect indistinct jokes, and then went away and left him chuckling placidly over the novelty of the idea.

"I ate nothing on the last of the three eventful days—I only suffered. I had advertised that on this third day the box-office would be opened for the sale of reserved seats. I crept down to the theatre at four in the afternoon to see if any sales had been made. The ticket-seller was gone, the box-office was locked up. I had to swallow suddenly, or my heart would have got out. 'No sales,' I said to myself; 'I might have known it.' I thought of suicide, pretended illness, flight. I thought of these things in earnest, for I was very miserable and scared. But, of course, I had to drive them away, and prepare to meet my fate. I could not wait for half-past seven—I wanted to face the horror, and end it—the feeling of many a man doomed to hang, no doubt. I went down back streets at six o'clock and entered the theatre by the back door.

tonic. Keep the teeth scrupulously clean, and occasionally scrub them with peroxide to make them white. If the gums have a tendency to shrink, rub them with listerine every day. For bad breath, take charcoal tablets. Brittle fingernails will become soft if rubbed with cold cream night and morning.

The Express to Sleep-town.

I know a little traveller
Who every single night,
Starts on a long, long journey,
That lasts till broad daylight.

Her ticket reads "Sleep-town Express,"
Stamped "Papa's good-night kiss,"
And when she pays him with a hug,
He says, "I thank you, miss."

Just take the berth marked Dreamyland,
You mount it by the stairs;
Make haste, because the train should start,
Soon as you've said your prayers.

Remember, too, on this express,
You tightly close your eyes,
And no one reaches Sleepy-town
Who talks, or laughs, or cries.

So when the sandman engineer,
His engine bell has rung,
The passenger for Sleepy-town
Must surely hold her tongue.

Be ready, then, to jump aboard,
Kiss mother at the gate,
It's after half-past seven and
The train is due at eight.

News of the Week.

Miss Sylvia Pankhurst is lecturing in Canada.

Relations between Russia and China are strained, owing to China's alleged violation of the St. Petersburg Treaty of 1881.

The famine area in China, in which thousands have died during the past few weeks, consists of a territory 300 miles long and 150 broad.

It was stated last week by Dr. Johnston, of Montreal, that Quebec has eleven per cent. more of its municipalities and corporations under local option this year than Ontario.

A large deputation from Northern Ontario last week petitioned the Provincial Government for a railway to connect Charlton, Elk Lake and Gowganda.

Russia is planning to form direct communication between the Black Sea and the Baltic by connecting and deepening the waterways, particularly the Duna and Dnieper.

An Italian inventor, Cerebotani, has reduced the apparatus necessary to receive wire messages to a size so small that it may be carried in a small case the size of those used for opera glasses.

Petitions to the Provincial Government of Ontario, asking for the removal of the three-fifths clause from the local-option law, were last Thursday turned summarily down by the Premier, Sir James Whitney.

A conspiracy among cotton speculators, to infect areas of cotton fields in Georgia and the Carolinas with boll weevil, and so raise prices by making cotton scarce, is alleged to have been discovered recently.

Dr. David Boyle, Provincial Archaeologist, to whom is indebted the foundation of the Archaeological Museum, Toronto, one of the finest on the continent, died in that city last week, at the age of seventy. He was the author of "Notes on Primitive Man in Ontario," "The History of Scarboro," and many archaeological reports and articles.

"The Farmer's Advocate" Fashions. The Beaver Circle.

[All children in third and fourth books, also those who have left school, or are in High School, between the ages of 11 and 15, inclusive, will write for Senior Beavers. Kindly state book at school, or age, if you have left school, in each letter sent to the Beaver Circle.]



6392 House Gown
or Wrapper. 34
to 44 bust.
Straight or pointed yoke.

Results of Competition.

The Battle of Waterloo essays have not all been examined yet. In the preceding competition the prizes went as follows:—

"A School Concert"—Olive Cullen.
"A Snowshoeing Trip"—Alvaretta Killough.

"A Skating Trip"—Jack Long.
"Have animals different dispositions as people have?"—William Hodgson.

An extra prize was given to Mervin Osburn, who wrote a very good composition indeed, although but nine years of age.

Honor Roll:—Evelyn Morgan, Amicus, Leonard Henderson, Jessie Swanton, Vera Lang, Hannah Long, Dora Cords, Laura Carroll, Marjorie Fraser, Annie Price, Viola Devitt, Percy Archer, Winna Harper, Country Laddie, Leonard Henderson, Abbie, Lizzie Fitzsimmons, Harold Guest, Winifred Colwell, Lorene Freeborne, Elsie Campbell, Gordon Kennedy, Harry Stephenson, Carl Nichols, Oswald Archer, William Truman, Irene Denham, Charles Patterson, Hazel Muir, Helen Brown, Emily Tucker, Clare Harding, Stella Spence, Leonard Black.

If space can be found a few of the honor-roll compositions will be published at some future time.

A Snowshoeing Trip.

It was a fine, bright afternoon in January that we had planned for our snowshoeing trip. The sun shone brightly, making the snow sparkle like a thousand diamonds, and the sparrows were twittering gaily.

After dinner my friends who were to accompany me on the trip arrived, all bright and ready for fun. They said that we could not have had a nicer day for our trip. We took some sandwiches and cakes in a basket for our lunch, as we thought we would become hungry before our tramp was concluded.

Our party consisted of four girls, counting myself; each girl had a pair of strong snowshoes fastened to her feet. We had gone only a little piece, when one of the girls, looking back at our tracks, said, laughing, "Oh! girls, look at our funny tracks!" Truly they were comical.

We were now going through open fields, and as we tramped along we noticed that, perched on weeds, that were sticking out of the snow, were small brown birds with little red feathers, edged with a green shading, on their heads; the wing feathers were tipped with white, and the tail had two whole white feathers in it. We examined a few of the weeds, and found that these tiny winter friends were busy picking out the seeds from the few remaining weeds that showed through the snow.

We saw quite a number of these shy little things on our way. One of the girls volunteered to name them, "Winter Canary," because they chirped like a canary, and when made to fly, flew zig-zagging through the air, the same as a canary, and you see they stay here all winter, hence their name.

After a little while we came across an old brush pile, and saw by the numerous tracks and tunnels that this was a rabbit's home. I directed one of the girls to shake some of the brush, on the opposite side, while the rest of us got ready to catch whatever showed itself. We were watching the tunnels for fear the prisoner would escape that way, when one of the girls screamed, and following her glance we saw a small cottontail speeding away towards the tall, dark woods that loomed up ahead of us. We looked at each other for a minute, in half-shame I might say, for letting this little animal get away from us, and then all joined in a hearty laugh. Suddenly we took it into our minds to follow the little creature to the woods, and see if there were any adventures for us to come across.

It was a magnificent woods, with its tall, stately pines, and vase-shaped elms. At one end of the bush, pines, hemlocks and cedars reigned supreme. It was

here that we were going; we knew that the black squirrels lived here, and we were all anxious to catch a glimpse of them. We were walking along as quietly as possible, when from somewhere not far ahead of us we heard something making a noise very like a blackbird. We went a little further and peeped around a large pine-tree trunk, and saw sitting about ten feet off the ground a beautiful, fat, black squirrel. He was singing to himself I expect, or else he was happy about something. Oh! what a lovely picture he made, with his big bushy tail spread out behind him, and his fat, sleek body, with his small black ears resting on his neck! Evidently he suspected nothing, when all of a sudden one of the girls snapped a twig, and he was gone. After being quiet for about five minutes we saw one of the limbs above the tree were near shaking, and then there was a sudden spring, and he alighted on a half-dead pine tree; he ran along the limb till he came to what we thought was his den, because he went into it and didn't come out again. We were thinking of going in search of more adventures, when some of us began to feel hungry, so the four of us sat down on a log, and still chattering like magpies, ate up our lunch.

When our lunch was over we started to get out of the bush. We noticed it was starting to get quite dark, and for fear of being lost in the darkness, we hurried home. We got to my home just as the darkness settled in for night.

My mother had prepared a good meal for us, and we did justice to it. After supper my brother hitched up the team of horses to the sleigh, and drove each girl to her respective home. Thus ended our happy and interesting snowshoeing trip. ALVARETTA MAY KILLOUGH Auburn, Ont. (Book IV.).

A Skating Trip.

Dear Puck and Beavers,—Of the four seasons of the year, I think winter is the best, for then we can go out skating and sleigh-riding. By the school there is a little creek, which runs through a field, and it has overflowed its banks, as we have had a thaw, and it is in fine condition for skating.

On Friday, when we were down skating at noon on the ice, we thought it would be hard to do without our daily pleasure, so we agreed to gather together at the school at 2 o'clock on the following afternoon.

The next morning I sharpened my hockey skates for the planned trip. At the time appointed we all arrived at our destination, bent on having a fine time.

First we thought we would have a hockey match, so we elected our captains. On each side there were seven boys, and the sides were as near equal as possible. At a quarter past two we started to play. At first our opponents had the best of the game, but by a careless shot on their side we got possession of the puck, and drove it right up to the goal, but the goalkeeper was too quick for us, and shot it out, and we raced back to defend our own goal. We got the puck again, and gave it to a forward, who gave it a shot, and before the goalkeeper could stop it it was in the goal. Their side got a goal in on us, though we tried our best to keep it out, and by the time the first half was up we were quits.

After five minutes' rest the game was renewed, and we played our best. We were a little rough, as we were both determined to win. They tried in vain to get a goal on us, but we were too quick for them. We had a scrimmage, and one of their fellows got a crack on the leg, but he still played. When we got the puck the forwards raced ahead of the rest, and put it in the goal. The other side now played for all they were worth, but now we just kept the puck out, thinking it was better to defend our own goal, now we were ahead of them, than to score another goal and leave our own unprotected. When time was up we stood one to none, and we yelled ourselves hoarse.

The rest of the time we spent skating around anywhere, and seeing who could do the cleverest tricks. We helped some of the younger ones to skate who were just learning. Five o'clock came very soon to us, and we went home well satisfied with our afternoon's fun, and ready for our supper. JACK LONG Brooklin, Ont. (Age 10, Class IV.).



6911 Plain Shirt Waist,
34 to 46 bust.



6891 Three or Four-Piece Skirt with Panels on Sides, 22 to 32 Waist. 6890 Child's Apron, 4, 6 and 8 years.

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

About a year ago a cook informed her Boston mistress that she was apt to leave at any time, as she was engaged to be married. The mistress was genuinely sorry, as the woman was a good cook, and steady. Time passed, however, without further word of leaving, though the happy man-to-be was a frequent caller in the kitchen. The other day the mistress was moved by curiosity to ask: "When are you to be married, Nora?" "Indade, an' it's niver at all, I'll be thinkin', mum," was the sad reply. "Really? What is the trouble?" "Tis this, mum. I won't marry Mike when he's drunk, an' when he's sober he won't marry me."

Children's Dresses

STYLISH little suits and dresses can be made for the children out of father's or mother's, or the older children's discarded garments by Dyeing them with



DYOLA
ONE DYE FOR ALL KINDS OF GOODS

and making them over.

Send for Sample Card and Story Booklet. The Johnson-Richardson Co., Limited, Montreal, Can. 8c

One Month's Free Trial Syracuse 'EASY' Washer

Washes clothes better than any other machine made, and with one-third the work. It pumps air and suds through the fibres of the clothes.

Washes a yard of carpeting from carpets to lace curtains. Galvanized rust-proof steel tub. Lasts a lifetime. Furnished with or without gas heater on rollers.

Try it 30 Days at Our Risk.

If you are not delighted with it, return it at our expense within 30 days. Write at once for free booklet of laundry recipes and trial order form. Agents wanted. **THE EASY WASHER CO., 51 and 55 Bruce Street, Toronto.**



Hereford Bulls

Two young bulls fit for service. Best of breeding and beef type. They are good ones. Also a few choice heifers and useful cows.

H. D. SMITH,
"Ingleside Farm," Hamilton, Ontario

The subject of conversation between the last two sportsmen left up at night in the smoking room after a hard day's shooting, was the wonderful scent of dogs.

"Mine is a marvel, Not long ago I went motoring, far from home. My pointer, although chained up, worked himself out of his collar and found me two hours afterward. What d'ye think of that?"

"I think you ought to have a bath."—
Buffalo News.

HERE IS A TALE WITH A MORAL

Little Edith Harris Cured of Dropsy by Dodd's Kidney Pills.

Two doctors said she would die, but to-day she is a healthy, happy girl.—Healthy Kidneys in children the guarantee of a happy, useful life.

McTaggart, Sask., Feb. 20.—(Special).—That no child is too young to have Kidney Disease, even in its worst form, and that Dodd's Kidney Pills will cure it in any form, has been abundantly proven in the case of little Edith Harris, of this place.

In May, 1903, this little girl, then two years old, was so swollen with Dropsy that her waist measure was increased from 18 inches to 34 inches. Two doctors said she must die. Dodd's Kidney Pills cured her, and to-day she is as merry and healthy a child as is to be found in the neighborhood.

In a recent interview, her father says: "Edith is better than ever. She has no return of dropsy since she was cured by Dodd's Kidney Pills, over seven years ago. She goes to school, and is healthy. I always keep Dodd's Kidney Pills in the house."

There's a moral for parents in this story. Many a child has grown up to a life of pain and suffering because its kidneys were neglected. A life of health and usefulness is assured if the Kidneys are kept in order with Dodd's Kidney Pills.

About Animals.

Dear Puck,—Have animals different dispositions as people have? I strongly answer in the affirmative.

Now, take for one instance, our old horse Bob. He could look which way he liked: pleasant or as cross as two sticks. When you went to harness him he always kicked up an awful row. He would throw around his head, jump, and do everything, down to switch his tail. When hitched up there was not a better horse to draw in the world. He would know when to go, and did not want to know when to stop. He puts me in mind of people who growl when asked to do anything, and work willingly when coaxed.

But take, for example, our horse Charlie. He is always pleasant-looking. When you are harnessing him he seems to enjoy it. When hitched up he will not do anything you want him to do. He will not go without a touch of the lash, and will always stop when told. This puts me in mind of people who are very happy when there is nothing to do, and sulky when there is.

Take, for instance, our cow Bess. She is a beauty. She always has a kind look in her eye, always waits patiently for her feed, is very quiet while being milked. When out she is very amiable toward the other cattle. She never used her horns except to defend herself. She puts me in the remembrance of an ideal person.

But take old Scot. She always had a wicked look in her eye, and was always hooking everybody to get the best feed. You were liable to go sprawling back under the other cow any time you were milking her. No amount of flogging could change her ideas. She puts me in mind of an obstinate person.

Now for the doggie side of it. We had a dog we called Sport. When you set him on the cattle you had to start to call him off as soon as you set him on, or he would nearly kill them. He would bite their heels till the blood ran down the floor. You just had to show him a stick or a rope to see him put his tail between his legs and make off for the bush. He put me in mind of a cowardly person.

We had a dog named Scottie. He was kind. He would not hurt the cattle for the world. You could hitch him to the sleigh or wagon. I used to pity every pack-pedlar who came into our place. He was death on them. He just made a race at them and proceeded to scare them if not called off. He was kindly toward children. He put me in mind of a person who always stood up for their loved ones.

Hoping to see this in print.
WILLIAM HODGSON
Granton, Ont. (Book IV., Age 15).

A School Concert.

Dear Puck and Beavers,—The school to which I belong is in Smith, in Peterboro County. As there are not many pupils who belong, it is difficult to prepare a good concert.

About one month before Christmas, our teacher told us we might have a concert, which would be open to the public. We were delighted, and, eager to make it a success, began to work at once.

Almost every child secured a recitation, while several learned songs, and some were to take part in dialogues and drills. We practiced quite often, and it looked as if we might have a good programme. It was decided to have the entertainment on the afternoon of the last day of school.

At last the great day came. The boys had secured a fine Christmas tree, and the forenoon was spent in hanging curtains, decorating the school and tree. Almost every child had brought some decoration, and when all these were put up the school looked very nice. Then, to our great surprise, the teacher produced candies for the whole school, which she had put in little tartan bags. These, when hung beside candy canes on the tree, made it very pretty.

Soon after dinner we could hear the sleigh-bells in the distance, and we knew that the people were beginning to arrive. When all were present, the teacher said we would begin the concert. The programme had been written on the blackboard, so we did not need a chairman.

There were a lot of good recitations, dialogues and drills, but none were so

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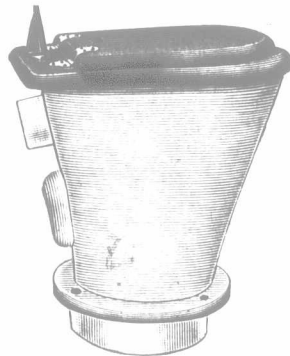
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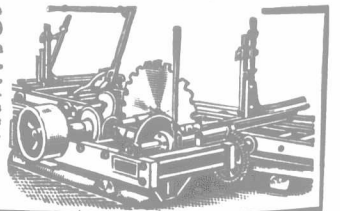
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Make most money because they do best work in quickest time with least power and smallest crews, owing to their simple construction and improved, patented devices. Portable and stationary. All sizes. Variable Friction Feed, Combined Ratchet Networks and Quick Reverser and other superior features. Free Catalog and Prices will interest you. Lists our complete line of wood working machinery.

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There's Money In Lumber

Do You Know Why The SHARPLES Dairy Tubular Cream Separator Is The Only One That Will Satisfy You ?

It is because Tubulars are the only modern cream separators. You cannot expect satisfaction unless you have a modern machine.

There are only two known ways of building cream separators—the old way and the modern way. We abandoned the old way over ten years ago, when we discovered and patented the modern way which is now used exclusively in our machines. Other manufacturers still use the old way. The law prevents them from imitating Tubulars.

The old way is wrong. This is clearly proved by the fact that separators built that way have too little skimming force and must have bowls filled with disks or other complicated, hard-to-wash, quick-to-wear parts. The new way is right. This is proved by the fact that Sharples Dairy Tubulars contain no disks or other contraptions, produce twice the skimming force, skim faster and twice as clean as others.

Tubular sales exceed most. If not all, others combined. Tubulars probably replace more common separators than any one maker of such machines sells.

Tubulars wear a lifetime. Guaranteed forever by the oldest separator concern on this continent. One of Canada's leading industries. You can own and use a Tubular for less than any other kind. If you do not know our local dealer, ask us his name and address. Write for catalogue No. 193.

THE SHARPLES SEPARATOR CO.
Toronto, Ont. Winnipeg, Man.



nice to the small children as the last one.

There was a large wheel covered with white cloth, to represent a clock face. In the cloth holes were cut, large enough for a child's face to be seen through. These holes were covered with paper, which had the numbers on them. At the side of the clock a little girl sat asleep in a chair, while a lullaby was being sung. This little girl was dreaming, and she wished that night would come quickly, so that Santa Claus would come. Just then a little fairy came in with a wand in her hand. She began to turn the hands of the clock around. As soon as the hand would come to a number a head would appear. When all the twelve holes were filled with funny faces, the clock looked very queer. Then Santa Claus came in, dressed in his fur coat and cap. He handed the presents to the eager little children who stood around. A kind neighbor had brought a phonograph, which he played while the presents were being given around.

The programme was now over, and the people started for home.

The concert had been a success, also an encouragement to the children, who that day had learned that good results always come from hard work.

OLIVE G. CULLEN
Lakefield, Ont. (Age 13, Class IV.)

"For 17 Years I Was Nearly Blind

Most of the Time in a Dark Room with a Bonnet Over My Face. At the End of a Month My Eyes Were What I Considered Well."—Mrs. Putnam.

(Free Book—Free Advice)

We show you in our new 80-page, cloth-bound, illustrated book, how to treat any eye trouble at home.

This book, with 125 illustrations, will tell you what doctors rarely tell their patients, but what you ought to know.



Some Interesting Games.

THE STORY OF KATE.

To play this game, each player must have paper and pencil. A time is set, say five minutes, and in that time each must try to write the most about Kate, bringing in as many words as possible that end in "cate," as locate, prevaricate, placate, advocate, etc. This is a good brainy game for the older girls and boys. Afterwards all the stories are read aloud by one of the players and judged.

A BLINDFOLD RACE.

Put straight rows of candies or buttons on the floor, at intervals of about a yard. Line the racers at one end of the room and let them take a look, then blindfold them and start them off. The game is to see who will have the most candies or buttons within the given time. For a change, this game may be played without blindfolding, the racers being compelled to hop instead. If anyone puts the other foot down he must start again from the beginning.

TWO GAMES FROM YOUTH'S COMPANION.

Here are two simple forms of entertainment, new to many persons in this country. The first is in the nature of a "stunt," and requires no special preparation.

An empty bottle is placed upon a small table, the cork being set loosely in the top of it, in such a way that the least touch will dislodge it. The members of the party are lined up some distance away, and with right arms extended horizontally, walk rapidly by the table on tiptoe, endeavoring as they pass to dislodge the cork by a snap of the finger. No one must stop or slow up as he reaches the table, nor may the bottle be touched or overturned.

The trick appears so simple that the surprise of the performers when they miss the cork and snap at the air, as they are almost sure to do on the first trials, never fails to excite merriment.

The second diversion is a guessing game, and requires a little more preparation. A dozen or more bottles are partially filled with different fluids, each having a distinctive odor. Coffee, tea, vinegar, lemonade, ginger ale, vanilla, almond, olive oil, tomato soup, chicken broth, and a perfume or two, are all suitable. There should also be a bottle containing plain water.

A number is pasted upon each bottle, and the guests are provided with cards containing corresponding numbers. If possible, a few drops of some anilin dye—black is best—should be put in each bottle. The dye does not affect the odor, and the uniformity of color will make accurate identification more difficult.

The bottles are placed on a table, and each person is invited to smell of the contents, and to write on his card the result of his investigations. No one is allowed to speak during the examination.

The guessing process, and afterward,

No matter how long you may have been afflicted, or how serious your case may be—whether cataracts, failing eyesight, optic nerve disease, sore or watery eyes, scums, or any other eye trouble, you are welcome to one of these valuable books and our advice free of charge.

Hundreds of men, women and children besides Mrs. Putnam have reported cures. Their pictures and reports will be found in the book.

We do not treat people who were born blind; where there is light, however, there is hope.

If you want this cloth-bound Eye Book free, write a description of your case, cut out the coupon below (or copy it), fill out the blank lines and mail to us to-day.

DR. OREN ONEAL,
305 North American Bldg.,
Chicago, Ill. :

I enclose letter explaining my symptoms. Please send me, absolutely free, your cloth-bound Eye Book, and advice about my case.

My trouble is.....

Name.....

Address.....

Planet Jr.

Scientific farming is the kind that pays; and Planet Jrs are scientific farming and gardening implements. They do the work of 3 to 6 men—do it better, and get bigger and better crops. They are backed by over 35 years' practical study of farm and garden needs. Every Planet Jr is fully guaranteed.

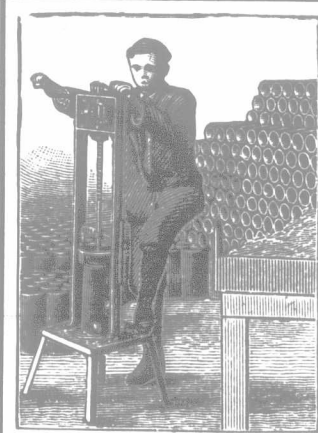
[New No. 10] Planet Jr Horse-Hoe, Cultivator and Hiller combines the most valuable features of the best one-horse cultivators and best horse-hoes. Small and light, yet strong and lasting.

[No. 35] Planet Jr Single-Wheel Disc-Hoe, Cultivator and Plow is made with the new Planet Jr pressed-steel frame that makes it more durable than ever. Has 3 adjustable discs on each side; new-idea pronged cultivator teeth, and plow attachment readily changed for depth.

Write for complete illustrated 1911 Planet Jr catalogue describing seeders, double and single wheel hoes, one and two horse implements—for every farm and garden need. *Free and postpaid.*

S L Allen & Co
Box 1108 Philadelphia Pa

WRITE FOR THE NAME OF OUR NEAREST AGENCY.



MAKE YOUR OWN TILE

One man can make 300 to 600 perfect tile a day with our

Farmers' Cement Tile Machine

At a cost of \$4 to \$6 per 1,000. CAN YOU AFFORD TO BE WITHOUT IT? The only farm tile machine that does not require hand tamping; the only farmers' machine operated by either hand or power. Machine makes 3, 4, 5 and 6 inch tile. Our Waterproof FLEXIBLE CASING holds tile in perfect shape till set. NO PALLET.

TEN DAYS' FREE TRIAL. If after 10 days' trial it does not meet with entire satisfaction, return at our expense. Write to-day for illustrated catalogue.

Farmers' Cement Tile Machine Co.,
WALKERVILLE, ONTARIO.

NORTHWEST FARM LANDS

Half a million acres of wild and improved lands near railway. All specially selected in the most fertile districts.

Special excursion in the spring to see these lands.

Write now for particulars as to prices and location.

STEWART & MATHEWS CO., LIMITED

A few good agents wanted.

Galt, Ontario.

Anything from a BERRY PLANT to a SHADE TREE is waiting your order



No better stock or value offered than at the old reliable CENTRAL NURSERIES. We ship direct to customer with satisfaction. Send for priced catalogue before placing your orders. It will pay. If you have not had good results from others, TRY OURS—31st YEAR.

The new hardy Hydrangea HILL of SNOW, a Beauty; the New Snow Queen Rose; Baby Rambler, in bloom all summer, by mail, 35c. each.

Apple, Pear, Plum, Cherry, Peach and Ornamental Trees, Roses, Shrubs, Seed Potatoes, etc.

A. G. HULL & SON,

St. Catharines, Ont.

A Thick Neck

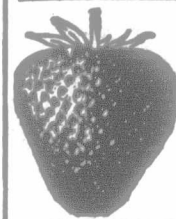
This is the name usually given to Goitre, a most uncomfortable, unsightly and dangerous condition. A few years ago we were asked to prepare our home treatment for Goitre, a trial having been so satisfactory in one case. Since that time our

GOITRE SURE CURE

has been a winner. Letters of gratitude from those who have used it received frequently. A young man recently said: "My collar is a size smaller in three weeks, and my health is better." Internal and external treatment. Price \$2, express paid.

SUPERFLUOUS HAIR, Moles, Etc., permanently removed by our reliable treatment—Electrolysis—which is given only at our offices here. Satisfaction assured. Booklet "F" mailed free.

Hiscott Dermatological Institute,
61 College St., Toronto. Estab. 1892



Strawberry Plants

40 leading varieties. Sold at reasonable prices. Catalogue and price list free. 100 plants sent postpaid to any address in Canada for \$1.00.

Downham's Strawberry Farm,
Strathroy, Ontario

Suffolk Hams

The method for curing these hams (used by the same family nearly 100 years), securing for them a world-wide reputation for unequalled excellence and flavor, will be sent with full directions for one dollar (\$1.00) on application to:

"Farmer," Cavendish, Suffolk.



BARRED ROCKS

EXCLUSIVELY.
CANADA'S CHAMPIONS.

FIVE-DOLLAR COCKERELS

Birds of all ages for sale.
Satisfaction guaranteed or money refunded.

JOHN PRINGLE, LONDON, ONTARIO.

ANCONAS, White Leghorns, Fertile Eggs. New circular free. Use my germ killer. Twenty-five cents, postpaid. Saves little chicks. Edmund O. Apps, Box 224, Vice-President International Ancona Club, Brantford, Ontario.

BUFF ORPINGTONS, Barred Rocks, White Wyandottes. Pure-bred, carefully mated, and bred to lay. Farm-raised, strong, vigorous stock. Eggs that hatch. Write for price card. "Ingleside Farm," Hamilton, Ontario.

BUFF ORPINGTONS—150 pure-bred cockerels and pullets, bred from exhibition stock; splendid breeders; prices reasonable; eggs in season; satisfaction guaranteed. Hugh A. Scott, Caledonia, Ontario.

BARRED Rock cockerels and hens; also one grand pen of Regal/White Wyandottes. Particulars free. W. W. Dods, Alton, Ont.

CHOICE BREEDING COCKERELS—Barred Rocks, Rose and Single Comb Black Minorcas. Great laying strain. Prizewinners. C. Day, Highgate, Ontario.

CHOICE COCKERELS—6 S.-C. Buff Leghorns and Buff Wyandotte birds for sale, \$2.00 each. W. R. McDonald, Petrolia, Ontario.

CHOICE COCKERELS, of Rhode Island Reds, R.-comb White P. Rocks, S.-comb Bantams, \$2 each. A. G. Mull & Son, St. Catharines.

EXCLUSIVE breeder of pure Barred Plymouth Rocks. First winners at Toronto for two years. Stock for sale. Leslie Kerns, Freeman, Ontario.

EGGS FOR HATCHING—Rhode Island Reds, Wyandottes, Dark Brahmans, Rocks, Leghorns. 15 eggs, \$1.00; 100 eggs, \$4.00. Rouen and Mammoth Pekin duck eggs, 13, \$1.00. Satisfaction guaranteed. Wade & Son, Sarnia, Ontario.

FOR SALE—Two pairs Pekin and Cayuga ducks, Rouen drake, pair White Holland turkeys, African gander; all Guelph and Ottawa winners. Black Cochins Bants, Barred Rock cockerels; Andalusian, Barred Rock and Rhode Island Red eggs. E. S. Baker, Springfield Farm, Guelph.

FOR SALE—Rose-comb Rhode Island Red cockerels; also Barred Rock cockerels, bred from the best prizewinners. E. D. Sherwood, Freeman, Ontario.

FOR SALE—Bronze Turkeys, won first, second toms; first, third hens, London Show. Also choice Partridge Wyandottes. R. G. Rose, Glanworth, Ontario.

FOR SALE—S.-C. Brown Leghorn cockerels; \$1.25 each. David A. Ashworth, Maple Grove, Ontario.

FORTY BARRED ROCK COCKERELS FOR SALE—From prize stock, one to three dollars. Write for egg record. Jas. Coker, Jerseyville, Ontario.

PRIZEWINNING Brown Leghorn cockerels. One pair Blue Andalusians; one pair White Rocks; one pair Silver Wyandottes. Arthur Master, Highgate, Ontario.

TEN large, vigorous Rhode Island Red cockerels (DeGraft strain), \$2.00 each. Satisfaction guaranteed. W. Gilbert, Kingston, Ont.

TOULOUSE GANDER FOR SALE AT ONCE. Three dollars and half. Robt. Stevens, Petrolia, Ontario.

WANTED—New-laid Eggs, Butter and Poultry. I guarantee the highest market prices. W. J. Falle, Prince Albert Ave., Westmount, Montreal, Que.

WHITE ROCK Cockerels, three dollars. Eggs from imported Black, Buff Orpingtons, five dollars; from White Rocks, headed by first-prize cock, Toronto, three dollars. Fifteen eggs. Fred A. Andrews, London, Canada.

WHITE ORPINGTONS—Greatest winter layers. Exhibited five birds, won five prizes, at Ottawa Winter Show. Illustrated mating and price list free. S. K. Burdin, Ottawa.

45 VARIETIES Standard-bred Fancy Poultry. Handsome 1911 catalogue free. S. A. Hummel, Box 23, Freeport, Ill.

\$6.41 A YEAR PER HEN—Our catalogue tells how it is done. Write for one. It's free. L. R. Guild, Reekwood, Ont.

SHOEMAKER'S BOOK on POULTRY

and Almanac for 1911 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c. C. C. SHOEMAKER, Box 920, Freeport, Ill.

the announcement of the actual contents of each bottle, will prove amusing. Usually the most laughter will be aroused by the various guesses regarding the contents of the bottle of water. If desirable, prizes may be given to the makers of the best and poorest lists.

Our Letter Box.

Dear Beaver Circle.—This story of mine is about an old horse of ours, who knew almost as much as a person. His mother would have nothing whatever to do with him, so he was raised on cow's milk, as we do our pet lambs nowadays.

When he was a colt he always was in mischief. If he saw anybody carrying two pails of milk he would know it was his chance to bite them, but it was for fun. One Sunday morning Boadie (for that was his name), when they had gone to church, opened the back door by lifting a latch, and he was found in a front bedroom. They had to have fasteners for every door, as he could open them from the inside or out. He would open the stable door and get to the meal, lift off the cover, and eat as much as he wanted.

A few minutes before dinner every day, when he was working, you would think he was listening, and as soon as the dinner bells began to ring he would stop and neigh, then when he was unhitched he would never walk, but always trot to the stable, just as a hungry person. The last few years he had a good time, and did not work much. He lived to be 26 years old, and no matter where he was put, he always liked the old orchard where he was brought up better than any other place on the farm.

ALEX. DERBY
Mosboro.
(Age 11, Book IV.)

Dear Puck and Beavers.—As I have been interested in your Circle for some time, I thought I would like to write again.

Here are some names for the Beavers' farms:—Woodside, Maple Land, Spruce Grove, Maple Grove, Willow Bend, Sunny Slope, Fair View, Balsam Hedge, Woodland.

I do not like winter as well as summer, although it is lots of fun to snowball and skate.

I will send you a few riddles:
I am in every one's way,
But no one I stop;
My four horns every day, in every way play,
And my head is nailed on at the top?
Ans.—A turnstile.

Black within and red without;
Four corners round about?
Ans.—A chimney.

Why is a magnificent house like a book of anecdotes?
Ans.—Because it is made up of good stories.

AN INTERESTED BEAVER.
Woodstock, Ont.

Beaver Circle Notes.
If Rufus Weber will write a longer letter he will see it in print.

Florence Baker's letter was written on both sides of the paper, which is against rules, as it is awkward for the printers. Be more careful next time, Florence, and likely you will see your letter "in print." A great many letters must be held over until the competitions are disposed of. Please be patient, Beavers.

My Brindle Bull Terrier.
My brindle bull-terrier, loving and wise,
With his little screw-tail and his wonderful eyes,
With his white little breast and his white little paws,
Which, alas! he mistakes very often for claws;
With his sad little gait as he comes from the fight,
When he feels that he hasn't done all that he might!
Oh, so fearless of man, yet afraid of a frog,
My near little, queer little, dear little dog!

He shivers and shivers and shakes with the cold;
He huddles and cuddles though three summers old,

Can You Beat This?

SEND us this ad., together with the special price mentioned below, and we will send you, PREPAID, a beautiful Guipure Lace Coat Collar, exactly like the above illustration; length 21 inches, width 4 inches. Your choice of ecru or ivory shade. Examine it carefully in your own home, and if you don't find it the best value you ever saw, and worth at least 35c., return it, and we will refund your money without question. Our special price, **19c.**

PAQUET'S

Spring Bargain Catalogue No. 28

is filled with bargains just as good as this one. We can't print them all in this space. Write for a copy of this catalogue to-day—it's FREE.

THE PAQUET COMPANY

LIMITED.
MAIL-ORDER DEPARTMENT,
QUEBEC, CANADA.

ONTARIO DEPARTMENT OF AGRICULTURE
Provincial Auction Sale of
Pure-bred Shorthorn Cattle
(MALES AND FEMALES)
Comprising 45 head, will be held in the Winter Fair Buildings, Guelph, on
WEDNESDAY, 1ST MARCH, 1911
Under the management of the Guelph Fat-stock Club. All stock inspected. Only good representatives offered. Many of the fashionable Scotch families will be represented. Freight on animals purchased by residents of Ontario and shipped to points in Ontario will be paid by the Department. For catalogues and further particulars apply to:
W. R. Elliott, President, J. M. Duff, Secretary, Guelph,
or **A. P. Westervelt,**
Live-stock Director, Parliament Buildings, Toronto.

\$15.00 and Upwards

We Give a Free Trial

of the DOMO CREAM SEPARATOR, which excels any other separator in the world. The DOMO SEPARATORS are of the highest quality, well built and durable. They are close skimmers, turn easy, handsomely finished, and guaranteed. Prices cut in two.

We gladly send a machine to you on free trial, FREIGHT PREPAID, and if you are not perfectly satisfied, return it to us at our expense. This liberal offer enables you to prove our statements, and that's what we mean. TEST IT AT OUR EXPENSE. We take ALL the risk. Can we offer anything more fair?

Write to-day for Circular "A," which gives full particulars of our machine, trial offer, a few of many testimonials received from users, prices and easy terms of payment. It's FREE.

DOMO SEPARATOR CO.

Brighton, Ont. St. Hyacinthe, Que.

And, forsaking the sunshine, endeavors
to rove
With his cold little worriments under
the stove!

At table his majesty, dying for meat,—
Yet never despising a lump that is
sweet,—
Sits close by my side with his head on
my knee
And steals every good resolution from
me!

How can I withhold from those wor-
shipping eyes
A small bit of something that stealthily
flies
Down under the table and into his mouth
As I tell my dear neighbor of life in the
South.

My near little, queer little, dear little
dog,
So fearless of man, yet afraid of a frog!
The nearest and queerest and dearest of
all;
The race that is loving and winning and
small;
The sweetest, most faithful, the truest
and best,
Dispenser of merriment, love, and un-
rest!
—Coletta Ryan.

"Taffy was a Welshman."

How many of you have sung the rhyme
about Taffy?

Taffy was a Welshman, Taffy was a thief,
Taffy came to my house and stole a
piece of beef;
I went to Taffy's house, Taffy wasn't at
home,
Taffy came to my house and stole a
mutton bone.

Well, here is the story of it, as told
in T. P.'s Weekly:

This is an old Riever's ballad, from
the Marches of Wales. The Welsh came
down, say, from the fastnesses of Rad-
nor Forest, and swept off the cattle. The
reprisal forces failed to find the robbers
in their mountain holds. Meanwhile the
Rievers were on the watch, and seeing
the homesteads deserted of their protect-
ors, swept down again, and carried off
the sheep. It is needless to say that
Taffy is a familiar form of St. David,
the patron Saint of Wales. The use of
his name, therefore, more or less fixes a
date antecedent to which the raids would
not have occurred.—F. G. M. P.

A. B. suggests that the lines refer to
the Tudor origin and public thefts of
Henry VIII., whose extravagances led
him to debase the national coinage,
causing general misery and want.

**The Garden of a Com-
muter's Wife.**

(By Mabel Osgood Wright.)

CHAPTER X.—Continued.

By the time I reached the end of
the path at the bars and turned to
go back, I began to realize the
blinding power of the snow, for
both the fall and the wind had
ceased; night seemed to be coming,
and I was almost obliged to grope
my way. In crossing the sun gar-
den, I walked into the dial post; in
turning aside from the apple tree, I
found myself under the rose arbor
on my way to the barn, instead of
near the house, so I continued on to
put Pat and the hounds into their
high quarters in the stable.

As I opened the door, half a dozen
juncos flew in after me, and bunched
half exhausted in the bottom of a
hay-rack. I called Bertie, and told
him to open one of the ventilating
windows in the hay-barn, on the side
away from the wind, and there was
also shelter for the birds under the
various sheds. Finally I struggled
back to the house, surprised to find
myself quite spent.

Martha Corkle was in a state of
ill-concealed alarm, which made her
head shake ominously, in spite of
pains-taking dignity.

"Mrs. Evan," she whispered, when
I went to the kitchen the more quick-
ly to get a needed cup of tea, "Mrs.
Evan, it's a mercy the 'ouse is well

PEDLAR NESTABLE
CORRUGATED
GALVANIZED **CULVERT**

**Saves Farmers' Money
Better Roads—Lowers Taxes**



THESE culverts of
mine are a great
thing for the farming
world. They not only
make good roads possi-
ble, but they serve the
farmer in many other
ways. And they are so
simply laid. They come
nested like this:



This compactness saves
freight and makes it
easy to handle them.
You put the sections
together like this:



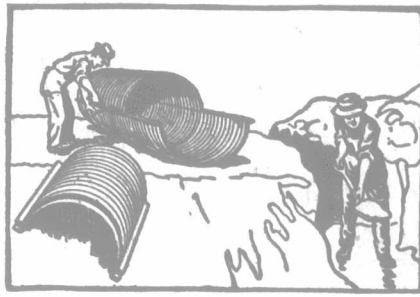
Then you clamp the
flanges together like
this:



And you've got a piping
that will outlast any-
thing of the kind there
is. Better get the book
and sample and study it.

G. H. Pedlar

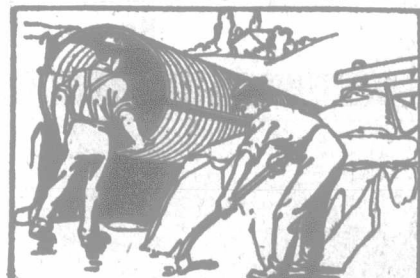
JUST give me the chance to prove to you
that my Culvert is so far ahead of any
other in everything that makes a culvert
good, that you won't be satisfied until
your township authorities have read my book
—sent free—and are also convinced of its
superiority. You will benefit through better
roads, lower taxes and prevention of washouts.
My Culvert actually costs less than even the
cheapest and most unreliable wooden culverts.
Outlasts and excels wood in durability and
reliability, and all other materials in economy,
strength and genuine utility. Write for my
Free Book and read the facts—then do what
you can to have Pedlar Culvert used in your
township



Pedlar Culvert is put to-
gether and in place in one-
third the time required for
any other culvert. No special
skill needed; no bolts, no
rivets. Easiest to install,
and by far the most economi-
cal and most durable.

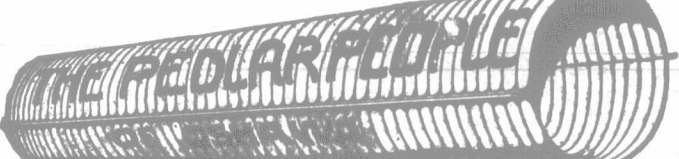
**Pedlar Nestable Culvert also has
A Score of Uses
On YOUR FARM**

Makes the best possible well curbing or
cistern lining, and keeps your water supply
pure. Makes it easier to water your stock.
Use Pedlar Culvert to drain any swampy spots
or for irrigation ditches and under-drains. Or
to instal a permanent sanitary sewage system.
Or to pipe water from springs or windmill
tanks. Get my book and read how it "fills the
bill" and saves your money.



**Ask For Free Book No. 20
And Sample Culvert**

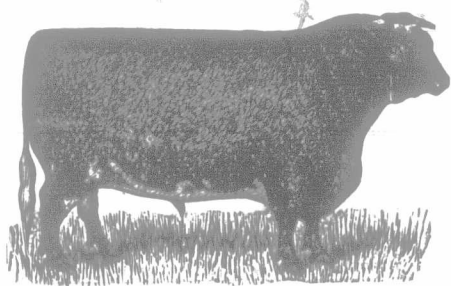
And give me your name and
address. A postal will do.



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HALIFAX 16 Prince St. ST. JOHN, N.B. 42-46 Prince William St.
QUEBEC 127 Rue du Port MONTREAL 321-3 Canal St.
OTTAWA 425 Sussex St. TORONTO 111-113 Bay St.
LONDON 86 King St. CHATHAM 200 King St. W.
PORT ARTHUR 45 Cumberland St. WINNIPEG 76 Lombard St.
REGINA 1901 Railway St. South CALGARY 1112 First St. W.
VANCOUVER 821 Powell St. VICTORIA 434 Kington St.
WE WANT AGENTS IN SOME LOCALITIES.
Write for details. Mention this paper.

**75 Dispersion Sale of the Entire Herd of Imp. and Home-bred 75
SCOTCH SHORTHORNS**

On FRIDAY, MARCH 10, 1911. Belonging to Richard Ward, Balsam, Ont.



Comprising cows, heifers and bulls.
A great many of the cows have
calves at foot. Those which have
not are bred and many forward in
calf to Imp. Brilliant Star = 60833 =
(91030). This bull, along with about
fifteen other young bulls of service-
able age, are included in the sale.
There are also a grand lot of young
heifers by Imp. Brilliant Star. Con-
veyances will meet the G. T. R.
trains, north and south, on morning
of sale at Myrtle, also C.P.R. train

stop on the farm, Glen Major a flag station. The sale will be held under
cover. A credit of eight months' on approved joint notes. Sale to commence
at 12 o'clock. Lunch at 11 o'clock. For catalogue apply to:

R. Ward, Balsam, Ont., or G.M. Forsyth, North Claremont, Ont.
Geo. Jackson, Port Perry; F. W. Silversides, Stouffville; Auctioneers.

Standard Wire Fence

**Here's the Fence
That is all Steel—**
Steel wires, steel locks, steel
posts. Standard Woven Wire
Fence is all No. 9 hard steel wire, well galvanized.
"The Tie That Binds" is hard, smooth steel that
holds uprights and running wires absolutely secure
without injury. Standard Patent Posts are 12 gauge steel, bent at
right angles, and so constructed that wires are held without staples.
Let us tell you a lot of other things about the Standard Wire Fence and our Metal Gates of Galvanized
Tubing. Our books are full of facts. Write for free copies and sample lock.
THE STANDARD WIRE FENCE CO. OF WOODSTOCK, LIMITED, Woodstock, Ont. and Brandon, Man. 18

**THE
Bay of Quinte
DISTRICT**

Is famous for its fertile farms
and up-to-date farmers. This
year they have grown a large
crop of clean, well-colored

RED CLOVER

which will comply with the
"Seed Control Act." I can
save you money, because I
buy from the grower and sell
direct to you. Also good
values in Alfalfa, Alsike,
Timothy and all small seeds.
Let me know your require-
ments, and you will receive
samples and prices by return
mail. **Special quotations
to farmers' clubs.**

JAMES HANLEY,
Seed Merchant,
Belleville, Ontario.

"What's the hardest thing about roller
skating when you're learning?" asked a
hesitating young man of the instructor at
a rink.
"The floor," answered the attendant.

Red Clover
Alfalfa Clover
Alsike
Mammoth
Timothy
Vegetable
Flower

SEED

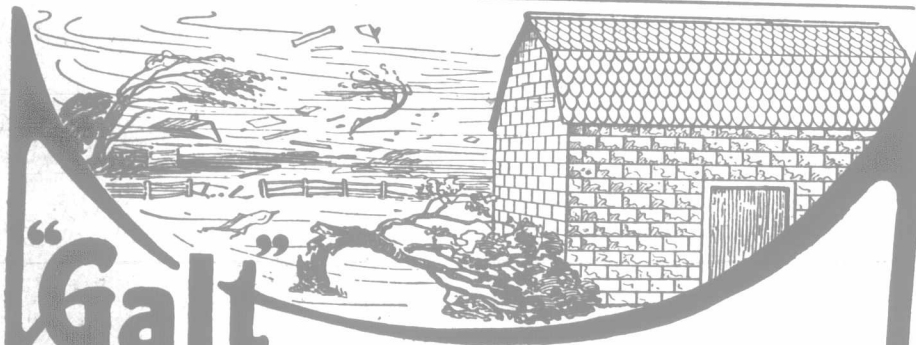
Barley
Oats
Corn
Wheat
Mangels
Beets
Turnips

If your plans for this year's seeding call for something good in any of the above, write us for prices, and in case of Clovers, Timothy and Grain we will be pleased to send you samples to examine. In this way you will receive as much satisfaction as a personal visit to our warehouse will give. This week's prices per bus. for our best brands of Clover and Timothy are (during February we pay freight in Ontario on orders of 200 lbs. or over of Clovers and Timothy): "Sun" Red Clover, \$9.50; "Gold" Alfalfa, \$13.50; "Ocean" Alsike, \$11.00; "Diamond" Timothy, \$7.00. These grade No. 1 Government Standard. Our present prices in 5-bus. lots or over for O. A. C. No. 21 Barley is \$1.00 per bus. Daubeney Oats, 90c. Imported Regenerated Banner Oats, \$1.25. Lincoln Oats, 85c. Regenerated Abundance, 80c. Bags for grain orders free. Bags for Clover and Timothy orders 25c. each. Our catalogue is free for the asking.

GEO. KEITH & SONS

Seed Merchants since 1866

124 King St. East, TORONTO, ONT.



"Galt" Shingles

The new "Galt" Steel Shingles and Sidings are the surest protection from the fiercest storms that rage—yes, even lightning storms.

They are made from the Best British Galvanized Steel Plates, which shed lightning like water from a duck's back.

No wind, rain or snow can penetrate the new Gale-proof, closed-end side-lock or the continuous interlocking and overlapping bottom joint. They are twice as securely nailed as any other—that's very important.

They are easily and quickly laid, and the Bold Gothic Tile pattern makes a very handsome roof.

They cost no more than ordinary metal shingles—why not have the "Galt Kind?" Our free Catalog "B-3" explains all about them.

THIS IS THE SHEET METAL AGE.

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

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

A Can of Paint FREE

We want to make you a present of a can of paint free. We want you to know the superior qualities of

Martin-Senour Paints

We want to show you how to use paints to preserve everything on your farm. Paint properly used, at the right time, is an insurance policy against rot and decay—it is a money-saver—not an expense. It is cheaper to paint than it is to repair, build or buy new. We are Pioneers of Pure Paints.

MARTIN-SENOUR PAINTS go farther, wear longer and look better than other paints. Now to prove it—cut out the coupon, present it to a Martin-Senour agent; he will give you absolutely free, a half pint can of Red School House Paint. If there is no agent near you, send us the coupon and we will see that you receive a can, and our Farmers' Book—How Paint Helps the Farmer get More Profit.

Write today
THE MARTIN-SENOUR CO., Limited
Montreal

This Coupon Gets the Can



COUPON

Present this coupon to any Martin-Senour Dealer, and receive free a half pint sample can of RED SCHOOL HOUSE PAINT.

To Dealer—You are authorized to honor this coupon when presented. THE MARTIN-SENOUR CO., Limited

victualled, and blankets and coals in plenty. The last time I saw a storm come up like this, I was but a girl, serving Mr. Evan's uncle in his shooting lodge in Scotland, to the which same place he had gone to keep Christmas.

"The snow came that deep that we were not dug out until Twelfth Night, and there were shepherds, sheep and cattle being turned up at times until spring, the same, of course, being stiffened corpses, the thought making me fearful for the doctor and Timothy Saunders."

I laughingly told her that, with the stout gray horses in a country of travelled roads, a few inches of snow meant no danger; nevertheless, I was relieved when, a little before six, father returned.

"I've known nothing like it except the great storm of '88," he said, stamping the snow from his shoes, while the whistling wind nearly drowned his voice, "and this time yesterday you were sitting out on the porch, Barbara, and I was driving without an overcoat."

The telephone rang, blessed nuisance! Evan was detained in town, but would arrive at nine; we were not to wait dinner, and the storm was not yet bad at that end of the line. This comforting message was the last word the telephone uttered for five days.

At a quarter to ten Evan came home, snow hanging to his face, bearding it white as Santa Claus. After a bit of supper, we all went to bed, feeling a strange sensation of suppressed excitement, for the wind was shrill as when keyed by a ship's rigging, in spite of the muffling snow that fell with a positive sifting sound. Bluff and Lark, who usually slept on the door-mats in the lower hall, insisted upon coming up stairs, whining and fidgeting until in self-defence we let them in, when Lark crawled behind the lounge, and Bluff stretched himself beside my bed, whence he arose at intervals to lick my hand or nose, as if in assurance of protection.

This morning there were none of the usual sounds of day. About these, however, the commuter troubles himself but little on Sunday. The dense silence was more disturbing than positive sound, and seemed to press upon the brain. I think the present experience has taught me an intense pity for the deaf, who, in the midst of moving objects, must perpetually feel this tenseness and pressure of silence.

Outside was a world of snow which was three feet deep on a level, and everywhere billowed into fanciful drifts. There were no paths, no fences; one unbroken sheet stretched from the front door, covering bank-wall, and road, and levelling them with the field beyond.

It was impossible to open the east door, so deeply was the snow heaped against it, and the dogs covered and refused to go out, even by the back way, where the wind had left a bare spot.

Bertie had not appeared, and Tim with difficulty fought his way in, bringing the milk pails, and has remained here ever since. It was of no use to attempt the breaking of paths while it was still snowing, and an effort to free even the back stoop was as foolish as the proverbial task of sweeping the wind off the roof.

Father tried to call up the hospital, but the telephone was useless. The lack of church bells told the plight of the village, and so we had a day of absolute and enforced rest in which to arrange and plant our indoor garden of books.

The one-time parlor across the hall from father's study and office had been developing (I suppose Aunt Lot would say degenerating) into a comfortable den for a month past.

The best chairs that for so many years had stood primly back against the wall were scattered about the room, their places taken by a continuous line of book-shelves of a height that left picture space above. The claw-footed mahogany table was drawn well into the bay and littered with books and magazines in a way

that must have surprised it. A pair of scroll-ended mahogany sofas faced each other on either side of the fireplace, improvising a sort of ingle nook, their antique and inhospitable haircloth hidden by the bright, harmonious colors of some Mexican rugs. The north window was Evan's lair; an open bookcase jutted out on either side to form an alcove, with a wide-topped desk between; while I had a somewhat similar nook by an odd, doorlike casement at one side of the fireplace. A great rug and a few big chairs made up the furniture, leaving plenty of room for "living, moving, and having our being." A woman educated by men soon learns the importance of having standing room within, as well as out of doors.

There are many things that make the account of the miracle of the loaves and fishes not only seem possible, but quite an everyday affair, and the unpacking and rearranging of books is one of them.

The plants in my book garden, like those of the hardy beds, were jumbled together, regardless of size, color, or season, and quite overflowed the space allotted them. Evan suggested that, as in the outdoor garden, when pressed for room, we should dispense with most of the annuals—the books of but a few months' bloom, which, having served to brighten a brief period, have no lasting qualities—and send them to the hospital, thus giving first place to the books of perennial delight and to the biennials—those volumes that one turns to at least every other year. To this I agreed, until I found that opinion plays a large part in the hardness of books, and that they cannot be as arbitrarily classified as flower seeds.

My little library was built up of three periods—childhood, girlhood, womanhood; or boyhood would have been a triter term for the first, as boy's books preponderated at this time. Strange, isn't it, that sex should be asserted in books at a time when the readers are the most sexless, and then quite disappear as the readers themselves develop! Books are written for girls and boys, "The Boy's Own Book," "The Girl's Toy-maker," but never "A Novel for a Woman," or "A History for a Man," appears.

The first period of reading stood by itself, and ranged from Grimm's and Laboulaye's "Fairy Tales," "The Wilds of Africa," "Tommy Try and What He Did in Science," "Robinson Crusoe," an expurgated Gulliver, "Alice's Adventures," and "Hiawatha," from which I made a play wholly my own, to certain famous histories and biographies that may be read from childhood to old age, each reading yielding new meaning, according to the development of the reader.

Girlhood began with Clarke's "Shakespeare's Heroines," Strickland's "Queens," "Ivanhoe," "The Pathfinder," and "Little Women"—a combination of the literary, martial, and domestic, that was much to my taste. Then for a long time history in all its branches, especially that of the Anglo-Saxon race, reigned supreme, and with it came folklore. In a single year, according to the dates written on the neat record book-plates father had given me, I became possessed of Brand's "Popular Antiquities," the convenient Bohn edition of the "Chronicles of Mathew of Westminster," "Florence of Worcester," "Roger de Hovenden," "Ingulph," and the "Venerable Bede," besides Plutarch's "Lives," and the ponderous volumes of Schoolcraft upon our own Indians, from whom I then fancied myself descended.

Natural history and the poetical side of nature came later. Figuiet's works and Emerson's "Trees and Shrubs of Massachusetts" hovered about my seventeenth birthday with a bevy of bird books. It had never before seemed any more necessary for me to locate the birds, with which I was wholly familiar and which were my field companions; and analyze them by means of books, than to

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Teacher is trying to get the word "migratory." She asks the class, "If a bird migrates, how should we describe its habit?"
"My gracious!" answers the child.

search the town records for statistics concerning my neighbors whose habits and daily lives were open to me. The next year I met Thoreau quite informally, though he had always been within easy reach, like the near neighbor upon whom it is so easy to call that we put it off, and Wilson Flagg went with me to the attic on rainy summer days in the guise of "Woods and Byways of New England," and its companion, "Birds and Seasons," while Burroughs and Hamilton Gibson were as a pair of rose-colored glasses through which I learned at once to differentiate and to beautify everyday things, though far back two books belonging to mother had set this door ajar. They were both Michelet's, "The Bird" and "The Ocean."

Then books on plants and gardening followed thick and fast, and I picked up a few inexpensive oddities at the book sales when I went with father, sometimes venturing to bid myself—the "Flora Historica" of Phillips, two quaint volumes on the Three Seasons of the British Parterre being one of the results of my prowess; while the first book that Evan gave me was the rare North American Sylva of Michaux and Nuttall, with colored plates.

As Evan began to sort and stack the books, I stood by in a state of increasing alarm as one favorite after another went to build up the pile of annuals. I saw the Rollo books and "The Wide, Wide World" depart without a sigh. I never cared for them except when I was rather feeble physically, as after whooping-cough or the mumps; but when "The Parent's Assistant" and Hooker's "Child's Book of Nature" followed, together with the "English Orphans," "Les Malheurs de Sophie," one of my early French books, "The Children's and the Schoolgirl's Garland" of Mrs. Kirkland, and "The Struggles and Triumphs of P. T. Barnum," a souvenir of a festive trip to the circus, I protested.

"Do you ever read these books?" quoth Evan, who was momentarily becoming aware that, according to the habit with book lovers, as far as the shelf-room was concerned, we were expecting to have more than a cat in her skin.

"Of course I haven't recently."
"Do you ever expect to again?"
"I'm not sure—that is, I may wish to. I used to like them, and I do now, though I can't tell why."
"I will give you an idea," said Evan, as he saw my expression. "Range them along the attic shelves and call them the garden of remembrance, where you may stray for memory's sake, just as we keep in an odd corner of the outdoor garden some old-time flowers whose use is gone, whose beauty is questionable, and yet the remembrances they bring entitle them to life."

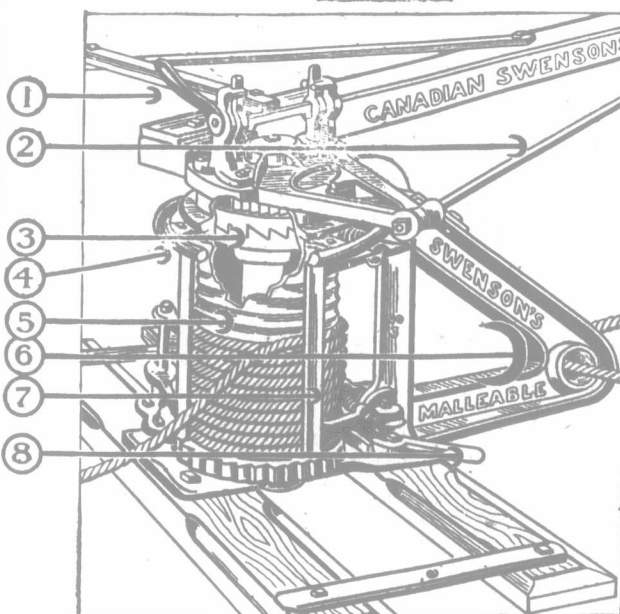
It was slow work, this arranging; for almost every volume had something to say or a reason to give why it should be planted in a particular nearby case. It was noon before we had more than made a beginning.

Then there was a temporary interruption, caused by the appearance of a man who lived far up the road. He was first seen coming zigzag along the stone fences, steadying himself with a pole. He disappeared twice in fifty yards from losing his footing and stepping into a drift, and when he finally reached the kitchen door he was exhausted, having been several hours in coming less than two miles. His quest was some milk for his baby, as, of course, the local pedler who usually supplied him had failed.

(To be continued.)

Of his Cambridge days a dignitary of the Church of England tells this story: He always wore a white tie, and when he got his fellowship, full of pride, he went to call upon the master of his college. He rang the bell, the door was opened, and he was about to present his card, when the footman, who had run his eye over him, said: "You're too late, young man. I got the place yesterday!"

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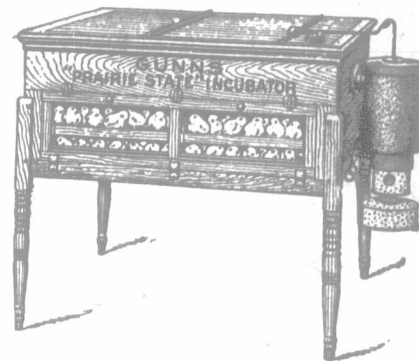
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QUESTIONS AND ANSWERS. Veterinary.

SORE NECK—SORE BACK—BLOOD OUT OF ORDER.

- Horse has had a sore neck since summer. Small pimples or boils form, discharge a little matter, and will not heal.
- Another horse has had a sore back for the same length of time. There is an open sore that exudes matter.
- What is good for a horse whose blood is out of order, and which is generally run down?

W. L. S.

Ans.—1. This is caused by pressure of the collar, and is very hard to heal without giving rest. If possible, give him rest, or work with a heavy breast collar. If the openings of the boils are deep, they should be cut down to the very bottom with a knife, and the diseased tissue carefully dissected out. If not deep, a caustic will destroy the tissue. Apply a little butter of antimony once daily with a feather for two or three days. Be sure that you get it to the bottom. Then, after using the knife or caustic to remove diseased tissue, dress three times daily with a lotion made of one ounce each of sulphate of zinc and acetate of lead, to a pint of water. If forced to use collar and hames, see that collar fits well and is kept clean.

2. This is caused by the back pad. Work without a back pad, and treat as for No. 1.

3. Have his teeth dressed. Give a purgative of 8 drams aloes and 2 drams ginger. Follow up with a tablespoonful of equal parts sulphate of iron, gentian, ginger and nux vomica, three times daily, and feed well and give daily exercise.

Miscellaneous.

TURNIPS AFTER TURNIPS—NO BUTTER FROM CREAM.

- Had fine crop of turnips last year; land, black, sandy loam. Would it be advisable to sow same piece of land this year with turnip seed for early shipping?
- Had some trouble with cream in churning this winter; cream would foam, a light, frothy appearance. Could get no butter. What would you attribute as the cause?

ANS.—1. Would not advise sowing turnips after turnips.

2. 1st, cows may have been milking for a long period, and have been fed on dry feed. Consequently, fat globules are small and hard. 2nd, cream is probably too thin; and 3rd, not warm enough; 4th, you may have a poor churn.

BUCKWHEAT FOR PASTURE.

I have a piece of low land that I cannot get on to work early enough for other grain, and I have been thinking about sowing it to buckwheat for pasture.

- Would you consider this a good idea, or vice versa? Your opinion would be appreciated. I need the grain for my hens next winter, and I also need the pasture.
- If you consider it wise to pasture, how thick would you sow it?
- When would you turn the cows on it?
- How long would three acres pasture five cows?
- Would the cows injure new seeding? I want to seed it down; can be sown about July 1st.
- Would you advise sowing anything else for pasture at that time, that grass seed can be sown with?
- Does seeding with buckwheat prove successful?

ANS.—1, 2, 3 and 4. The number of farmers who have used buckwheat as a forage crop is so limited that it is to be doubted whether it is of any worth for such a purpose. Better not try buckwheat for pasture, except for an experiment. Experience of readers on this question would be appreciated.

5. Cattle can be pastured without much harm on crop newly seeded, if ground is dry and firm.

6. Green oats make excellent pasture, and ought to be suitable. Prof. Zavitz's mixture of oats, sugar cane and clover, would probably meet your needs.

7. Several of our contributors claim to have had excellent success in seeding down with buckwheat.



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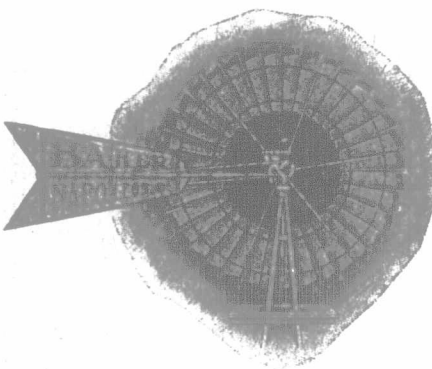
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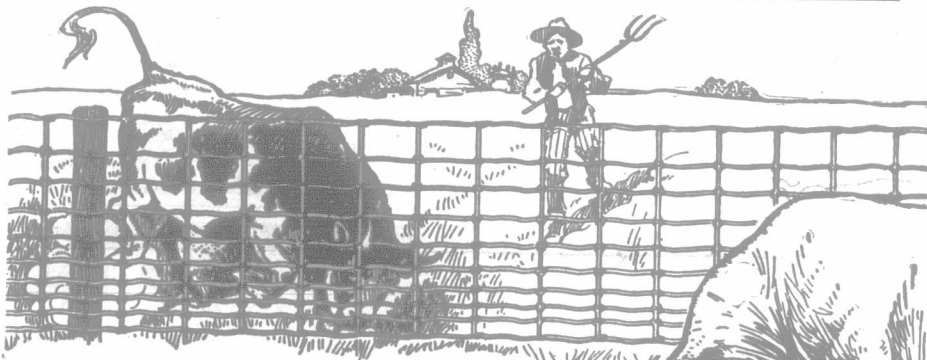
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Concerning the quality and galvanizing of your fence, I think it perfect. I have compared it with other makes and every person where I put up your fence is well pleased with it and will not have any other fence on the place. I was at a farmer's not long ago and he stated that he was going to have three hundred rods of it in the Spring. I put up ninety rods for his neighbor four years ago and there is no sign of rust or slackness yet. The wire in your fence is tempered so as to suit the cold and warm weather and I have never had to go back to tighten one rod of fence that I have put up yet. I could mention different makes of fence, from firms well known, that their fences have rusted badly inside of three years. The Peerless is the farmers' favorite around here. —P. FOGAL, Cedar Valley.

Wherever I have seen Peerless Fencing that was erected five years ago there was no sign of rust and it seems to be as good as the day I put it up and I know of other fences that have been up only two or three years that are very badly rusted. This I am prepared to prove to anyone who wishes to see the fence for themselves, as the fences are here for inspection. I am well pleased with the material that you have used in your fences. —O. M. PASTORIUS, Harrow.

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I have been comparing some of the Peerless Fencing that I put up the first year I sold fence and every wire is just as bright as ever, while some other makes put up about the same time have from one to three rusty horizontal wires running through it. I have always found the wire in Peerless Fencing first class. —EZRA FOX, Kingsville.

In regard to the durability of the Peerless Fence for the length of time it is up, I find on examination by myself and the parties I have put it up for, it surpasses any other wire fence for not rusting. Also the people I have dealt with give the Peerless Fence the preference before any other and if they were buying again would buy no other. —W. H. Van ALSTYNE, Atkinson.

Peerless Fencing is the best galvanized fence and when put up properly is the best fence on the market today. I have some Peerless Fence, put up some four or five years ago, which is as bright as ever and tight, standing O. K. —HOWARD BRUSH, Pitts Ferry.

Farmers speak well of your fence and I know of no fence that looks better for the years that it has been erected than the Peerless. I have never heard a farmer say that the Peerless showed any sign of rust yet. —GEO. DAVIS, Clinton.

QUESTIONS AND ANSWERS. Miscellaneous.

MILK RACK.

I intend building a milk-wagon platform, as light as possible, capable of carrying 4,000, 4,500, or possibly 5,000 lbs., and cans. I have two spruce bed-pieces to set out against the bolster-stakes on the springs. They are about 4 x 5 inches.

1. How many cross pieces would be needed, and what thickness and width should they be?

2. What material should they be, or what material would do?

3. Would the spruce bed-pieces be all right?

4. What kind of lumber would it be best to use for the covering, and state the thickness necessary. The platform I used this year was two-inch plank, without bed-pieces. This platform was a load itself, so I want something light and strong. Your advice will be appreciated. Or should you have a better platform plan, I would be thankful to get it through your valuable paper.

BEGINNER.

Ans.—1, 2 and 4. The common platform for a milk-hauling wagon in the neighborhood of London, has as its foundation a couple of bed-pieces. Across these bed-pieces there are nailed strips of sound elm lumber an inch thick and three or four inches wide, a half-inch space being left between strips. These strips at the rear end of platform, between hind wheels, extend but little over bed-pieces, so as not to interfere with wheels. When possible, they extend much farther, say two feet on each side. To strengthen these, and also to make a ledge to prevent cans from slipping off, other strips of the same kind of lumber, two or three inches wide, are nailed or bolted firmly to extreme outer ends of cross-strips on the upper side.

3. The spruce will probably be all right, but 3 x 6-inch shape would be stronger.

OLD PLASTER—MOLASSES AS STOCK FOOD—SALT STIFFENS STRAW.—FISTULA—BOVINE AND HUMAN TUBERCULOSIS.

1. Of what value is old plaster applied to run-down land?

2. What value is molasses at 35c. per gallon, compared to oil cake at present prices, to feed? How much per day should be fed to six-months-old colts; to work horses; to growing pigs, ten weeks old; to fattening cattle; to milking cattle; to spring calves; to fall calves?

3. Is salt, applied to the land, of any value to stiffen the straw? When is the best time to apply, and how much?

4. Aged mare has fistula of withers. There are two holes about half-inch in diameter and two inches deep; have been using a solution of Zenoleum and water for about two months, and they have got somewhat smaller, but slowly. Can it be cured, and the remedy?

5. Is tuberculosis of cattle communicable to man?

INTERESTED.

Ans.—1. So far as our observation goes, old plaster is of little value as manure.

2. Molasses being a purely fattening and heat-producing food, with scarcely any protein in it, can not be compared with oil cake. Extensive experiments in feeding molasses were conducted a few years ago at the Texas Experiment Station, where molasses can be procured very cheaply. As much as a gallon per day could be safely fed to yearling steers. The returns from molasses fed there, varied from 3c. to 30c. per gallon. Prof. G. E. Day, O. A. C., Guelph, calls it an expensive food. At 35 cents per gallon, it would be an unprofitable food, except in small quantities, and for special purposes.

3. Salt, applied to grain crops, will make the straw stiffer and brighter. Sow after grain is up.

4. Fistula of the withers is a disease difficult to cure. Occasionally the sore will heal up, and, after a time, break out again. Better consult your veterinarian.

5. Some eminent men deny that bovine tuberculosis can be communicated to man, but most authorities disagree with their opinion.



Genasco

the Trinidad-Lake-Asphalt Roofing

is the lasting roofing for this reason:

Trinidad Lake Asphalt is natural asphalt, full of life and vigor that are put in and kept there by the oily nature of this asphalt. Genasco is made of this natural asphalt, and has all its permanent weather-resisting qualities which keep it lastingly waterproof.

Roofings that you don't know about are risky. Their looks are apt to deceive you. Be on the safe side, and get Genasco Roofings—mineral or smooth surface. Fully guaranteed.

The Kant-leak Kleets insure the perfect application of roofing—makes seams water-tight without smeary cement, and prevents leaks from nail-holes. Ask your dealer for Genasco with Kant-leak Kleets packed in the roll. Look for the hemisphere trademark. Write us for samples and the Good Roof Guide Book.

The Barber Asphalt Paving Company
Largest producers of asphalt and largest manufacturers of ready roofing in the world.

Philadelphia

New York San Francisco Chicago

Caverhill, Learmont & Company, Montreal, Que.
D. H. Howden & Co., Ltd., 200 York St., London, Ont.



NOW! Is Your Chance

We want convincing subscription solicitors in a number of districts not now covered.

We give a liberal cash commission.

Write us regarding the agency for your district, also for sample copies and agents' outfit.

Do not delay, but write TO-DAY to:

The Circulation Dept.,
The Farmer's Advocate and Home Magazine,
London, Canada

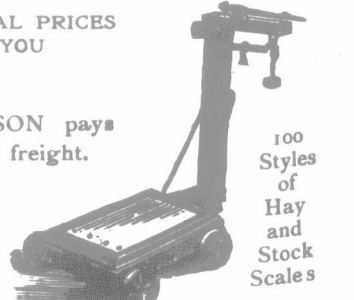
WILSON'S GOLD MEDAL SCALES

GET SPECIAL PRICES FOR YOU

LISTEN!

WILSON pays the freight.

Get special price list to-day.



100 Styles of Hay and Stock Scales

C. WILSON & SON, 79 Esplanade Street E. Toronto, Canada.

FARM LOANS

At 5 1/2% for term of five years, in large or small amounts. Half-yearly repayments if desired. Satisfaction assured. No delay. A. L. MASSEY & CO., 10 Wellington St., East, Toronto.

QUESTIONS AND ANSWERS. Miscellaneous.

GRAIN-DRILL SPACING.

Which will give the best results, a six- or seven-inch spacing drill, sowing grain at the same rate? Some declare six inches best; others seven.

A SUBSCRIBER.

Ans.—The six-inch spacing is preferred by a number of farmers we know as giving a better distribution of the grain.

STRINGHALT.

Have a Clyde gelding, rising four years old, that was slightly affected with stringhalt last winter, but got apparently all right in summer and showed no symptoms. This winter he is affected again with the same trouble. As he is a valuable horse, would like to know if there is a cure for same, or if he might grow out of it? We like your paper very much; in fact, better than any other.

A SUBSCRIBER.

Ans.—This is a nervous trouble that is usually progressive, and worse in cold weather than in warm weather. Medicinal treatment has practically no effect. An operation, which consists in severing the peroneal tendons, sometimes, but not always, effects a cure. Injuries and diseases of the foot sometimes give rise to stringhalt-like movements, which usually disappear after the resulting lameness ceases, but occasionally do not do so, and chronic stringhalt remains.

WASH FOR PLASTERED HOUSE.

Please give information in regard to a wash for a house. As our house is plastered, and marked off in squares, below the veranda; that is below where the top of it is attached to house, and above veranda is just the ordinary rough-cast, thought there might be a wash that we could apply to give all the same effect.

W. E. C.

Ans.—It is not likely that any wash that could be applied would give the same effect to the rough and smoother portions of house, though they might both be made of the same color. A good wash, and one that lasts well, and is very cheap, is made as follows: Take 1/2 bushel of lime, slake with boiling water, make into a milk, and strain through a fine sieve. Add to this a peck of salt dissolved in warm water; three pounds of ground rice boiled to a paste and stirred in while hot, and one pound of glue, previously dissolved in a glue-pot over a slow fire. To this mixture, add five gallons of hot water, stir it well, cover, and let stand for a few days. This can be colored to any shade desired. Apply when hot.

GOSSIP.

William Thorn, Lynedoch, Ont., ordering a change in his advertisement, writes: I still have fifteen extra fine, large, White Wyandotte cockerels for sale, bred from best pens in Canada; also some extra good two-year-old Ayrshire heifers, just fresh, and some to freshen soon, and a few very fine cows, heavy milkers, good teats, and high testers. I am making a specialty of Record-of-Performance work. Have one choice young bull, fashionable color, large size, fit to head any herd, for sale. My cows are milking very heavily.

J. A. Watt, Salem, Ont., writes: Our herd of Shorthorns are looking fine. It contains more high-class breeding cows than ever before. Have sold a lot of grand young bulls to men who know the right kind. R. W. Caswell, of Saskatoon, was so impressed with Keir Emblem, the young bull we imported last year, that he bought him at \$3,000. Mr. Caswell intends to exhibit a herd through the Western fairs this season, and, with such a herd-header as Keir Emblem, he should be very hard to defeat. In my advertisement, I am offering for sale one of the best young stallions in Canada. He can be bought right, as my attention is entirely taken up with our large herd of Shorthorns.

TRADE TOPIC.

The Cyclone Woven Wire Fence Co., Dundas street, Toronto, would like it announced that if their goods are not represented in one's district, they are ready to make engagements with suitable agents.

SUCCESS-MANURE-SPREADERS are made right here in Canada

Need you guess twice about the motive?—when anyone tells you that the up-to-date manure spreader—the aptly-named SUCCESS—is no longer made in Canada. Just you investigate. Just write the Dain people. Do that before you put a dollar into any manure-spreader investment.

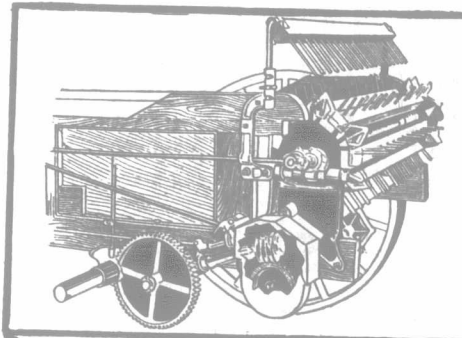
YOU WILL PROFIT.

The Canadian-built, moderate-priced SUCCESS is paying dividends to hundreds of progressive farmers. All over Canada it is giving its owners an increase of two to four dollars value a ton on stable manure used as fertilizer. It will do as much for you.

JUST WRITE US.

Quit wondering which make to choose. Write us for PROOFS—not mere claims—and then decide wisely.

ASK FOR MORE FACTS



Here you see the independent (worm and gear) drive that makes the SUCCESS distribute evenly uphill or down. No other spreader even claims this. The SUCCESS does it.

Ready for prompt Fall shipments. No delay.

Dain MFG. CO., LIMITED 90 Dain Ave., Welland, Ont.

With the SUCCESS you can make one load of manure fertilize more ground than three loads would spread the ordinary way. And the SUCCESS will actually save \$4 a day for you. Save that much every day you use it!

MAKE US PROVE.

Tell us to show you why YOU would gain, and gain big, with a SUCCESS Manure Spreader. Require proof that this spreader adds two dollars actual value to every load it carries—compared with the pitchfork way.

AS TO REPAIRS.

Repair parts—though rarely needed—will be quickly supplied for any SUCCESS Spreader ever sold in Canada.

HURST SPRAYERS ON FREE TRIAL

LET US SEND YOU ANY OF THESE SPRAYERS—to try for 10 days, then if you buy, you can pay us cash or we'll wait till you sell your crop, then you can pay us out of the "extra profit." We pay freight. Wholesale dealers' prices.



Man-Power Potato and Orchard Sprayer. Sprays "anything"—potatoes or truck & rows at a time. Also first-class tree sprayer. Vapor spray prevents blight, bugs, scab and rot from cutting your crop in half. High pressure from big wheel. Pushes easy. Spray arms adjust to any width or height of row. Cheap in price. Light, strong and durable. GUARANTEED FOR FIVE FULL YEARS. Needn't send-a-cent to get it "on trial." You can get one free if you are first in your locality. Write today.

Horse-Power Potato and Orchard Sprayer. For big growers. Most powerful machine made. 60 to 100 gallon tank for one or two horses. Steel axle. One-piece-heavy-angle-iron frame, cyress wood tank with adjustable round iron hoops. Metal wheels. "Adjustable" spray arms and nozzles. Brass ball-valves, plunger, strainer, etc. Big pump gives vapor spray. Warranted for five years. Try this machine at our expense with "your money in your pocket." See free offer below. Write today.

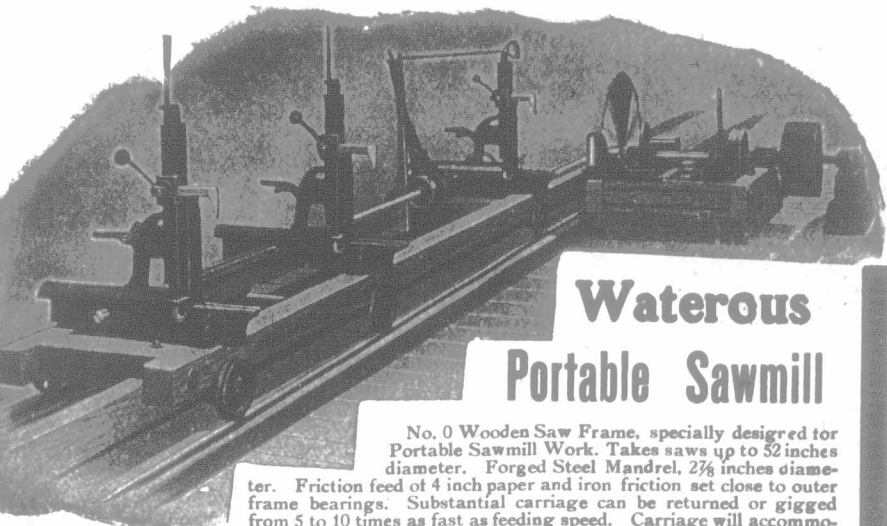
Fits-All Barrel Sprayer. Fits any barrel or tank. High pressure, perfect agitation, easy to operate. Brass ball-valve, plunger, strainer, etc. Auto-made strainer. No "cup leathers" or "rubber" about any of our sprayers. Finished plain, mounted on barrel, or on wheels as shown. Free year guarantee. It don't cost you "a cent" to try it in your orchard. Get one free. See below. Write today.

FREE—Get a sprayer FREE.—After you have tried the sprayer and are satisfied that it is just as we recommend it, send us a list of the names of your neighbors and we will write them and quote them price and have them call and see your machine work, and for every Fits-All Sprayer we sell from your list we will credit you with \$2.00 or send you check if you have paid cash. For every Man-Power Potato and Orchard Sprayer we sell we will credit you with \$3.50 or send check. For every Horse-Power Potato and Orchard Sprayer we sell we will credit you \$5.50 or send check. We do all corresponding and selling. All you need do is to show the sprayer. Many have paid for their sprayer in this way. This offer is good only the first order in each locality. Don't delay. Send the coupon or post card NOW.

COUPON — Fill Out and send to-day. THE ONTARIO SEED CO., Successors, 136 King Street, Waterloo, Ontario. Send me your Catalogue, Spraying Guide, and "special offer" on the sprayer marked with an X below.

- Man-Power Potato and Orchard Sprayer. Horse-Power Potato and Orchard Sprayer. Fits-All Barrel Sprayer.

NAME... ADDRESS...



Waterous Portable Sawmill

No. 0 Wooden Saw Frame, specially designed for Portable Sawmill Work. Takes saws up to 52 inches diameter. Forged Steel Mandrel, 2 3/4 inches diameter. Friction feed of 4 inch paper and iron friction set close to outer frame bearings. Substantial carriage can be returned or giggered from 5 to 10 times as fast as feeding speed. Carriage will accommodate good size logs. Standard carriage for rack feed is 16 feet 11 inches long; rope feed 17 feet 6 inches long. Frame extra wide, of heavy red pine stringers, edges bound with heavy iron. Log seats heavy web. Six-inch-eye-beams. Knees and rack cast in one piece. Knees have 3-inch independent taper movement, and are fitted with our patent upper and lower steel hook. Peel Dogs, operated by overhead, single-acting ratchet setworks, having large ratchet wheel. Split steel setting and holding Pawls, designed to eliminate lost motion and permit a set of 1-16 inch. Steel-set shaft 1 1/2-1 3/8 inches diameter and 16 feet long. Carries pinions which operate knees, and is fitted with heavy cast iron hand-wheel for hand setting. Track 30 feet long. This is one of the finest portable sawmills made. It will pay you to send for our free catalogue, which describes it, as well as many others, in detail. Drop us a card to-day.

THE WATEROUS ENGINE WORKS CO., LTD., BRANTFORD, ONT.

GOSSIP.

The annual Ontario Provincial auction sale of pure-bred cattle will be held at Guelph, March 1st, as advertised, under the management of the Guelph Fat-stock Club, when 45 head of Shorthorns, males and females, will be disposed of under favorable conditions.

The small farmer might profitably keep two breeding mares, and a third horse or mare for road use, or to take the place of one of the mares at foaling time. Brood mares, properly handled, will do regular work throughout the summer while nursing their foals, which should be kept in a comfortable box stall during the day, and allowed to run with their dams on pasture at night.

O. Sorby, Guelph, Ont., writes: I have sold the three-year-old imported Clydesdale stallion Marchfield Godolphin (11878) (15311), to Charles Bean & Son, of Ailsa Craig, Ont. Marchfield Godolphin is a very thick, wide, heavy horse, and his breeding is No. 1, his sire being Treasurer Godolphin by the famous Drumflower, his dam is by Prince Carlung, and great-grandam is by the noted Boydston Boy. He should suit the locality he is going to, as size and quality are what they want.

Dr. Publow Says DE LAVAL CREAM SEPARATORS ARE THE BEST

Picton, Ont., Nov. 18, 1910.

The De Laval Separator Co.

Gentlemen :

When one is connected with a State educational institution in dairy work, he is frequently asked by intending purchasers, "What is the best cream separator to buy?" They are usually given a number of names of the different makes, and told to give some of these a trial. Now that I have severed my connection with college work, I am at liberty to express my opinion at will, and while I know you are continually receiving excellent testimonials from users of your machines, still, I wish to express to you the satisfaction it has given me to use DE LAVAL SEPARATORS in over twelve years of successful work in creameries, on the farms, and in dairy schools. My experience has taught me that you have the best cream separators on the market, and IF I were to purchase a new one of any size to-day, it would be a DE LAVAL. Yours very truly,

C. A. PUBLLOW, M.D.

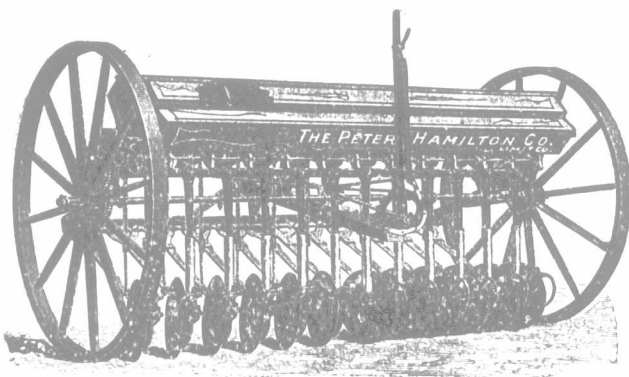
The Doctor has simply added his testimony, born of the experience that qualifies, to that of the other dairy authorities the world over.

NOW, as a dairy farmer, do you know of any good reason why you should not buy a DE LAVAL SEPARATOR? There's an agent near you. Send for our catalogue.

THE DE LAVAL SEPARATOR CO'Y
173-177 William St., Montreal, Que.

BE SURE AND SEE THE PETER HAMILTON AGENT.

He will tell you all about our "LEADER" DRILL



The "Leader" is what its name implies, because it has earned that position amongst seeding machinery. It is simple in construction, light of draft, durable and accurate.

Ask any farmer who has used Peter Hamilton machinery, and he will tell you of the satisfaction he has had in using it. If you cannot see our agent, write to-day for catalogue F.

THE PETER HAMILTON CO., LIMITED
Peterborough, Ontario.

HE HAS SOMETHING SPECIAL TO OFFER YOU.

GOSSIP.

CHANGE OF SALE DATE.

Too late to have the change announced in our issue of Feb. 16th, came instructions to change the date of the Union Horse Exchange sale, at Union Stockyards, Toronto, of 75 registered Clydesdales, imported and Canadian-bred. The date of the sale, as indicated in the advertisement in this issue, will be March 14th, and not March 7th. Parties interested will do well to look up the advertisement, and plan to be present at the sale.

A MARE FLAGGED A TRAIN.

The Houston (Texas) Chronicle records a singular case of a mare saving the life of her foal by flagging a train. The colt had fallen with all its legs through a bridge over a creek. The mare ran down the track, facing an oncoming passenger train, which was slowed down to save her life, when she turned and went from the train, keeping on the track till she came to the bridge, when she stopped and began whinnying. The engineer, fireman, and some passengers, released the colt, and the mare and her baby proudly trotted off.

AYRSHIRES AND PONIES AT AUCTION.

At the Hamilton Sale Co.'s sale barns, in the City of Hamilton, on Thursday, March 8th, N. & E. Dymont will sell 30 head of Ayrshire cattle and 10 Ponies. Twelve of the Ayrshires are in milk, the majority of them in the R. of P., with official yearly milk records within a trifle of 14,000 lbs., besides being winners at the leading shows, including London and the Dairy-test at Guelph. Eleven of them are heifers, from two months to two years of age; six are bulls, from three to twelve months of age, out of such cows as Floss Morton, whose R.-of-P. record is nearly 14,000 lbs.; Fairy of Hickory Hill, winner in the dairy-test at Guelph for the last two years, etc. One of the bulls is three years of age. This is the highest-class lot of Ayrshires that has been offered by auction in Canada in late years. Four of the twelve in milk are in the Record, and the others are now in the test. The Ponies are Welsh and Iceland; ten of them from two to seven years of age, beautiful and well-broken, sound, and good movers; also the stallion, Venturesome Verne, a chestnut four-year-old Hackney-Welsh cross. This is an exceptionally nice pony. For fuller particulars, look up next week's issue.

CLYDESDALE AND ROAD HORSES, AND HOLSTEIN CATTLE BY AUCTION.

At lot 4, concession 2, West York, 1 1/2 miles west of Yonge street, on Thursday, March 9th, C. H. Shaver, owing to having sold his farm, will sell at auction his entire herd of Holstein cattle, numbering 17 head, 3 registered Clydesdales, and several head of high-grade Thoroughbred horses. The Clydesdales are, Imp. Blossom 6436, a bay, eight years old, sired by Carbineer, dam by Prince Sturdy, grandam by Macgregor. This is a low, thick, smooth mare, of splendid draft character, and a regular breeder, being now in foal to the noted prize horse, Gay Sprig (imp.). A daughter of hers to be sold is a bay filly, rising two, sired by Imp. Craigmair, a big, drafty filly, that will reach a big size. Another daughter is a bay filly, rising one year, by Imp. Top Spot. These are the kind of draft mares in such great demand these days, and will certainly be good buying for their fortunate purchasers. Another high-grade draft filly is a bay, rising three, by Imp. Proud Baron. This filly has abundance of size and quality. Other most desirable and fascinating horses to be sold are a black three-year-old gelding, a chestnut two-year-old filly, and a bay yearling, all got by the noted Thoroughbred stallion, Halfing (imp.), and out of a daughter of Ephesian (imp.). These are an exceptionally breedy lot, and the kind that makes the cracks, either at the jump or following the hounds. In next week's issue we will give a synopsis of the Holsteins to be sold, several of which are in the R. of M. and R. of P. For catalogue, address C. H. Shaver, Davisville, P. O., Ont.

Don't Wear A Truss

After Thirty Years' Experience I Have Produced An Appliance for Men, Women or Children That Cures Rupture.

I Send It On Trial.

*If you have tried most everything else, come to me. Where others fail is where I have my greatest success. Send attached coupon to-day.



The above is C. E. Brooks, of Marshall, Mich., who has been curing Rupture for over 30 years. If ruptured write him to-day.

and I will send you free my illustrated book on Rupture and its cure, showing my Appliance and giving you prices and names of many people who have tried it and were cured. It is instant relief when all others fail. Remember I use no salves, no harness, no lies.

I send on trial to prove what I say is true. You are the judge, and once having seen my illustrated book and read it you will be as enthusiastic as my hundreds of patients whose letters you can also read. Fill out free coupon below and mail to-day. It's well worth your time, whether you try my Appliance or not.

FREE INFORMATION COUPON.

C. E. Brooks, 4515 Brooks Bldg., Marshall, Mich. Please send me by mail in plain wrapper your illustrated book and full information about your Appliance for the cure of rupture.

Name
Address
City State.....

28 Holsteins 28 BY AUCTION

Will be sold by Public Auction

Wednesday, March 1st, 1911

At Balm of Gilead Farm, TOLEDO, ONT., County of Leeds.

The herd consists of six registered cows and two heifers coming two years, three rising one year, and one bull coming three years. The remainder of the herd consists of well-graded cows. Accommodations on ground, and if informed by mail or phone will meet parties at Irish Creek Station on or day previous to sale. All stock and machinery must be sold, as I have sold my farm.

D. C. Haley, Auctioneer. ISIAH PARKER, Toledo, Ont.

Unreserved Auction Sale of PURE-BRED SHORTHORNS

I will sell for Mr. Adam Bone, 1 mile east of Paris, Ont.

Wednesday, March 1, 1911,

in conjunction with his entire high-class farm-stock sale, 13 head of Pure-bred Shorthorns, consisting of cows, 3 2 and 1 year old heifers, calves and 2 young bulls fit for service. The above are healthy, large and well developed, and are a great milking strain. Sale commences at 10 a. m. Cattle at 3 p. m. Good train service, either steam or electric. Usual sale terms. For particulars apply to:

Scott Davidson, Auctioneer,
Box 255, Paris, Ont.

James Miller, Clerk. Adam Bone, Prop.

Saves work and wages

THOUSANDS of farmers are reducing the cost of planting and increasing the production by using the ASPINWALL POTATO PLANTER. This machine does all the work automatically, requires no human aid other than the driver, and soon pays for itself out of the wages it saves. What the Aspinwall No. 3 Potato Planter has done for others it will do for you. Write for catalog descriptive of our POTATO CUTTERS, PLANTERS, SPRAYERS AND SORTERS. Address Dept. F.

Aspinwall Manufacturing Co.
No. 3 Jackson, Mich., U.S.A. Canadian Factory: Guelph, Ont.

PLEASE MENTION THE ADVOCATE.

QUESTIONS AND ANSWERS. Miscellaneous.

REMOVING MANURE.

A rents from B a small place that would grow enough feed for one horse. A buys a lot of cows and three horses to go on a 125-acre farm in the spring. A buys twenty tons of hay and straw to feed same. Can A remove the manure from the place. There was no regular lease signed—just so much a month for the year. F. A. J. Ontario.

Ans.—Under the circumstances, we think he can.

CAKED UDDER—RELIGION OF PRESIDENT TAFT.

1. What is good for a cow with a caked bag before she has calved? 2. Of what religion is President Taft of the United States? O. D. B. Morrisburg, Ont.

Ans.—1. Keep bowels open, and manipulate gently with the hand. If obstinate, bathe with hot water and rub well with camphorated oil.

2. President Taft is a Unitarian.

GOLDEN SKIN IN CHICKENS.

Can you inform me where I can get cockerels or pullets with a rich golden skin? I can see them on the market, but never came across any for keeping. Also state price, and the kind. FARMER.

Ans.—Enquire of those advertising in our columns, stating your wants plainly. You should be able to get what you want from breeders of Plymouth Rocks or Wyandottes.

GOSSIP.

C. R. Gies, Heidelberg, Ont., in ordering a change of his Holstein advertisement to one of seed grain, writes: I have no more female Holsteins for sale at present, and only two more bull calves. I have sold 44 head since July, and 13 lately; 8 to Michener Bros., Alberta; 1 to C. E. Trebilcock, The Grove, Ont.; 1 to A. Hoover, Emery, Ont.; 2 to Alfred Hutchinson, Mt. Forest, and 1 to John Hewitson, Allenford, Ont.

SHORTHORNS AT AUCTION.

An auction sale of Scotch Shorthorns, possessing exceptional merit both in type and breeding, the property of S. J. McKnight, Epping P. O., Ont., will be held at his farm, ten miles from Thornbury Station, G. T. R., on the Allandale-Markdale branch, and twelve miles from Markdale Station, on the Owen Sound branch of the C. P. R., on Thursday, March 9th. There are twenty-five head, twenty females and five bulls, the bulls ranging from ten to fourteen months of age, the get of Imp. Nonpareil Fame, a Cruickshank Nonpareil, and Imp. Count Claret, a Marr Claret. The females are one, two and three years of age. All old enough will either be safely in calf or have calves at foot, by the stock bull, Imp. Count Claret. On blood lines, they represent such fashionable tribes as the Cruickshank J., or Jealousys, Crimson Flowers, Gems, Emeralds and Duchesses; several of them are out of imported dams, and all by imported sires. All the top sires in their pedigrees are imported. They are all in proper nice condition. Many of them are prizewinners wherever shown at local shows, and among them are high-class show things, in any company, if properly fitted. There will be no disappointment in the quality of the animals for visitors attending the sale. The terms are very liberal; eight months' credit on bankable paper, 5 per cent. per annum off for cash. Conveyances will meet morning trains at both Thornbury and Markdale Stations. Arrangements are made to carry all visitors to the farm on morning of sale that arrive the evening before. Look up next week's issue for particulars of breeding.

A nation well-brought-up little girl yawning at the breakfast table one Sunday morning, and ventured a polite proposition to her mother. "I really don't feel at all like going to church this morning," she remarked. "Can't we just send cards?"

DAN PATCH EATS IT EVERY DAY 3 FEEDS FOR ONE CENT INTERNATIONAL STOCK FOOD THE GREAT ANIMAL TONIC

Good morning! "CREAM OF THE WEST" FLOUR Like the sunrise—full of life The CAMPBELL MILLING CO. LTD., TORONTO

To be genuine it must bear the name "Bissell" Because of the great success of the "Bissell" In-Throw Harrow several of its features have been imitated on other harrows. But no other harrow will give equal results unless it is built exactly the same. The plates of the "Bissell" could be put on other harrows, but they wouldn't cut deep into the soil and stir it up thoroughly like they do on the "Bissell."

PLANS and MATERIALS COMPLETE for HOUSES, BARNs, COTTAGES, \$138.00 up Well-Designed, Substantially Built Comfortable Homes at 50% Saving SOVEREIGN CONSTRUCTION CO. LUMSDEN BUILDING, TORONTO

ear russ

erience I have e for Men, en That e.

anything else, come where I have my ed coupon to-day

Marshall, Mich. ure for over ed write

ustrated book on g my Appliances es of many people ed. It is instant member I use no

t I say is true, having seen my n will be as en- patients whose out free coupon well worth your pliance or not.

COUPON. Marshall, Mich. plain wrapper all information ure of rupture.

ns 28 ON

Auction 1st, 1911 TOLEDO, ONT.

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H PARKER, Toledo, Ont.

n Sale of THORNS

le east of Paris, on h 1, 1911,

l-class farm-stock rns, consisting of lves and 2 young are healthy, large at milking strain. e at 3 p. m. Good etric. Usual sale

ioneer, Ont.

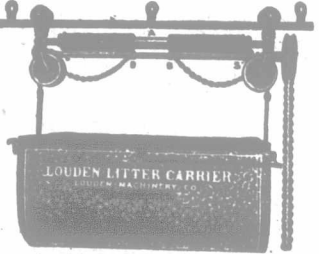
Adam Bone, Prop.

PLANTER. Automatically, the driver, and it saves. What has done for or catalog des- PLANTERS. Press Dept. F. ing Co. No 3 ADVOCATE.

From Coast to Coast

This year we were awarded medals or diplomas at all the leading exhibitions from New Westminster, B. C., to Halifax, N. S., including the Dominion Exhibition, St. John, N. B., where we secured the gold medal. There is a reason for it. It is because our goods are the leaders. For instance, our Litter Carrier is the strongest, handiest and easiest-working Carrier made.

Write for our catalogue of Hay Tools, Feed and Litter Carriers, Barn-door Hangers, Cow Stalls and Stanchions, and Hardware Specialties to



Louden Machinery Co., Guelph, Ontario

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NOTHING EQUALS
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WATERPROOF CLOTHING
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25¢ AT ALL DRUG STORES OR SENT PREPAID BY CHEMISTS CLEVELAND OHIO

"SAVE THE HORSE" SPAVIN CURE.
REG. TRADE MARK
SOUND
Sometime ago I purchased a horse, believing him to be a real good one. At the time I did not know that he had been bred and blistered. He became very lame from a Bone Spavin, and the prospect was not very favorable, owing to his advanced age. However, having a bottle of "Save-The-Horse" on hand, of which I had used very little in satisfactorily curing Puffs on another horse, I ventured to think it would help the spavin on my new purchase. I was ashamed to drive the horse in the daytime, he was so lame. I used about half the bottle. Suddenly the horse forgot his lameness, and to this day he acts and goes as sound as a colt. Now should you want a recommendation you are at liberty to refer to me.
Joe. W. BURTON.
\$5.00 a Bottle With Signed CONTRACT.
This is a binding CONTRACT and protects purchaser absolutely in treating and curing any case of Bone and Bag Spavin, Thoroughpins, Ring-bones, (except low), Curb, Splint, Capped Hock, Windpuff, Sheath, Injured Tendons and all Lameness. No scar or loss of hair. Horse works as usual. Send for copy of contract, booklet on all lameness and letters from prominent business men, bankers, farmers and horse owners the world over on every kind of case. At all druggists and dealers, or express paid.
Troy Chemical Co., 148 Van Horn St., Toronto, Ont., and Binghamton, N. Y.

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Orleans, R. F. D. 19, Belding, Ionia Co., Michigan.

We are breeders of the very best kind of PERCHERONS
We sell nothing but meritorious stock, and our stock sells on its merits. Young stock of both sexes for sale. Write us now.

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Court Lodge, Egerton, Kent, Eng.
Exporters of Pedigree Live Stock of all Descriptions.
From now on we shall be shipping large numbers of horses of all breeds, and buyers should write us for particulars before buying elsewhere. If you want imported stock and have not yet dealt with us, we advise you to order half your requirements from us, and obtain the other half any way you choose; we feel confident of the result, we shall do all your business in the future. Illustrated catalogues on application.
PLEASE MENTION THE ADVOCATE.

QUESTIONS AND ANSWERS. Miscellaneous.

QUACK GRASS SEED AND ROOTS.

I bought a quantity of hay containing quack grass.

1. Will the quack grass grow from the seed in the hay, it being cut about July 12th?
2. Does quack grass grow from the seed or from the root? D. E.

PASTURE CROP FOR THIS SEASON—MIXTURE FOR LOW LAND—FENCING ACROSS CREEK.

1. I have about five acres sand, fall-plowed, and would like to seed it in good pasture for this summer. What would be best to seed it with? I need early pasture, especially.
2. I have six acres flats which I cannot plow on account of creek overflowing and breaking it up. How would be the best way to seed in fresh pasture, and what would be the best seed to sow?
3. There is a creek running through my farm. Is it compulsory for one to keep the fence across the creek at both ends of my farm every year. M. A. C.

Ans.—1. The mixture used by Prof. C. A. Zavitz for pasture the season of sowing is composed of oats 51 lbs., Early Amber sugar cane 30 lbs., and common red clover 7 lbs. per acre. Sown about the first of May, should be ready to pasture about the second or third week in June, and will last throughout the season.
2. It is doubtful whether any grass better than what now occupies the creek flats could be sown. You might try the following mixture, however, first breaking up the surface with several harrowings with a sharp-toothed harrow, and cover with another stroke or two of the harrows: Orchard grass 3 lbs., meadow fescue 3 lbs., timothy 2 lbs., red top 3 lbs., and alsike clover 3 lbs. per acre.
3. If the creek crosses the line at those parts of the boundary fence that by agreement is yours to keep up, you can scarcely get away from the necessity of keeping up the fence across it.

WHEN TO TRIM MAPLES—ASHES FOR FRUIT TREES—MARE SHAKES HEAD—FERTILIZERS FOR MANGELS.

1. What time of the year should hard maples be trimmed?
2. Are ashes good to put around fruit trees?
3. Have a mare five years old that shakes her head as if flies were at her nose.
4. What is the name of the liquid that is put on alfalfa seed? I understand that it can be got at Ottawa, or can it be got at any drug store?
5. I have a piece of ground, clay loam, on which I had potatoes last year, and it was heavily manured. Would it pay me to put nitrate of soda on it before putting mangels on it, and how much per acre? Would you advise salt, too, and how much? Where can I get the nitrate of soda? A SUBSCRIBER.

Ans.—1. After the buds have swollen.
2. Unleached ashes are a valuable manure for fruit trees. They should be applied over the whole surface of the ground, and not close to the trunk, merely.
3. Some horses acquire this habit without any known cause. In other cases it is due to a growth in the nostrils, which can be located and removed by a veterinarian. In some cases it appears to be due to brain trouble. When no visible cause can be discovered, nothing can be done.
4. Nitro culture for inoculating alfalfa seed can be procured from the Bacteriological Department, Ontario Agricultural College, Guelph, and not from any drug store.
5. It would probably pay to apply 150 lbs. nitrate of soda per acre, but as a complete fertilizer usually gives best results, cost considered, it would be wise to add 100 lbs. acid phosphate and 150 lbs. muriate of potash. Salt can be applied with advantage, at the rate of 200 lbs. per acre. Several firms who deal in fertilizers advertise in "The Farmer's Advocate," from whom any supplies in that line may be obtained.

A Garden of Delight

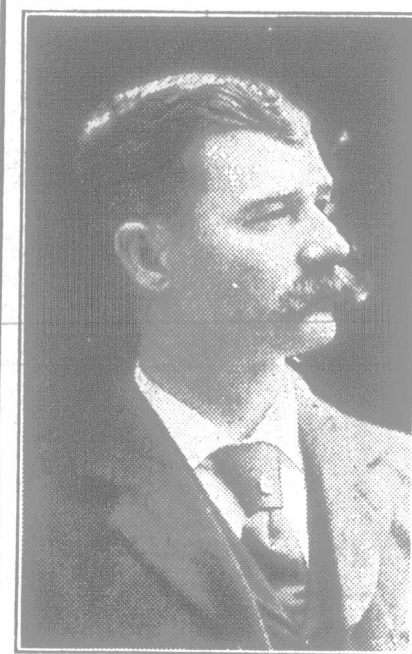
Is your garden a source of pride and pleasure, or simply of common "garden truck?" That will depend largely on your choice of seeds. People who sow

EWING'S Reliable Seeds

and give them proper care, get big crops—sure crops—crops of superior quality. Whether you garden for pleasure, or profit, or both, discriminate on the seed question. Get EWING'S, the seeds that have proved their quality by over forty years of bumper crops.

If your dealer hasn't Ewing's write for our Illustrated Catalogue and buy from us direct.

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J. B. HOGATE, Weston, Ont.

Weston, Ont., and Brandon, Man. IMPORTING BARNES J. B. HOGATE, Proprietor, IMPORTER OF Clydesdale and Percheron STALLIONS

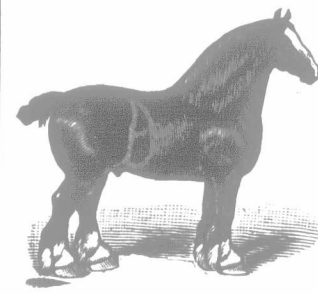
Clydesdales sired by such noted sires as Hiawatha, Baron of Buchlyvie, Baron Winsome and others. Dams equally as good.

Percherons of the best blood of France.

I can sell you a ton stallion for less money than any man in the business. Don't buy undersized stallions and think you will breed draft geldings and mares from them. Come and see my ton horses and get prices. I will surprise you and save you plenty of money. Weston is reached by the G. T. R. and C.P.R. For further particulars write:

J. B. Hogate, Weston, Ont.

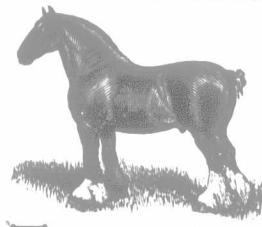
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I have 22 Imported Clydesdale Stallions to select from, of different ages, and from such noted sires as the champions Hiawatha, Marcellus, Baron of Buchlyvie, Baronson, Hapland's Pride, Silver Cup, Revelanta, Royal Blend, Baron Clyde, Shapely Prince, etc. The breeding is the best, and the individuals second to none. Prices and terms right. Just give me a call and be convinced that you struck the right place. Markham 20 miles north of Toronto, on the G. T. R. Locust Hill Sta., C. P. R., 3 miles. Long-distance phone. Will meet visitors on the shortest possible notice.

T. H. HASSARD, Markham, Ont.

UNION HORSE EXCHANGE Union Stock-Yards, TORONTO, ONT.



The Great Annual Auction Sale of
75 Imported and Canadian-bred
REGISTERED CLYDESDALES
Stallions, Mares, Mares in foal and Fillies, will be held this year on
Tuesday, March 14th, 1911.
J. HERBERT SMITH, Manager.

OUR WINNINGS AT GUELPH

Were more than any other firm exhibiting. Champion imported mare. Champion Canadian stallion. Six firsts and many seconds and thirds, making a grand total of Twenty-one ribbons on eighteen horses exhibited. It is worth your while to go and see this bunch at:

Smith & Richardson's, Columbus, Ont.
MYRTLE, C. P. R. BROOKLIN, G. T. R. PHONE CONNECTION.

Clydesdale Stallions; Fillies Hackney Stallions

We have been importing Clydesdales and Hackneys for 5 years, and in that time have won at the leading shows in Canada and the United States the grand total of 40 championships against all comers on both sides of the line, besides dozens of firsts, seconds and thirds. We never had a better lot on hand than just now. They were winners in

Scotland, winners at New York, and winners at Guelph and Ottawa. They are the best types of the breed, with size, character, quality, action and breeding, and we sell them as reasonably as inferior ones can be bought, and give terms to suit. Clydesdale stallions and fillies and Hackney stallions.

Long-distance 'phone.

GRAHAM & RENFREW CO.,
BEDFORD PARK, ONT.

Clydesdales and Hackneys FOR SALE

We have more prizewinning Clydesdale fillies for sale than any other firm. We have them any age or color you want. Also Hackney and Clydesdale stallions.

Hodgkinson & Tisdale
Simcoe Lodge, Beaverton, Ont.

Long-distance 'phone. G T. R. C. N. R.

To Buyers Looking for a Good Stallion:



I have imported **Percheron Stallions** for years. Always bought from the best breeders in France, and beg to call the attention of prospective buyers to the fact that I have won this year at Toronto first and second aged class sweepstakes and silver medal. Also at Ottawa Fair, first and third in aged class, first, second and third in 3-year-old class, sweepstakes and gold medal. Those horses are beautiful dapple-greys and blacks, three to four years old, weighing 1,800 to 2,000 lbs., with feet and legs that cannot be beat, beautiful heads and necks, the kind that good buyers are looking for. **I do not intend, and I will not allow, if I can help it, any one to give more quality breeding for a fixed price than I will.** Come to the home of the champion prizewinners and judge for yourself.

JOHN HAWTHORNE, Simcoe, Ontario.

7 Imported Clydesdale Stallions 2, 3, 4 and 5 years of age. selection, with type, quality, breeding and character unexcelled. Our prices are right, and our terms are made to suit. 'Phone connection.
Crawford & McLachlan, Widder P. O., Ont.
THE DORF STATION.

ORMSBY GRANGE CLYDESDALE FARM

We import extensively from Scotland the best Canadian types of the breed. We make a specialty of filling orders. We have now on hand a big selection, from foals up to 5 years of age, both stallions, mares and fillies.
DR. D. MCEACHRAN, ORMSTOWN, QUE.

ORCHARD GROVE HEREFORDS

Young bulls and one- and two-year-old heifers, of show-ring quality and most fashionable breeding; thick-fleshed, smooth and even.
L. O. CLIFFORD, Oshawa, Ont.

WHEN WRITING ADVERTISERS MENTION THE FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS. Miscellaneous.

CLOVER-SEED PRICES.

I see by the market report that you quote clover seed at around \$7 per bushel, and timothy seed at \$8 per 100 lbs. Are these the prices which farmers get from seed agents on the market at Montreal? I am Secretary of a Farmers' Club here, and, as we are in need of about 10 cwt. of clover and 20 cwt. of timothy seed, I was wondering if you were in a position to put us in touch with some reliable man or men that would furnish us with this amount of seed. WM. McL.

Ans.—The quotations which we give at this time of year are prices paid at country points, and are necessarily the price which is paid farmers for the uncleaned article. Dealers then have to bring the seed to Montreal, clean it and grade it, and get their profit. In fact, to the price mentioned must be added all the charges of the middlemen, so that by the time the seed gets back to the farmer, it has had a considerable amount added to its price.

HEATING MANURE KILLS WEEDS—STRAINS OF BERKSHIRES.

1. What is the effect of mixing cow and horse manure, and piling so that they will heat? Does the substance of the manure evaporate? Will it kill weed seeds, and especially yellow weed or wild mustard seed?

2. I have heard people speak of the "Big Berk" and the "Little Berk" hogs, as though there were two distinct breeds. Is this so, or is it merely a myth? A READER.

Ans.—1. While manure is heating, it is wasting. If the process be long continued, the waste is very great. Weed seeds are killed, however, even the seeds of wild mustard succumbing.

2. In England, there is but one breed of Berkshire hogs. Strains, or families of the breed, differ somewhat in size, but there is no recognized difference in registration of Berkshires.

VARIOUS QUESTIONS.

1. If you were mixing oats with barley, for seed, how many oats would you put in?

2. Would you advise sowing goose wheat with barley? If so, how much?

3. Supposing you were sowing oats and barley, mixed, would you set your drill for barley or oats? Would 2½ bushels be too much?

4. If hauling manure in winter, is it better to spread manure right away, or put in small heaps, seven or eight heaps to one load?

5. When is the best time to sow rape, in May or June, and how much to an acre?

6. If sowing buckwheat to plow under for manure, how much should be sown to an acre?

7. When is the best time to sow clover on fall wheat, and how much should be sown on an acre?

8. Would you advise sowing alsike on high land? E. B.

Ans.—1 and 2. Experiments at Guelph show that the best-yielding mixture of grain is barley and oats, sown at the rate of one bushel of each per acre. At Macdonald College, 1½ bushels barley, with 1 bushel of oats, gave better results.

2. Goose wheat and barley mixed, one bushel of each per acre, result in a fair-yielding crop, though considerably short, by weight, of the yield of oats and barley mixed.

3. Unless snow is more than six inches deep, it is better to spread manure as hauled in winter.

4. Rape comes to full growth in from eight to ten weeks after being sown. The best time to sow depends upon the time the crop is wanted. June is generally preferred. If sown in drills, 1½ lbs. of seed per acre is about right; if broadcast, 4 lbs. per acre should be sown.

5. Three pecks buckwheat per acre is a fair seeding; for plowing under, five pecks would be a liberal amount per acre.

6. Sow clover on fall wheat in March, when ground is bare and honeycombed with frost, at the rate of 6 to 10 lbs. per acre.

7. It is well to mix a pound or two per acre of alsike seed with every grass-seed mixture.

BOILS AND PIMPLES

Are caused altogether by bad blood, and unless you cleanse the system of the bad blood the boils or pimples will not disappear.

Get pure blood and keep it pure by removing every trace of impure morbid matter from the system by using the greatest known blood medicine,

BURDOCK BLOOD BITTERS.
Boils Cured.

Mr. A. J. Saulnier, Norwood, N.S., writes:—"Two years ago I was troubled with boils on my neck and back, and could not get rid of them. A friend recommended me to try Burdock Blood Bitters, and after using two bottles I was pleased to note the boils were entirely gone, and I have not been troubled with any since."

Pimples Cured.

Miss Eva A. Skinner, Granby, Que., writes:—"I am pleased to recommend Burdock Blood Bitters as it has done me much good. My face was covered with pimples, and being advised by a friend to try Burdock Blood Bitters and have them removed I did so and I now have not a spot on my face."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

DUNHAMS' PERCHERONS

For forty-six years renowned as the best of the breed. Six large importations since February 1, 1910 (the last arrived October 12th), insure fine selection, as each animal was individually selected for size, bone quality and excellence. If you want choice stallions or mares, write for catalogue, illustrated from life.

W. S., J. B. & B. DUNHAM
WAYNE, ILL.

Clydesdales FOR SALE—Imp. and Canadian-bred stallions and mares, ranging in age from foals upwards. Seven imp. mares in foal. Keir Democrat (imp.) (12187) (7018) at head of stud. Also a number of work horses. Long-distance 'phone. **R. B. Pinkerton, Essex, Ont.**

The Maples Farm PRESENT OFFERING:
HEREFORDS 2 YOUNG BULLS, 13 and 14 mos. old; also heifers. All from imported stock, and all prizewinners at Toronto and Ottawa. **MRS. W. H. HUNTER & SON,**
Address: **THE MAPLES, ONTARIO.**

ABERDEEN - ANGUS
Will sell both sexes; fair prices. Come and see them before buying. **WALTER HALL,**
Drumbo station, **Washington, Ont.**

Aberdeen-Angus Cattle—Stock all ages, and both sexes, good strains, at reasonable prices. Apply to
ANDREW DINSMORE, Manager,
"Grape Grange" Farm, **Clarksburg, Ont.**

FOREST VIEW I have lately purchased the **HEREFORDS!** Govenlock herd of Herefords, and have for sale sons and daughters of Toronto winners and g. champions; also Galloways of both sexes. **A. E. Cauffield,**
Mount Forest, Ont. P. O. and Station.

ABERDEEN - ANGUS CATTLE
3 choice yearling bulls for sale at reasonable prices. Also females any age. Parties requiring such will get good value. Correspondence invited.
GEO. DAVIS & SONS, ALTON, ONT.

Willow Bank Stock Farm
SHORTHORNS AND LEICESTERS.
Herd established 1855; flock 1896. The great Duthie-bred bull, Imp. Joy of Morning = 32070, and the Missie bull, Royal Star = 72502, heads my herd. Choice selections to offer at all times in both bulls and females.
JAMES DOUGLAS, CALEDONIA, ONTARIO.

SHORTHORNS AND LEICESTERS.—Present offering: Eight choicely bred one and two year old heifers, also bull calves. Choice shearing rams and ram and ewe lambs. Show material. Write: **W. A. Douglas, Tuscarora, Ont. Caledonia Station.**

Glenburn Stock Farm
A few nice **Shorthorn** calves of both sexes, **Shropshire** ram lambs, ewes and ewe lambs. Banded Rock cockerels of Hawkins' strain. **JOHN RACEY,**
Lennoxville, Quebec.

4 Shorthorn Bulls
FOR SALE. 3 red and one roan; age from 12 to 16 months; sired by Imp. Lord Gordon (99434) = 70135, bred by A. Watson, Elgin, Scotland. **J. & W. RUSSELL,**
Richmond Hill, Ontario.

PIMPLES

by bad blood, and system of the bad ples will not dis-

BITTERS.

Norwood, N.S. I was troubled and back, and them. A friend by Burdock Blood ng two bottles I ne boils were en-

ARCHERONS

years renowned of the breed. Six ortations since y 1, 1910 (the last October 12th), fine selection, as mal was individ- ize, bone quality you want choice write for cata- from life.

B. DUNHAM

LE—Imp. and Cana- stallions and mires, wards Seven imp. (imp.) (12187) (7018) at work horses, Long- erton, Essex, Ont.

ANGUS

ces. Come and see ER HALL, Washington, Ont.

STOCK FARM

Stock all ages, and both sexes. Apply to Manager, Clarksburg, Ont.

CASTLE

at reasonable prices. requiring such will be invited. ALTON, ONT.

STOCK FARM

Shorthorn calves of Shropshire ram and ewe lambs, and cockerels of Haw- JOHN RACEY, Quebec.

STOCK FARM

and one roan; age sired by Imp. Lord =, bred by A. Wat- W. RUSSELL.

QUESTIONS AND ANSWERS.
Miscellaneous.

ROPE INJURY TO HEEL.

Colt got burnt with a rope a couple of weeks ago. Sore discharges, and will not heal up.

Ans.—A wound of that kind is hard to heal. Keep as quiet as possible, and dress with four ounces raw linseed oil, four ounces limewater, and two drams carbolic acid, three times daily. If proud flesh forms, apply a little butter of anti-mony, once daily, as long as necessary.

PELEE FARMERS.

I wish to have the names and addresses of a few successful farmers of Pelee Island and Point Pelee, in order to write them to find out particulars about agricultural conditions and prices of land in that part of Ontario. A SUBSCRIBER.

Ans.—Write A. McKenny, B.S.A., agricultural office, Essex, Ont.

CEMENT WALL.

1. If I build a cement wall for a barn 60 feet by 36 feet, and 8 feet high, how much cement would I require? How thick ought the wall to be?

2. Which is cheaper, cement or stone wall? Which is better, cement or stone wall?

3. Is one kind of cement better than another? J. C.

Ans.—1. One foot thick would be enough for the wall above ground, with a footing or base sixteen inches wide. The foundation should be carried down below frost-line and below any soft spots. It may be mixed one part Portland cement to twelve parts coarse gravel, with plenty of field stone imbedded. The wall should be mixed about one part cement to eight of good gravel. These will, of course, be some deduction for doors and windows, as well as for field stone, which may be worked in. All told, you had better count on about 60 barrels of cement, less whatever you may save by using stone.

2. Under prevailing conditions, cement is usually cheaper, and if the walls are built hollow, either by use of blocks or otherwise, we believe the cement wall is better.

3. We presume there is a certain amount of difference as among various brands. Indeed, contracts specify the brand or brands to be used. It is not for us to discriminate in this matter, however, and we may say that we know of no brand that is unsatisfactory.

BARNYARD DRAINAGE.

In one corner of my barnyard there is a small depression into which the water from the higher part of the yard gathers at the time of a spell of wet weather, or during the early spring thaw. It also runs in from the roof of buildings, making the yard untidy. Two or three years ago, I dug a hole about four feet square, down to building sand, then filled the hole with stone. For a time it worked well, but wash from the yard formed a sort of sediment over the stone so that the water from the yard fails to soak through to the sand.

1. Would a tile drain answer the purpose for getting the water away?

2. Which is the best kind of tile for the purpose, the ordinary drain tile, or tile with a collar on one end large enough to receive the small end of the next tile? Would the sediment from the yard be likely to enter at the joints of the tile and choke them up?

3. Would it be a good plan to cover the joinings of the tile with a piece of sod or a little lock of hay?

4. What is good fall for drain for 100 feet? Would need to tile about 300 feet. A. B. H.

Ans.—1. Yes, at least until the sediment again made the surface of the ground watertight. You should try to avoid having any liquid from the barnyard drain away to such a place.

2 and 3. Ordinary tiles, if covered over with gravel to a depth of six inches, would be kept free of sediment, and would answer fully as well as those made with collar.

4. There ought, if possible, to be at least two inches fall in each 100 feet of drain. Less will do, but more than this is better.

THE PAGE WIRE FENCE COMPANY LIMITED
HEAD OFFICE & WORKS WALKERVILLE CANADA BRANCHES TORONTO MONTREAL & ST. JOHN

BRITISH COLUMBIA DISTRIBUTORS E.G. PRIOR, 6-CO. VICTORIA VANCOUVER

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HIGH-CLASS SCOTCH SHORTHORNS BY AUCTION

At the farm, 10 miles from Thornbury Sta., G.T.R., and 12 miles from Markdale Sta., C. P. R., on

Thursday, March 9th, 1911

MR. S. J. MCKNIGHT will sell without reserve 25 Scotch Shorthorns, 20 females, 1, 2 and 3 years of age, 5 bulls from 10 to 14 months of age. This is a high-class offering; low, thick-fleshed, soggy, in good condition and bred in the purple.

TERMS are 8 months' on bankable paper, or 5 per cent. per annum off for cash. Conveyances will meet morning trains at both stations. Catalogues on application to:

S. J. MCKNIGHT, Epping P.O.
Auctioneers J. A. MYLES, Heathcote, Ont. CAPT. T. E. ROSSON, London, Ont.

OIL CAKE

The finest feed known for stock. Once a user, always a user. Sold either fine or coarse ground. Write:

J. & J. Livingston Brand
DOMINION LINSEED OIL CO., LIMITED,
BADEN, ONTARIO. 31 Mill St., MONTREAL, QUE.

Farmers and Cattlemen, Read This!

When you cannot sell your export cattle at satisfactory prices at home, and wish to ship them to the Old Country markets, write or wire for space, market and shipping information to

Donald Munro, Live-stock Forwarding Agent and Commission Salesman,
43 St. Sacramento Street, Montreal.

Load your cattle carefully, and bill them to me. I provide the necessary feed, insurance, etc., pay freight and all other expenses from shipping point, and give liberal cash advances on all consignments. Cattle are loaded on steamer under my personal supervision, and placed in charge of capable attendants for the ocean voyage. I represent the most reliable salesmen at all the different British markets. BUSINESS ESTABLISHED 1890. REFERENCES: THE MOLSONS BANK, MONTREAL.

Maple Hall Shorthorns

We have 13 young bulls for sale between 10 and 15 months old, and they are a choice lot. There is not a poor one amongst them. There are two Cruickshank Duchesses of Glosters, five Cruickshank Butterflies, five Crimson Flowers, one Sheppard Rosemary.

DAVID BIRRELL & SON, GREENWOOD P. O., ONT., CLAREMONT STATION.

Shorthorns and Clydesdales

For sale: 6 bulls 14 to 20 months old (4 reds and 2 roans), 6 bulls from 10 to 13 months (3 reds, 2 roans and 1 white); 15 imported and home bred cows, in calf and with calves at foot. Herd bulls: Bullrush (imp.), a Cruickshank Butterfly; and Royal Winner (imp.), a Marr Bessie. A richly-bred Clydesdale stallion rising two years by imported sire and dam. Visitors always welcome. Burlington Junction station, G.T.R. Bell phone.

W. G. Pettit & Sons, Freeman, Ont.

Maple Leaf Shorthorns and Hampshire Hogs

Offering for sale Shorthorn bulls and heifers and young Hampshire pigs.

PORTER BROS., APPLEBY P.O., BURLINGTON STA. Phone.

SPRINGHURST SHORTHORNS

Excellent lot of Scotch-bred bulls fit for service (bred for beef and milk), also heifers, for sale.

H. SMITH, HAY P. O., ONT.
FARM ADJOINING EXETER ON G. T. R.

Steel Tanks

Fig. 3

We only manufacture one grade. Our steel is the best American grade. Our tanks are so thoroughly braced that they will not twist or bulge. Heavy galvanized angle on all the corners and, when necessary, inside.

CHEAP TANKS ARE EXPENSIVE
It pays to buy a first-class article at a reasonable price. Write us.

Ontario Wind Engine & Pump Co.
(LIMITED)
WINNIPEG. TORONTO. CALGARY.

Have on hand at the present time a choice lot of

Shorthorn Bulls

ready for service, mostly from imported stock, of such families as the Rosewoods, Butterflies, Beautys and Duchess. One of the lot is a red imported bull of the choicest breeding. Come and see them during the holidays.

H. J. Davis, Woodstock, Ont.
G. T. R. and C. P. R. Long-distance Bell phone.

SHORTHORN FEMALES

OF ALL AGES FOR SALE.

Prices to suit all kinds of customers. Have one red eleven-months-old bull left; a Clipper; price \$100.

J. T. GIBSON, DENFIELD, ONTARIO.

GREEN GROVE Shorthorns, Yorkshires and Clydesdales. Three-year-old imp. bull for sale. Owing to having heifers to breed, I have decided to offer my choicely bred Sittyton Butterfly bull, Benachie (imp.) = 69954 =, bred by A. T. Gordon; sire Scottish Farmer, grandson of Scottish Archer; dam Beatrice 2nd, which produced Bandmaster, the first-prize Royal winner, which sold for 600 guineas. Also young stock, either sex. **GEORGE D. FLETCHER, Binkham, Ont., Erin Sta., C. P. R.**

MAPLE LODGE STOCK FARM 1854
Very desirable young 1911
SHORTHORN BULLS FOR SALE.
Have best milking strains. LEICESTER SHEEP of highest quality. Lucan Crossing, G. T. Ry. Telegraph, Ailsa Craig. Telephone.

A. W. SMITH, Maple Lodge, Ont.

Imp. Scotch Shorthorns—When looking for Shorthorns, be sure to look me up. Young bulls fit for service, and females all ages; bred in the purple, and right good ones. **A. C. PETTIT Freeman, Ont.**

Shorthorns and Yorkshires—A choice lot of young bulls and heifers at reasonable prices, from such noted families as Miss Ramsden, Crimson Flower, Lady Sarah and others. Also a fine litter Improved Yorkshires, prize-winning stock. **ISRAEL GROFF, Elmira, Ont.**

Was Terribly Afflicted With Lane Back. Could Not Sweep The Floor.

It is hard to do house work with a weak and aching back. Backache comes from sick kidneys, and what a lot of trouble sick kidneys cause.

But they can't help it. If more work is put on them than they can stand it is not to be wondered that they get out of order. Doan's Kidney Pills are a specific for lame, weak or aching backs and for all kidney troubles.

Mrs. Napoleon Larmour Smith's Falls, Ont., writes: "I take pleasure in writing you stating the benefit I have received by using Doan's Kidney Pills. About a year ago I was terribly afflicted with lame back, and was so bad I could not even sweep my own floor. I was advised to try Doan's Kidney Pills, which I did, and with the greatest benefit. I only used three boxes and I am as well as ever. I highly recommend these pills to any sufferer from lame back and kidney trouble."

Doan's Kidney Pills are 50 cents per box or 3 for \$1.25, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering direct specify "Doan's."

Dr. Stewart's Pure Condition Powders MAKES STRONG, HEALTHY STOCK.

Horses, cattle, hogs and poultry—not a stock food, but a scientific blending of roots, herbs and barks; makes good solid flesh naturally, not artificially; does not bloat; acts directly on digestive organs.

If not satisfied, your money back.

The standard for over 30 years. Large cans 50 cts., prepaid. Send for our veterinary booklet.

At most dealers, or PALMER MEDICAL CO., Windsor, Ontario.

10 Scotch Shorthorn Bulls 10 FROM 10 TO 14 MONTHS OLD

The Princess Royal, Secret, Bessie, Village Maid families are represented in lot. First-class herd headers and farmers' bulls for getting market-topping steers. Prices very reasonable.

JOHN MILLER, BROUGHAM, ONT. Claremont Station, C. P. R., three miles.

Woodholme Shorthorns are of the richest modern in type and quality. For sale: One and two-year-old heifers, several young bulls, thick-fleshed, low-down and mellow.

G. M. FORSYTH, Claremont, Ont. 100 yards from station. Phone connection.

HIGH-CLASS SHORTHORNS

I have on hand young bulls and heifers of high-class show type, pure Scotch and Scotch-topped, sired by that sire of champions, Mildred's Royal. If you want a show bull or heifer, write me.

GEO. GIER, Grand Valley P.O. and station, also Waldemar station.

SPRING VALLEY SHORTHORNS

If you want a good Shorthorn bull, we have them. Canadian-bred and imported. Females all ages. Also a few good YORKSHIRES—boars and sows. Prices right.

Phone connection. Ky'e Bros., Ayr, Ont.

Shorthorns

Present offering: 12 bulls from 5 to 20 months old; 40 cows and heifers to choose from. Nearly all from imported bulls. At prices to suit everyone. Come and see them, or write: Robert Nichol & Sons, Hagersville, Ont.

Oakland Shorthorns for Sale

Here is a herd of breeders, feeders and milkers. About 50 to select from. 7 bulls from 8 months up to 2 yrs. Prices from \$90 to \$130. Scotch Grey 72692 at head of herd. G. T. R.

Jno. Elder & Son, Hensall, Ont.

INVERNESS SHORTHORNS

I can supply Shorthorns of all ages, with richest Scotch breeding and high-class individuality.

W. H. EASTERBROOK, Freeman, Ont.

4 Shorthorn Bulls FOR SALE

with size and quality. Several females, all bred from heavy-milking dams.

Thomas Graham, Port Perry, Ontario.

QUESTIONS AND ANSWERS. Miscellaneous.

ROPE OIL.

Can you tell me where I can get rope oil, and what price? W. B. A.

Ans.—This oil, used in the manufacture of ropes, could probably be secured from some wholesale hardware establishment, at about 60 cents per gallon.

INCOME ASSESSMENT.

1. What amount of income must a farmer have before he can be assessed on same?

2. How is it to be made, on face value of bank account, and notes of hand and mortgages, and any other securities he may possess, or in what way? Ontario.

Ans.—1. The income of a farmer derived from his farm is entirely exempt from taxation.

2. The assessment would be in respect of the interest or dividends merely, and not on the amount of capital deposited or invested. Such income, also, would be exempt, provided it did not exceed \$300, and the person is a householder or head of a family, and not in receipt of an income from all sources exceeding \$300.

HOG PROSPECTS—FORMALDEHYDE FOR PEA BUGS—CEMENT FOUNDATION.

Since subscribing for your valuable paper, I have noticed quite a few items on the profits of Sows versus Cows. I am only a young man, and don't pretend to know everything, but I have had and seen considerable experience on both these classes of stock, and I think circumstances alter cases. I noticed one writer sold his milk for \$6,510.61, to the Canadian Milk Products Co. Well, away up here, we can't sell our milk for such prices. There is no demand for milk, you may say, at all. By drawing it five miles, in time for the 7-o'clock train, we might get 3 or 4 cents per quart. Another thing is the pasture. Now, for myself, I have only fifty acres, and only thirty-five of that cleared, and where have I room for pasture? Of course, I intend to clear more as I have time. Now, Mr. Editor, I am writing this to learn, and I am going to ask you to print this in your paper, to ask some kind brother farmer to write on the subject. I am only starting, and, not having too much money, and neither house nor barn in condition, I would like to know what is the best routine of farming to follow. My farm is good for wheat—excellent—but there has been wheat upon wheat (as it has been rented out), until it is run out, though last season there was a good crop on it. From my experience, in such a case, sows should be more profitable, I think, as I can grow a lot of roots, and I don't need pasture. I have one sow that raised 99 pigs, and she is five years old in the spring. I thought of raising or keeping two sows, and raising about two acres mangels, and then I would have about 40 pigs per year, as my farm yields about 600 bushels of grain. I once heard a prosperous farmer say, if there was no money in buying feed to feed stock, there was no money in feeding your own feed. I once lived on an eight-acre lot, and I fed off eight pigs, and they did miserably, as I thought, compared with some I had seen, and I cleared \$50 on them. Of course I did not count in 20 quarts milk every day from two cows.

1. Would you be kind enough to let me know what are the prospects for hogs?

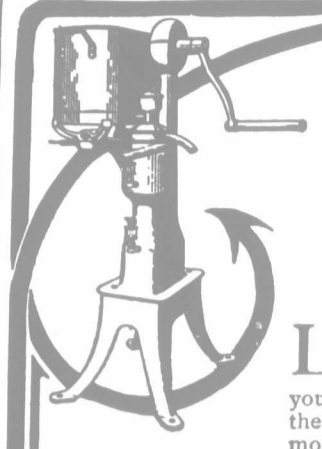
2. Would using formaldehyde on peas prevent bugs?

3. How much cement would it take to build a wall 16 x 22 x 8 feet, and if an 8-inch wall would be strong enough for a cellar under a frame house the above size? R. B.

Ans.—1. So far as we can see at present, the prospect is for a continuation of moderately good prices for hogs.

2. It is not recommended for this purpose. Carbon bisulphide is what is used, treatment being given shortly after harvest.

3. An eight-inch wall under frame house would be quite strong enough. Foundation wall for house of the dimension given would require about 7 cords of gravel and 28 barrels of cement, if mixed 1 to 8.



OWNERS KNOW THE REASONS WHY IHC CREAM HARVESTERS PAY BEST

LET IHC owners tell you about IHC Cream Harvesters. They know IHC superiority by actual experience. The local dealer will give you the names of some owners near you. Learn from them why IHC Cream Harvesters skim closest, are most durable, easiest to clean, and easiest running.

IHC Cream Harvesters

Look over the IHC separators they are using every day. Then consider these facts:

The wearing out of parts and many other cream separator troubles are largely due to dust and milk getting into the gears. IHC Cream Harvesters are the only separators with dust and milk proof gears which are easily accessible. A glance at an IHC will show you this great feature. IHC Cream Harvesters are protected against wear at all points by phosphor bronze bushings—not cast iron or brass bushings. IHC Cream Harvesters are constructed with larger spindles, shafts and bearings than any other separator. The IHC bowl is free from slots or minute crevices, which make it remarkably easy to clean. There are many other advantages which any IHC owner or the local dealer will point out and prove to you. IHC Cream Harvesters are made in two styles—Dairymaid—a chain drive machine, and Bluebell—a gear drive separator—each in four sizes. In justice to yourself, see an IHC owner or the local dealer before you decide on any separator. If you prefer, write for catalogues and all information to nearest branch house.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA Chicago (Incorporated) U.S.A.

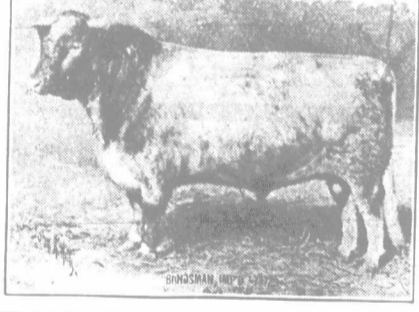
IHC Service Bureau The bureau is a center, where the best ways of doing things on the farm, and data relating to its development, are collected and distributed free to everyone interested in agriculture. Every available source of information will be used in answering questions on all farm subjects. If the questions are sent to the IHC Service Bureau, they will receive prompt attention.



RAW TORONTO, 1815. WALKERTON, 1895. ALL KINDS WANTED.

FURS

In any quantity. Ship by freight, express or mail. We pay charges, and remit full market value same day. Send trial shipment, or write for information, prices, tags, etc. C. H. ROGERS, WALKERTON, ONT. DIRECT EXPORTER AND MANUFACTURER.



SCOTCH SHORTHORNS 100 HEAD IN HERD.

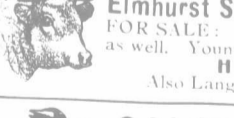
Headed by the imported bulls: Bandsman, a half-brother to the \$6,500 Count Crystal, the highest priced calf on record in Scotland; and Village Duke, a son of Villager, winner of 18 first and special prizes in Scotland. For sale: 12 good young bulls of the choicest breeding, and 40 young cows and heifers. All of noted Scotch breeding. In calf to our stock bulls.

Farm 1/4 Mile from Burlington Jct. Sta. Long-distance phone. Mitchell Bros., Burlington, Ont.



H. CARGILL & SON

have to offer at the present moment an exceptionally good lot of young bulls, which combine all the requisites necessary for the making of superior stock sires, viz.: Quality, Size, Conformation and Breeding. If interested, come and make your selection early. Catalogue on application. John Clancy, Manager, Cargill, Ontario.



Elmhurst Scotch Shorthorns and Large English Berkshires FOR SALE

Five young bulls, red and roans, fashionably bred and quality as well. Young sows bred for March litters. H. M. VANDERLIP, Cainsville, Ont., P. O. and Station. Also Langford Station. B. H. Radial in sight of farm, B. H. phone.



SALEM STOCK FARM

Young bulls fit to head the best herds; are priced reasonably. Can suit you in SCOTCH SHORTHORNS of any age. Elora, G. T. R. and C. P. R., 13 miles from Guelph. J. A. WATT, SALEM, ONT.

PLEASANT VALLEY SHORTHORNS

For Sale: 1 red, 1 roan, 2-year-old show bulls. Several good bull calves, also some yearling heifers. Some show propositions among them. If interested, write or call and see us before buying. GEO. AMOS & SONS, MOFFAT, ONTARIO. Farm 11 miles east City of Guelph on C. P. R. 1/2-mile from farm.

SUNNY SLOPE SHORTHORNS

I breed Scotch Shorthorns exclusively. I have some choice young females safe in calf and some good young bulls for sale at present at prices you can pay. Long-distance phone. A. EDWARD MEYER, BOX 378, GUELPH, ONT.

Ring-Bone



There is no case so old or bad that we will not guarantee
Fleming's Spavin and Ringbone Paste
to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of Fleming's Vest-Pocket Veterinary Adviser.

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durable bound, indexed and illustrated. Make a right beginning by sending for this book.

FLEMING BROS., Chemists,
75 Church St., Toronto, Ontario

QUESTIONS AND ANSWERS.
Miscellaneous.


PEAR SCAB—FERTILIZER FOR ONIONS.

1. I have a pear tree apparently about 15 years old, standing about ten feet from the north end of a one-story kitchen, which has for two years borne a good crop of pears (medium early), about seven-eighths of them being covered with black scabs, and also cracked open to the core, with several cracks on each pear. The fruit that is cracked and scabby is very small. The tree appears to be in a healthy condition. What should I do with the tree?

2. What is the best fertilizer for onions on an open clay, with black loam top, well drained?

Ans.—1. This is pear scab, a fungous disease similar to apple scab, and requiring similar treatment. Spray before buds burst with lime-sulphur 1 to 11; also before blossoms open, after blossoms fall, and again two weeks later with Bordeaux (4, 4, 40), or with lime-sulphur 1 to 30 or 1 to 35.

2. There is nothing better than cow manure.



Rock Salt, \$10.00 ton.
Toronto Salt Works, 128 Adelaide St. E.,
G. J. CLIFF, MANAGER. Toronto, Ont.

Riverside Holsteins

Choice bulls 6 to 9 months old, sired by Sir Pieterje Posch De Boer and Prince De Kol Posch. Later is the only son of champion cow, dairy test, Guelph, 1908 and 1909, and out of R. of M. dams.

J. W. Richardson, Caledonia, Ont.

Haldimand Co. Long-distance phone.

WHY USE A HOLSTEIN BULL?

No other bull will cross so well with the farmer's grade cows, giving him large, robust offspring that will grow strong and vigorous, and develop into paying dairy cows—the kind that give MILK. We have them for sale from dams that are producers. Write us, or come and see.

MONRO & LAWLESS,
Elmdale Farms, Thorold, Ontario

THE MAPLES HOLSTEIN HERD

Everything of milking age in the Record-of-Merit. Nothing for sale at present but a choice lot of bull calves sired, by King Posch De Kol. Write for prices, description and pedigree.

Walburn Rivers, Folden's, Ontario

Notice! In public test we have the champion and 2nd highest scoring cow; world's record 3-year-old, junior champion 3-year-old in official test. Average per cent. fat 4.55. Herd headed by Grace Fayne 2nd's Sir Colanthe. Sire's dam and sister with 35 pounds butter records each. **M. L. Haley and M. H. Haley,** Bull calves for sale. **Springford, Ontario**

HOLSTEINS AND YORKSHIRES

R. HONEY, Brickley, Ont.
Northumberland Co.
Offers a choice lot of boars and sows ready to mate; also orders taken for the coming crop of calves from Prince Posh Calamity Bleske and R.O.P. cows.

Springbank Two choicely-bred bull calves for sale. One is 10 months, the other 8 months. From high-class milkers. Prices reasonable. For particulars and breeding write to: **Wm. Barnett & Sons, Living Springs, Ont.** Fergus, C. P. R. and G. T. R.

Holsteins and Tamworths for Sale—Seven bulls, boars fit for service; sows bred, pigs, either sexes, from 6 weeks up. Sixty-five to select from. Phone connection, via Cobourg. **BERTRAM HOSKIN, The Gully P.O.**

Holstein Cattle—The most profitable dairy breed. Illustrated description booklets free. **Holstein-Friesian Ass'n of America.** F. L. HOUGHTON, Secy, Box 127, Brattleboro, Vt.

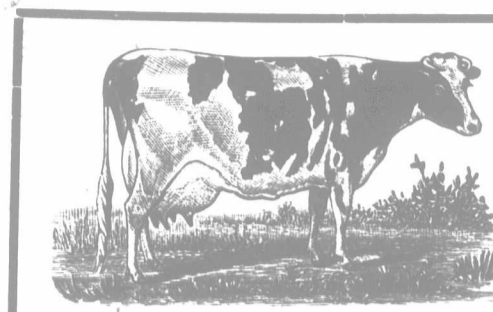
Lake View Dairy Farm I have several of noted Francy breeding, also daughters of Sir Admiral Orms. Present offering: Bull calves and heifers. **W. F. BELL, BRITANNIA BAY, ONTARIO.**

Evergreen Stock Farm offers bulls 2 to 12 months, from highest testing stock, giving 12 lbs. at 2 years to 22.8 lbs. for mature cows. Sired by Sir Mercena Favorite. Dam and gr. dam have average record of 24.60 lbs. butter in 7 days. **F. E. PETTIT, Burgessville, Ont.**

ELMWOOD HOLSTEINS.—Two choicely bred bulls 17 mos. old, grandsons of Sarcastic Lad; sired by a son of Iantha Posch, whose dam's record is 27½ lbs. butter in 7 days. Young cows to freshen during March and April. Prices right. **E. D. George & Sons, Putnam, Ontario**

AYRSHIRE CATTLE!
Several choice cows and heifers for sale. Good teats; good udders. Record-of-Performance a specialty. One choice bull seven months old. White choice bull cockers, \$2 each. **WM THORN,** Trout Run Stock Farm, LYNEDOCHE, ONTARIO. Long-distance phone in house.

BUSINESS-BRED AYRSHIRES
My herd of Ayrshires have for generations been bred for milk production. They are nearly all in the R.O.P. My present offering is several young bulls most richly bred. **James Begg, R. R. No. 1, St. Thomas, Ont.** Bell phone.



Clydesdales, Road Horses & Holsteins
BY AUCTION

At the farm, 1¼ miles west of Glen Grove, on Yonge Street,
THURSDAY, MARCH 9TH, 1911

Mr. C. H. Shaver will sell by auction 3 registered Clydesdales, an imp. mare and her two daughters, 17 Holstein cattle (15 females and 2 young bulls); several of the females are in the R. O. M. and R. O. P. They are high producers, and have rich official backing. Also to be sold are several high-grade and high-class Thoroughbred geldings and fillies. This is a sale of high-class stock in splendid condition.

TERMS—8 months' on bankable paper, or 6% per annum off for cash.

Conveyances will be at Davisville P. O. at 11 a.m. on day of sale. Lunch at noon. Catalogues by addressing:
J. H. Prentiss, Auct. C. H. Shaver, Davisville P. O., Ont.

Fairview Farms! We are offering sons of Pontiac Korndyke, sire of the world's record Pontiac Clothilde De Kol 2nd, 37.20 lbs. butter in 7 days, and the sire of seven daughters that average 31.13 lbs. each in 7 days, equalled by no other sire living or dead. Also sons of Rag Apple Korndyke, whose dam, Pontiac Rag Apple, 31.62 lbs. butter in 7 days, is a full sister to the world's record cow, making these two full sisters' records average for the seven days 34.41 lbs. each, equalled by no other two full sisters of the breed. Also sons of Sir Johanna Colantha Glad, whose dam and sire's dam average 33.61 lbs. each, which is higher than can be said of any other sire of the breed. Dams of many of these calves are high-record daughters of Pontiac Korndyke and Rag Apple Korndyke. Write me for breeding and price.

E. H. DOLLAR, HEUVELTON, ST. LAW. CO., N. Y.

LAKEVIEW HOLSTEINS

Two young bulls, calved March 27th and April 25th, sired by Count Hengerveld Fayne De Kol, whose sire is the sire of D. J. Kol Creamelle, 10,017 lbs. milk in 100 days, and whose dam is the dam of Grace Fayne 2nd's Homestead, who made 35.55 lbs. butter in 7 days. These two bulls are mostly white, and are smooth and big. Must make room for this season's calves, and will sell reasonably.

E. F. OSLER, BRONTE, ONTARIO

HOLSTEINS AND YORKSHIRES

We own the champion two-year-old of the world for yearly production. We own the champion Canadian-bred three-year-old and champion cow in the Record of Merit. We own the sire and dam of champion of the world and the champion three-year-old. We are breeding 30 heifers to this great bull, which are for sale. Also bull calves from high-record cows, and one two-year-old bull, dam's record over 27 pounds butter in 7 days. Trains met by appointment.

D. C. FLATT & SON, Millgrove, Ont.
Farm phone 2471, Hamilton.

Holstein Bulls

From high-class, officially-tested cows. Ready for service. Also bull calves.

R. F. Hicks, Newton Brook, Ont., York Co. Toronto Shipping Point.

Silver Creek Holsteins—Official records range from 13 lbs. for 2-year-olds to 22 lbs. for mature cows. Stock bull, King Fayne Segis Clothilde, his 7 nearest dams' records average 27 lbs. For sale are young stock of both sexes, sired by bull with high official backing and out of Record cows.
A. H. TEEPLE, Currie's P.O., Ont., Woodstock, Sta. Phone connection.

Ayrshire Cattle & Ponies
BY AUCTION

In the CITY OF HAMILTON, at the Hamilton Sale Company's Sale Barn, three minutes' walk from the Stuart St. Station, on
THURSDAY, MARCH 9th, 1911

MESSRS. N. & E. DYMENT will sell by auction, without reserve, 30 head of Ayrshire cattle, 12 cows in milk, 11 heifers from 2 months to 2 years of age, 6 bull-calfs from 3 to 12 months of age, and one bull 3 years of age. Several of those in milk are in the R. O. P., and many of the others are sons and daughters of R. O. P. dams. A strictly high-class offering. The ponies are Welsh and Icelandic; ten of them will be sold, from 2 to 7 years of age well broken and sound; also the grand pony stallion, Venturesome Verne, a Hackney-Welsh cross.

TERMS: Seven months' on bankable paper, or 5 per cent. per annum off for cash. Catalogues on application to:
E. DYMENT, Copetown P.O.
SALE AT 1.30 P.M.

STONEHOUSE Ayrshires

The champion Canadian herd for 1910 at the leading shows. 32 head imp., 56 head to select from. R.O.P. official records, the best and richest bred types of the breed. Anything for sale. Young bulls, female—all ages.
HECTOR GORDON, HOWICK, QUE.

AYRSHIRES

We are now selecting in Scotland our 1911 importation of Ayrshires. Over 20 already secured as a result of our visit in Oct. Write us about young bulls and females. Deepest milking strains. Reasonable prices. Home offering: A few very choice bull calves. Two fit for service.
ROBT. HUNTER & SONS, Maxville, Ont.

Ayrshires

Bull calves, from 4 months to 9 months, from imported sire and Record of Performance dams. Records 50 to 63 pounds per day.
N. Dymont, R. R. No. 2, Hamilton, Ont.

HILLCREST AYRSHIRES.—Bred for production and large teats. Record of Performance work a specialty. Fifty head to select from. Prices right.
FRANK HARRIS, Mount Elgin, Ont.

Ayrshires & Yorkshires

Our Ayrshire herd is in fine form. We can fill orders for a number of bulls fit for service, of good dairy breeding, or imported stock for 1911. Females any age. Young calves either sex. Young boars fit for service. Young pigs ready to ship. Write for prices and particulars. Long-distance phone.
ALEX. HUME & CO., Menie P. O., Ont.

MATERIALS FOR BASEMENT WALL.

1. Am purposing to put a basement under shed for cow stable. Which would you recommend, concrete wall or hollow building brick?

2. How many hollow bricks would it take for shed 60 feet by 24, 8½ feet high, the foundation being laid with common stone to a height of six inches above ground level?

3. What amount of cement or lime would it take for same? S. H. G.

Ans.—1. We would certainly recommend a wall of good hollow bricks or cement blocks, properly laid, in preference to a solid concrete wall. Though the latter may be stronger and cheaper, it is not so dry, warm, or healthful for stock. If using bricks, be particular to select only those of good, hard quality, because, in too many cases, the large bricks have proved defective in this particular, and discolor badly with weather.

2. After deducting doors and windows, you may figure the number of bricks, approximately, by dividing the cubic contents of the entire wall by the cubic contents of one brick.

3. Much depends upon the way in which the mason does the work. An experienced builder and dealer to whom the query was submitted, said, for such a wall, probably five barrels or about fifteen bushels of gray lime, and three barrels of cement, would be needed.

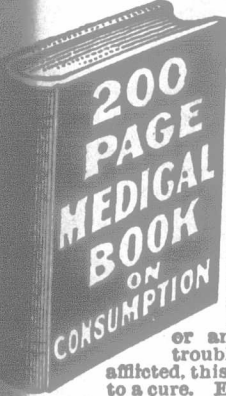
PROBABLY LIVER COMPLAINT.

Last fall my hens took sick very suddenly. I noticed that their heads turned a purplish-red, and that they were mopy. I fed them a poultry food three times daily, also a little salts in chop, slightly moist. It helped them, but several died. I would find them lying under the roosts. At present some of my hens are very pale about their heads. They get lame in one leg, and, last of all, die. I have also fed them the condiment in boiled oats, but it does help them.

ANSUBSCRIBER.

Ans.—Symptoms point to a form (of which there are many) of liver complaint. It is to be regretted that the age of the fowls, and kind of food given are not mentioned. Liver complaint among fowls, especially among the older fowls of the heavy breeds, is common at this period of the season and a few weeks later, for it is now and then that any errors in the food given and manner of feeding it show their effects. The dark purple comb and lameness are both indications of liver trouble. It may be fatty degeneration, or congestion of the liver. It really matters little. Both are usually due to over-feeding, lack of exercise, or the too liberal use of condiments, lack of grain food, overcrowding, etc. As to treatment, it is hard to at once cure what for some time past has been coming to a head. Try a liver pellet occasionally; give plenty of green food, and supply any lack in essentials, such as grit, lime for shell, etc., etc. Treatment for the more-advanced stages of liver complaint is seldom successful. Reduce rations, and change them if necessary. A. G. G.

Consumption Book



FREE

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless. Write at once to the **Yonkerman Consumption Remedy Co.**, 1632 Rose Street, Hamazon, Mich., and they will send you from their Canadian Depot the book and generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait—write today. It may mean the saving of your life.



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Also Piles, Burns, Scalds, Chapped Hands and Face.

Gentlemen use it after shaving. This Balm is handled by the best firms, and is highly recommended by those who have used it.

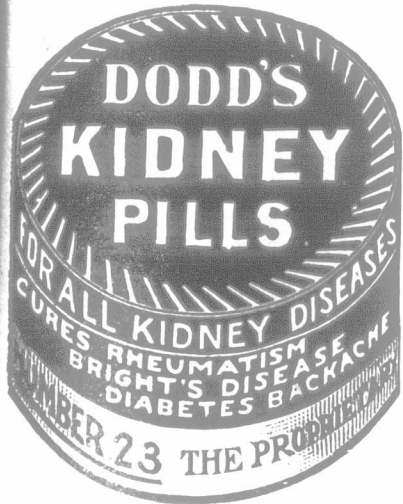
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Many stories are told of a certain section of the South, where the inhabitants are noted for their longevity, but none better illustrates the view the natives take of the matter than this: "Your father must be getting pretty well on in years," said a cousin from the city to a farmer. "Yes; pap's nigh to ninety." "Health good?" "No; not just now. He ain't been feeling himself for some time back." "What seems to be the trouble?" "I don't know. Sometimes I think farming don't agree with him any more."



GOSSIP.

WHOLE-WHEAT BREAD.

Sir Oswald Mosley, one of the best-known stock-breeders in the Midlands, has taken a new line in which remarkable interest has been developed all over the country. He has started a scheme for the supply of whole-meal bread to the inhabitants of the village of Rolleston, on his estate near Burton-on-Trent. The flour is ground by the old-fashioned stones, which the modern steel rollers have nearly everywhere displaced. A great many people are gravely dissatisfied with our present bread, and as we are a bread-eating people, the matter is of national importance. Certain it is, that since fine flour came into fashion, dental and stomach troubles have greatly increased. Quite a few authorities contend that the whole of the wheat should be used in flour-making.

No one blames the miller for the trouble. He simply supplies what the public wants, and would quickly install stones for the production of whole-meal flour, if there were a demand for it.

Cumberland, which has long been noted for fine, muscular men, used to have a fine "Haver" bread, which was really a very thin cake of fine oatmeal. This was the staple bread on the farms, and was most delicious. Now that that country has largely forsaken this kind of bread for bread made from ordinary white flour, it is claimed there has been considerable deterioration, and especially dental troubles. The village bakery at Rolleston has been simply overwhelmed with orders for the whole-meal bread, and if Sir Oswald's experiment leads to an improvement in our bread supply, he will have greatly enhanced an already great reputation.

Burgoyne's Fyfe.

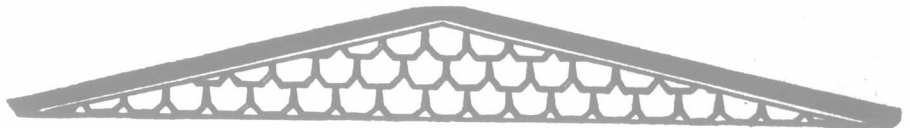
Another attempt to improve our bread supply by bettering the quality of British wheat without impairing its yield, promises success. This work has been done at the Cambridge School of Agriculture. Strong wheats, such as Canadian and Russian, give a much better loaf than English wheat, but seem to be inherently less prolific. Transferring "Fyfe" to England does not appear to increase its yield. So the Home-grown Wheat Committee has been experimenting with crosses, and one cross promises favorable results. This is Red Fyfe, crossed on Essex Rough Chaff. The cross is named Burgoyne's Fyfe, and a considerable quantity of seed has been distributed amongst farmers at 10s. per bushel. The coming season will show how far the experimental promise is borne out in actual field culture.—F. Dewhurst.

TRADE TOPICS.

We draw attention to the advertisement of Wm. Ewing & Co., Montreal, whose catalogue of reliable seeds may be had on application. This 90-page catalogue gives valuable directions regarding culture of the different garden crops, as well as prices of all seed supplies for the farm, and vegetable and flower gardens. Poultry and pet supplies, and also implements for the lawn, garden and greenhouse, are catalogued as well.

PLANET JR. TOOLS were invented by Samuel L. Allen, a practical farmer, whose original ideas led him to construct improved implements for use on his own farm. The ingenuity of these inventions, and their practical efficiency, were too good to remain long unknown, and he was soon constructing similar implements for his own neighbors. From this beginning has grown the large and complete plant of S. L. Allen & Company, in Philadelphia, from which farm implements are now shipped to all parts of the world. Planet Jr. tools include seed drills and wheel hoes for garden, one- and two-horse cultivators, potato diggers, and orchard and beet tools that are adapted for all farming and gardening purposes. Any farmer interested will find a copy of the Planet Jr. catalogue filled with valuable suggestions and helpful information. It can be had upon request.

"How are you?"
"Oh, I'm about even with the world."
"How's that?"
"I figure that I owe about as many people as I don't owe."



How "Eastlake" Steel Shingles will save you money



Talk No. 6

A Good Investment

By
The Philosopher of
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Mr. Farmer—consider "Eastlake" Steel Shingles purely from an investment standpoint.

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"Eastlake" Shingles cost you less than any roof that will not last you half as long.

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Time has proven them—roofs covered with "Eastlakes" 25 years ago are in perfect condition to-day.

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And here's a note for the housewife—"Eastlake" roofs mean plenty of clean rain water for household use.

Learn more about "Eastlake" Steel Shingles before spending a dollar in any roofing.

Send for our illustrated booklet, "Eastlake Metallic Shingles," also for booklet containing all these talks. Write to-day.

We also manufacture Corrugated Iron, Barn and House Siding, Metallic Ceilings, Eavetrough, Conductor Pipe, Ventilators, etc.

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Wide-Tire Steel
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This is the kind of equipment you want to haul your loads. T.-K. wagons with Indestructible Wheels will outlast two ordinary wagons. The steel wheels are best construction possible. They are made with staggered spokes, so the tires won't bend between spoke-heads, while the hubs never wear out. Letters from thousands of farmers testify to their superiority. Write for booklet and special prices.

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LET THE PEERLESS WAY SHOW YOU HOW TO MAKE A SUCCESS OF POULTRY RAISING IN CANADA



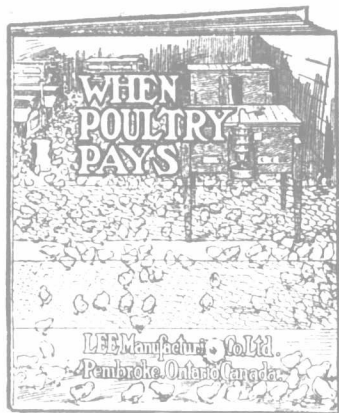
THE PEERLESS WAY of co-operative raising and marketing of poultry will absolutely guarantee success to every poultryman who will carry it out complete. Whether you have never kept poultry—whether you have kept poultry and made a failure of it—whether you have kept poultry merely in a haphazard way—or whether you are now doing well but might do better—The Peerless Way can help you to greater profits. For The Peerless Way shows how to hatch—feed—care for—fatten and kill and HOW TO MARKET.



Send right away for a full description of this money-making method. Let us explain to you just exactly why The Peerless Way will get you more profits, and let us send you our big, plain-spoken, Free Book containing

Some Facts, Their Proofs and an Interesting Offer

that will enable you to put The Peerless Way to work for yourself at a cost so low as to be scarcely worth considering. This book is very frank; it tells you just what you can do, and what you cannot do, and, if you have any leaning whatever towards poultrying as either a business or a side-line, you will be interested in the straightforward way it comes out with information that is vital to your success.



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Gentlemen:—Without obligating myself, you may send me your book "When Poultry Pays," and the proof of how The Peerless Way has successfully co-operated with others.

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It Will Cost You Little to Adopt the Peerless Way



You don't need a great lot of cash to make the right kind of a start in poultrying; the knowledge of what to do and what not to do is far more essential. But you do not need to be an expert; for we are ready to supply you with all the necessary knowledge. If you have just a little money, and a pretty fair amount of common-sense, added to enough diligence to look after things properly, The Peerless Way can make poultry profitable for you.

Co-Operation In Raising and Marketing



The Peerless Way is a great deal more than merely a system of poultry-raising; it is also a practical method of co-operative marketing,—a system that will make you independent of combines, and enable you to obtain top-notch prices for large or small quantities of eggs and poultry by showing you how to market to the very best advantage.

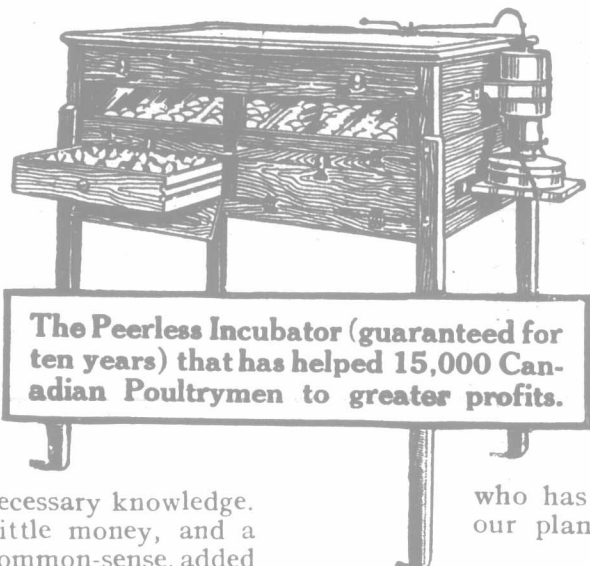
The Peerless Way Has Over 15,000 Successful Users



Over fifteen thousand poultrymen in Canada have made a success of poultry raising by The Peerless Way. They have made no heavy investments—they have started with no elaborate equipment—nor have

they given up a big tract of land to their poultry yards. They have simply done what you, or any other capable person, can do—adopted our system, followed the plain, practical method it teaches, and used freely

the advice of our experts. Most of them, without knowledge or experience, have stepped into the business that guarantees high dividends on a small investment. Some of them are devoting only part of their time to it, and a few of them are devoting all their time to it—though mighty few of them gave it all their time on the start. But every man who has consistently followed our plan has achieved success.



The Peerless Incubator (guaranteed for ten years) that has helped 15,000 Canadian Poultrymen to greater profits.

You Can Have Free Advice From Our Poultry Advisory Board



If you are a user of The Peerless Way, you are entitled to consult our poultry experts at any time without charge. The Peerless Way covers everything in poultry-raising that it is possible for any method to cover; but if, at any time, a point comes up that is peculiar to you alone, all you have to do is to write us. Our experts will consider your case individually and write you personally. This service is free to every member of the Peerless Family.

We Will Show You How To Market Your Poultry And Eggs.



The Co-Operative Marketing plan, that forms so important a part of The Peerless Way, has helped our 15,000 co-workers to make more money than any one of them could have made, working individually. The poultry market is a real market—if you know how to take advantage of it. We are constantly over-run with orders for both eggs and poultry. As a matter of fact, poultrying as a business is a long way from being over-done in Canada—there is plenty of room to make good money out of it. Be sure to send for our book.

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