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**THE FARMER'S ADVOCATE**  
**AND HOME MAGAZINE**  
 \*AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*

Director Central Exp. Farm  
 8 Dec 31, 16

VOL. LI.

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LONDON, ONTARIO, MARCH 23, 1916.

No. 1226

# Get the highest-class telephones for your system

**They will give better and longer service.**  
**Save maintenance cost. 10 years' guarantee.**

THE illustration shows one of our standard type of telephones for rural party line service. Our telephones are the clearest-talking and loudest-ringing telephones on the market.

They are made in Canada, and have many exclusive features — many improvements that add to their efficiency. They are the result of careful study, by our expert engineers, of Canadian telephone requirements. Given the severest tests, and examined part by part, by men of wide experience in telephone construction, they have been pronounced the highest-class, the most efficient, telephones yet constructed.

Your system requires the highest-class telephones that money can buy—telephones that will give the best and longest service—that will save repair expenses—that will cost the least for maintenance—in short, Canadian Independent Telephones.

You may require the services of our staff of qualified telephone engineers to assist in planning construction or solving operating problems. Their wide experience and knowledge are at your service, without cost to you.

Our large investment in the Independent Telephone business makes us directly interested in seeing that every municipal or local company enters the telephone field along the best and safest lines. A failure would injure directly the independent telephone development,

and indirectly our business, so that it is to our benefit to lend our strongest assistance to make every independent telephone company a success.

There are inferior and cheaper telephones on the market, but we are not competing with them for your business. We want your business on the basis of SUPERIOR QUALITY and VALUE.

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And to eliminate all chance, all possibility of dissatisfaction, we offer to send our telephones for FREE TRIAL.

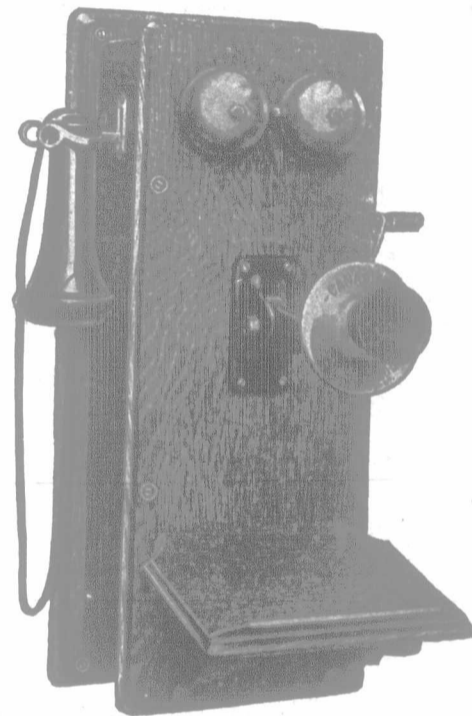
In addition, we GUARANTEE them for 10 years against defects in material and workmanship. That shows our confidence in our telephones.

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 Highest quality silage. Less power. Large capacity. Elevate to unusual heights. Built to last. Throw, blow and lift.

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 One-piece semi-steel frame and perfect alignment of main bearings at all times. Capacities 3 to 30 tons per hour, in sizes from 4 H.P. up. When silos are high, conditions hard, or power thought insufficient, the "Gilson" invariably handles the job successfully. Thousands in use. Write postal today for free Catalogue on "The Wonderful Gilson" line of cutters. Your gas engine will run them.

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THE HYLO SILO is perfectly air-tight. No frozen or spoiled ensilage around the walls. Convenient and perfect fitting doors, adjustable without hammer or wrench. Made of Guaranteed Long Leaf Yellow Pine. Built to last a life-time. Stands rigid when empty.

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 Smooth, Hard, Clean-Cut. Write for Booklet.  
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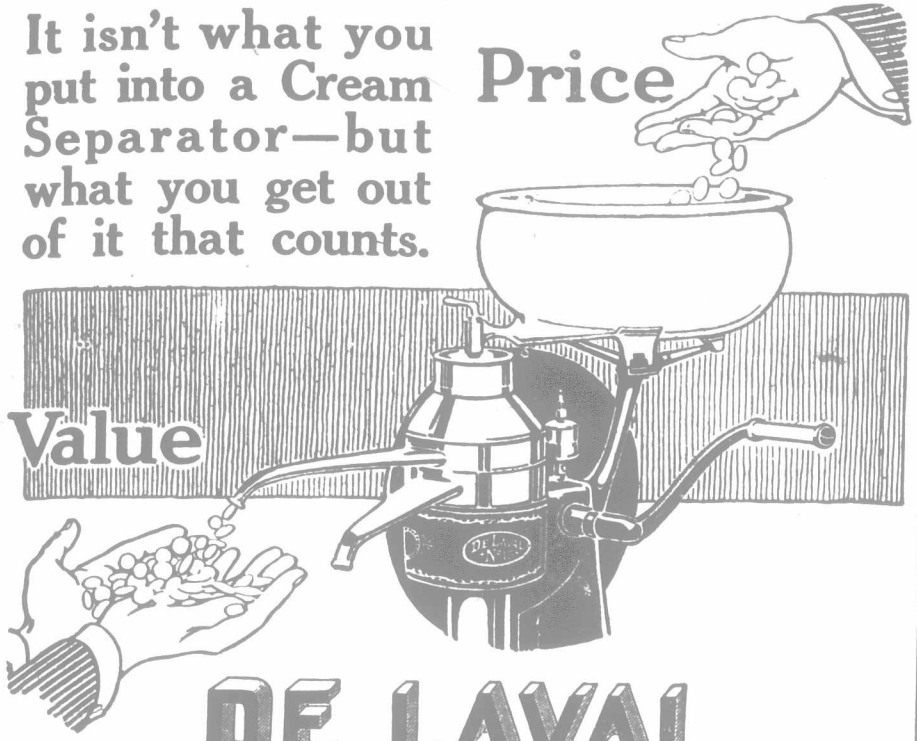
This is the such a favori and it cost free to any p Its frame is steel bars, str ly-braced by The shaft piece of kat runs in well non-heating b Balance whe changeable. Built so stron when in operat lifetime of servic

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It isn't what you put into a Cream Separator—but what you get out of it that counts.

Price

Value



### DE LAVAL Cream Separators are by far the most economical

REAL economy is never short-sighted. It never confuses PRICE with VALUE.

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And there is no reason why you should let its FIRST COST stand in the way either, because the De Laval may be purchased on such liberal terms that it will actually pay for itself out of its own savings.

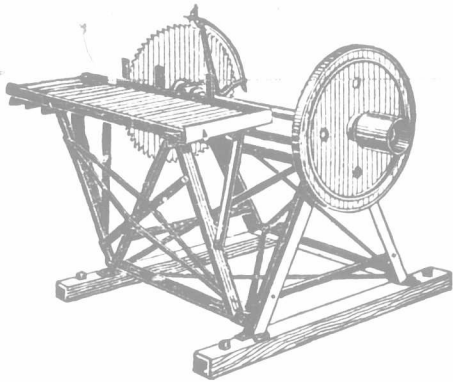
A De Laval catalogue to be had for the asking tells more fully why the De Laval is the most economical cream separator, or the nearest local De Laval agent will be glad to explain this and many other points of De Laval superiority. If you don't know the nearest local agent, simply write the nearest De Laval main office as below.

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

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This is the Saw that has become such a favorite with farm-owners—and it costs only \$19, delivered free to any point in Old Ontario.

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Balance wheel and pulley are interchangeable.

Built so strongly that it never shakes when in operation. And it's good for a lifetime of service.

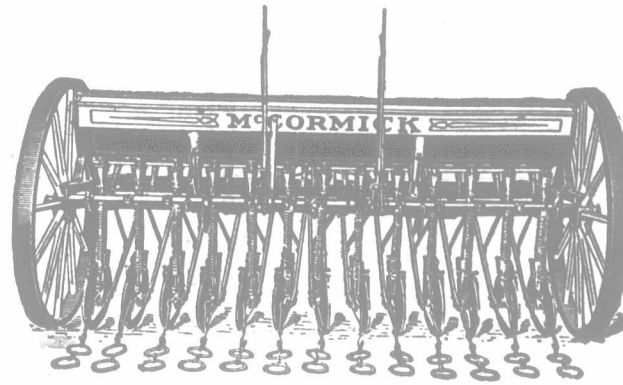
Saw Blades Supplied at These Low Prices

20 inch.....	\$3.25	26 inch.....	\$5.25
22 inch.....	3.85	28 inch.....	6.05
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THE PAGE WIRE FENCE COMPANY LIMITED.

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### Buy and Use a McCormick Drill

OF all the conditions that influence a grain crop—seed bed, planting, weather—there is none more important than planting. Your seed bed prepared, your seed selected, there is still a chance to improve the size and quality of the harvested crop by doing your planting with a McCormick single disk or hoe drill.

Good seed is too precious to waste. Plant it with a no-waste McCormick drill.

Good seed deserves the best possible chance to start and grow. A McCormick drill gives it that chance, by planting it in moist ground and covering it to an even depth with a protecting blanket of soil.

Good planting, such as is done by McCormick drills, removes many chances for crop failure, and adds to the net profits from your grain fields. Buy and use a McCormick drill.

You can get one from the McCormick local agent, who will show you the many features that make McCormick drills such good planters. See the agent, or write us, and we will make it easy for you to own a McCormick drill.

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Contains Phosphoric Acid and Lime, and is the ideal fertilizer for Ontario soils. The consumption has doubled this season, and our entire make has now been sold. If we have no agent in your district and you think you could place a carload next fall, send us your name and address, and our general sales agent will call and have a talk with you.

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Model 75, Roadster \$825—f. o. b. Toronto

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From every Province in the Dominion and every State in the Union we hear of the amazing success of the latest Overland—the \$850 model.

At the New York and Chicago Automobile Shows—where all the season's models were brought together—the new model Overland was the most widely discussed car exhibited.

And why not? An electrically started and electrically lighted completely equipped Overland with four-inch tires for only \$850!

Is there any wonder this car took the whole continent by storm?

Season after season for seven years we have experienced one great success after another.

But this one tops them all.

No other achievement in the history of the entire industry parallels this record.

It stands out alone—boldly—conspicuously—unapproached.

Never before has an automobile success been so rapid, so definite and so sweeping.

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TRADE MARK

## Such An Instantaneous Success

The \$850 Overland has made history. It marks the entrance of a new automobile value—a car complete in every sense of the term at a price which was hitherto thought impossible.

Yet here it is—a powerful five-passenger touring car complete for only \$850.

Note that word "complete."

This means electric starter and electric lights, electric horn, magnetic speedometer—in fact, every necessary item. Nothing is lacking. There are no "extras" to buy.

Note that the motor is the very latest en bloc design—the last word in fine engineering.

In addition note that the tires are four-inch size. This is another big advantage. Many cars costing more have smaller tires.

Note that the rear springs are the famous cantilever type. Another advantage. Cantilever springs mean the utmost in riding comfort.

Note the headlight dimmers—the electric control buttons on steering column—demountable rims and one-man top. These are all big advantages.

This newest Overland is light in weight, easy to handle and very economical to operate.

It's just the car the world has been waiting for.

It is large enough for the whole family—moderately priced, within the reach of the majority—economical to maintain—built of the best quality materials—snappy, stylish and speedy—and complete in every sense.

In short, it is just another striking example of how our larger production enables us to build a bigger and better car and still keep the price within reason.

You'll want one, so order it now.

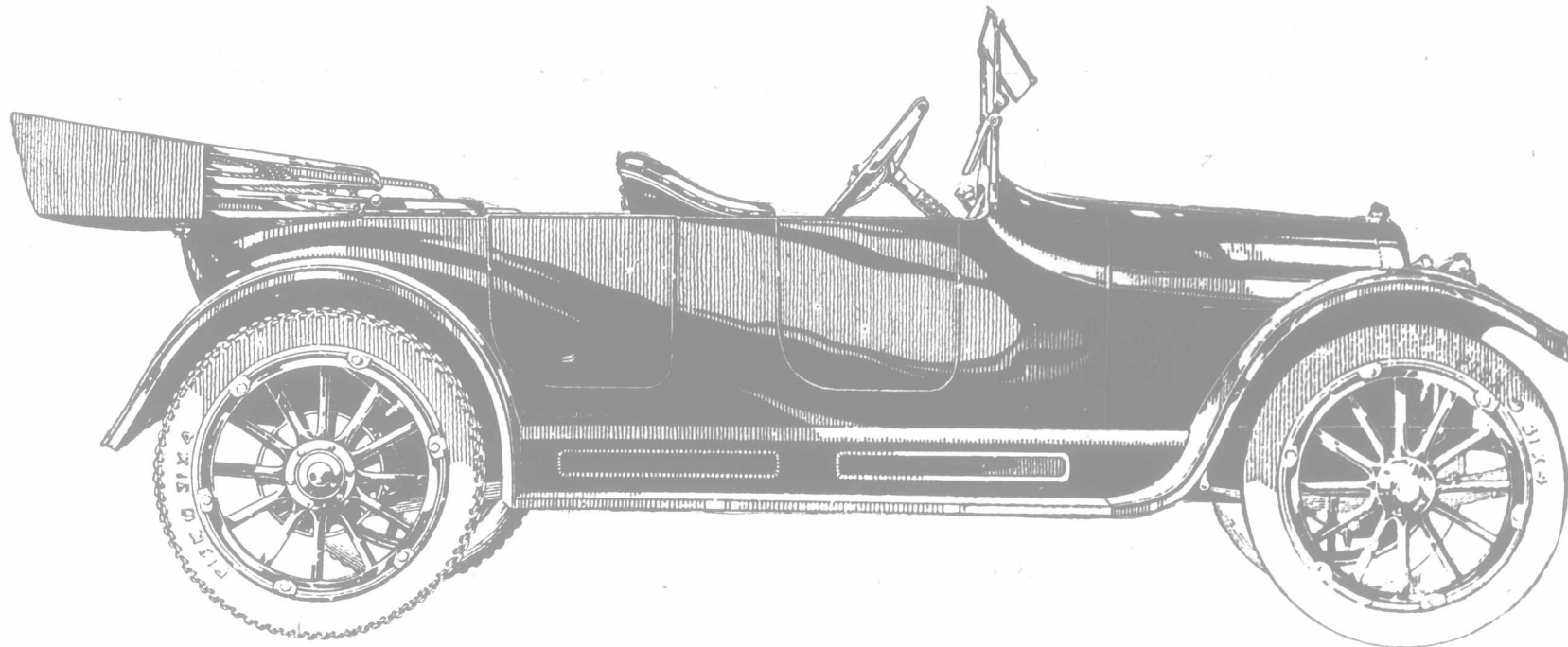
Don't wait, debate or argue with yourself. See that your order is placed immediately.

Then in a few days you and your whole family will be driving your own car.

Remember it comes complete—only \$850!

Catalogue on request. Please address Dept. 582

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## Affords Absolute Stock Protection



INVEST IN  
IMPROVEMENTS  
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Is made of LARGE Wires, which means longer life. Our improved process of galvanizing makes "CANADIAN" last longer and offers greater resistance against corrosion. It is a continuous Stay Fence.

## ONE SOLID WALL OF STEEL!

Full Size Wires  
Full Length of Rolls

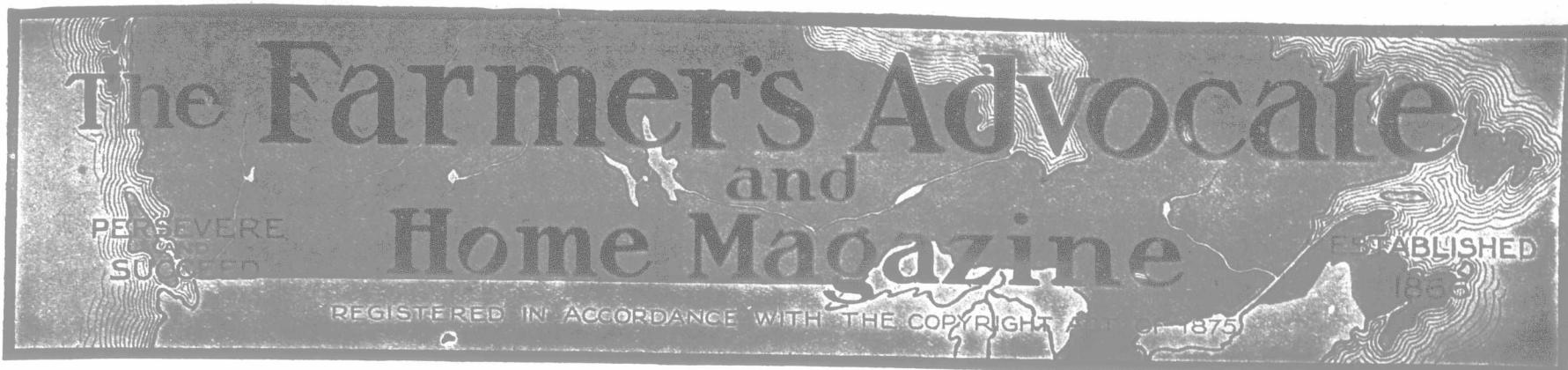
Full Weight  
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MADE BY

### The Canadian Steel & Wire Co.

Winnipeg, Man.

Hamilton, Ont.



LI.

LONDON, ONTARIO, MARCH 23, 1916

1226

## EDITORIAL.

The spring equinox is past and spring begins in earnest. Are you ready?

If you have a friend in the city, write to him and invite him out to help with the farm work during his vacation.

Canada must produce more. To do it more manure is necessary. This means more live stock. All of it should be high-class.

Read "50 below zero" in this issue, and think of our mild winter. But our stock is not yet at pasture, as it is in the Peace River District.

Canada must be prepared for the military fight now at its hottest, but also must be ready for hard, commercial and readjustment battles to come.

There are other seeds besides corn which should be put to the germination test. Perhaps the oats, the clover, the turnips, the beets and many others are not up to 100 per cent. germination.

The school teacher, proficient in every way, rarely is well enough paid. The one not numbered in the proficient class is over-paid at any price. What is the duty of the inspector in such cases?

More and more does it appear that if Canada is to raise 500,000 men or more for the front, there will have to be some systematized form of enlistment or enrolment. Cities have been taking a census. Why not the Dominion?

Lord Shaughnessy advises that military units, already formed, should be recruited up to full strength before others were authorized and put under way in the same districts. This looks like good business reasoning. Why the extra expense?

Figures relating to the amount of money received in the United States for horses and mules sent to Europe for the war do not increase the Canadian farmer's appreciation of the manner in which the Canadian horse market has gone to pieces.

There are some figures in the report of the Commission on the High Cost of Living which should be significant enough to prove to the city man who grumbles: "The farmer is the only man making any money these days," that the farmer gets mighty small returns compared with those of some city business.

In order to keep himself from perishing with cold, a poor, old man stole two sticks of wood from an Ottawa yard, and the Police Magistrate fined him \$10 and \$2 costs, or two weeks in jail. If he had robbed the country of a quarter of a million timber limit or subsidy, to what would the fine and imprisonment have amounted?

Some of our military authorities still persist that no Canadian industry will be short of labor if 500,000 men go to the war, and some go so far as to make it a million, but none of these are called upon to work 200 acres of land alone this year. And we believe other basic industries than agriculture already feel the effects of promiscuous recruiting.

## A Comparison of Product Values.

It is not an uncommon thing to hear a man of the city make this statement: "The farmer is the only man making any money these times." It was not an uncommon statement before the war. Somehow, the consumer had the idea that because it cost him more to live than it formerly did, the farmer was getting all the money. The other day, while reading a part of the voluminous report of the Commission on the High Cost of Living, we came across a few figures which are worthy of some attention, and which perhaps more than many of us think, show a clear reason why the rural population of Ontario dwindled by over 50,000 during the first decade of the present century, while the urban population increased nearly 400,000. Just study these figures for a minute. In 1911 the total capital invested in agriculture in Canada amounted to \$4,224,695,387, and the value of the total product of agriculture in that year was \$663,349,190, or 15.7 per cent. This means that the total product of the farms of this country in 1911 represented only 15.7 per cent. of the capital invested in agriculture, which was, according to figures given in the report, a decline from a return of 20.4 per cent. in 1901, at prices which were much smaller than those which were obtained in 1911. Let us look for a moment at the gross returns which manufacturers made on capital invested in 1910, one year earlier. According to figures given in the report, manufacturers of food products made a gross return on capital invested of 184.6 per cent. Capital invested in other lines of manufacture made returns as follows: Textiles, 124.9 per cent.; iron and steel products, 91.9 per cent.; timber and lumber and their re-manufactures, 71 per cent.; leather and its finished products, 128.8 per cent.; paper and printing, 74.1 per cent.; liquor and beverages, 66.9 per cent.; chemicals and allied products, 103.2 per cent.; clay, glass and stone products, 56.2 per cent.; metals and metal products other than steel, 109.1 per cent.; tobacco and its manufacture, 116.9 per cent.; vehicles and land transportation, 141.1 per cent.; vessels for water transportation, 63.5 per cent.; miscellaneous industries, 44.4 per cent.; hand trades, 133.3 per cent. These percentages represent the value of the product turned out by these various lines of manufacture in 1910, in comparison to capital invested in them. They average 93.4 per cent. of the capital invested, and during the ten years from 1900 the percentage decrease in return was only 13 with manufacturing plants, as compared with 25 with capital invested in agriculture. But all that is necessary is to compare the 15.7 per cent. gross return on the capital invested in agriculture with the 93.4 per cent. gross return on the capital invested in manufacturing industries, to realize that the farmer is not getting anywhere near the same returns as is the manufacturer, and the very fact that the manufacturer is able to make higher returns, and, in many cases, is bonused besides, enables him to pay higher wages than the farmer can afford to pay, and consequently the trend of the rural population is bound to be cityward.

## The Teacher's Important Position.

One of the drawbacks to our educational system in this country is the comparatively small salary paid public school teachers. The school teacher, particularly the rural school teacher, is always looked up to as a leader in the community, and so the teacher should be. The training of the children should always be in the hands of the most competent among us. The teacher, next to the parents, has the most influence upon the receptive mind of the child. The character, thought, and ability of the rising genera-

tion all depend, to no small degree, upon the character, thought and ability of the teachers, who, in the public schools of the country, labor to decrease the percentage of illiteracy. This being the case, it does not seem to be quite in keeping that the profession of school teaching should be so poorly paid that few young men consider it at all in mapping out their life work, and those who do simply use it as a stepping stone to something, possibly not higher, but which returns a higher remuneration for service rendered. Teaching is by no means an easy occupation. The proficient, successful teacher certainly earns more than the average of \$500 or \$600 or \$650 per year, which obtains in rural districts. It was pointed out the other day in a discussion of the subject, that while many of the teachers are under-paid, others, who do not take an interest in their work, who are not proficient, and who are teaching simply for the money that is in it, get more than they earn. It was a Public School Inspector who made the statement. We wonder what the duty of the Inspector is in such a case? If the teacher is not capable of earning the salary that the average rural school pays, he or she certainly should not be in the school, and the Inspector of such schools should make the fact known to the Trustee Board. Whether or not teachers are getting enough remuneration, the fact remains that there are very few men, forty, fifty, and sixty years of age, who have thought enough of the profession to make it their life work, and who are still teaching in a country school. Surely the rural school should have just as good teachers as the city schools, and surely the education of our children should be in the hands of the most capable men and women the country produces. There is only one way to accomplish it, and that is to pay the teachers the salary that their ability can command, and insist upon a rigid inspection of the schools, so that none but the best are permitted to train the young minds of the country. But before the rural teacher can get the salary that a good teacher must earn, the farmer's returns on capital invested in his business must compare more favorably with the returns which manufacturers and business men are able to get on the capital invested in their various lines of business.

While on this point we might also suggest that too much stress should not be placed upon the teaching of agriculture in the public schools. Why should agriculture be taught any more than any other trade or profession in the elementary teaching common to the public schools? We believe that more good could be done if the teacher had the proper appreciation of agriculture, had the proper knowledge of the subject, and then proceeded to teach reading, writing, and arithmetic from books not prejudicial to the cause of agriculture, from an un-biased mind ready to encourage the boy who expressed the desire to farm to be persistent in his desire, ready always not to prejudice the young mind against agriculture and hold out rosy prospects for the child in some other walk of life. Give agriculture a fair field, with the boys and girls of the country, and there will be no need of teaching agriculture as a subject in the public schools. We believe, however, that it should be a subject given more consideration in the secondary schools.

How gratifying to read that the Allied lines in France hold! And how gratifying to the man who realizes that he is doing his bit to help it hold! The men at the front make the supreme sacrifice, and those at home who do their utmost in production, in money, in comforts for those who fight, in the maintenance of Britain's commercial supremacy, provided they give liberally, are essential to final success.

## The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE  
DOMINION.

Published weekly by  
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

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

1. **THE FARMER'S ADVOCATE AND HOME MAGAZINE** is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
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12. **WE INVITE FARMERS** to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known. Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
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14. **ALL COMMUNICATIONS** in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or  
THE WILLIAM WELD COMPANY (Limited),  
London, Canada.

### Should Co-operation Begin in Marketing?

Last week we had a short article, in which we attempted to show that in so far as purchasing supplies is concerned, co-operative organizations of farmers cannot afford to cut prices, in fact, that it is not good business for any firm to do so. We hope the article will draw out discussion on the matter, and in this article we wish to advance the idea that the main business, or at least the business which deserves the first consideration of a farmer's organization, should be the matter of marketing the produce of the farm to the best advantage. In talking with a prominent farmer, a short time ago, and a man who has had a great deal of experience in co-operative work in this country, we advanced this idea, and he informed us that it depended a good deal upon the local conditions where the Farmers' Club, or other organization is operating. In some cases experience had taught that more good work could be done in buying supplies than in selling goods. We appreciate the fact that in some localities it is necessary that some kind of organization be in existence to handle the supplies which the farmer must purchase, but on the whole we believe that the farmer should first be concerned in marketing his produce, and once his organization is able to aid in this it can then widen its field of operations to include the purchase of supplies in large quantities. It would be a fatal mistake, in our opinion, if too much emphasis were placed on the buying of supplies, and this end of the co-operative field were allowed to absorb all the attention of the co-operator. Successful selling associations could easily be elaborated into combination selling and buying associations. We are simply opening the subject in this note, and ask that our readers discuss the matter. We are going to follow out this line of thought on co-operation in a few future issues, and a frank discussion by men who are co-operating, by officers of co-operative associations, and by those whose associations have been successes or failures, would be helpful to all. Organizations have come into being and have gone down to failure, and let us in this discussion endeavor to point out some of the reasons why they failed, and to use them to help the newer organizations over the most difficult places. There must be some sort of co-

operation on the part of the agriculturists of this country if agriculture is ever to be properly represented in Parliament, and is ever to be placed on the basis which it deserves.

### The Horse Demand Should Improve.

The statement is made in an article referring to the progress of the Percheron Society of America, published in this issue, that horses to the value of \$112,000,000 and mules to the value of \$23,000,000, were exported from the United States during the sixteen months ending the first of January last, and that this amount of money was more than that received for all horses exported from that country during the sixteen years previous to the commencement of the time mentioned. That this has been a good thing for the horse business of the United States is shown in the same letter which states that at the present time good, draft geldings are selling on the Chicago market for from \$275 to \$325 each. We believe, notwithstanding the fact that the Canadian horse market has been dull and draggy for the past year and a half, that the very fact that so many horses have been taken out of the United States, and that horse stock is scarcer in that country at the present time and prices are comparatively high, such must have, eventually, a stiffening effect upon the market in this country. It is stated that the British army has all the horses it will require for some months to come, but even so the very fact that so many horses have been taken out of productive enterprises in United States and in Europe, will, in the end, surely have the effect of increasing demand and raising the prices of the horse stock in this country. However, the horse that will be in demand will be the best type of breeding animal or the heaviest and cleanest-limbed drafter. The Northwest is already looking for breeding stock in the East, and prices are a little better and sales somewhat increased now as compared with a few months ago. The Canadian horseman still wonders why he was not permitted to do a certain portion of the trade represented by the figures given in connection with the returns for stock exported from the United States. However, horsemen in this country who have the right kind of stock may yet have their innings and may yet find ready sale at even higher prices than those paid for horses for war purposes. But they will have to get a higher price to pay them for feeding and caring for the horses until the market opens once more. We give these figures simply to show our readers that while the horses have not been taken from Canada they have been taken from this continent, and eventually when things right themselves the places of these animals must be filled.

### The Lack of System.

Lord Shaughnessy, in an address given in Montreal, took a very sane viewpoint with regard to recruiting. Those conversant with the situation in the country and in industrial centres know that in order to raise 500,000 men, a very severe draft would be necessary on the working population of this country. Already it is said that the West is calling for 10,000 men to assist in seeding and harvesting the 1916 crop, and other industries are beginning to feel the loss of large numbers of first-class men. The trouble seems to be that under the lack of system, known as the voluntary system, many men, conscientious citizens, who would be of more value to the Empire working at home, taking care of their families and paying for Red Cross and patriotic purposes a percentage of their incomes, at the same time keeping business alive, and mayhap helping to keep the armies supplied with ammunition, have actually donned the uniform and are in training or at the front, while others, not so necessary to the welfare of the country, men who might be spared, but who have not heard the call, remain at home. When it comes to taking one out of every fourteen of our population, it means that unless our national efficiency is to be impaired, some form of universal enrolment should be adopted. Most readers will agree with Lord Shaughnessy when he advised that battalions already authorized should be brought up to full strength before others are authorized and officered at needless expense to the country. There is no one in Canada but believes that Canada should do her share in this war, and the men of military age in this country are each and all ready to do their share as soon as it is clearly pointed out to them what their duty is. National efficiency means that the

largest number of men should be raised for the war at the smallest possible expense to the country, and that at the same time business and industry in this country be kept at high-water mark by retaining in it the men absolutely essential to its welfare.

### Did He Count the Cost?

A cable despatch records that during the first four days fighting of the great battle of Verdun the German's fired 2,000,000 shells, most of them heavy calibre, but that the number of projectiles discharged by the French was not so great. Not reckoning the wearing out of guns under such terrific strain, the cost of those two million rounds is calculated at not less than \$25 each or about \$50,000,000 for ammunition in four days, and the battle went on intermittently for a couple of weeks. The total on one side alone is, therefore, almost beyond conjecture, and this is trivial compared with the human destruction of some 200,000 Teutons killed and wounded. Is it possible that such frightful results ever entered into the calculations of the Kaiser before he let loose the hellish dogs of war? What compensation can he ever hope to offer his deluded and outraged people for the program of blood and fire, the like of which was never staged before in the history of mankind?

### Government Owned Enterprises.

Whatever diversity of opinion may be entertained regarding the principle and practice of government ownership and operation of public utilities, the progress of provincial hydro-electric enterprise in Ontario and the growing mileage of railways under direction of the Dominion Government shows steady advancement, and there can be little doubt regarding the concurrence of the public mind upon the subject. According to comparatively recent data given in "The Christmas Farmer's Advocate" by J. L. Payne, Comptroller of Railway statistics, Canada had in operation a total of approximately 31,000 miles of railroad, and of this mileage, according to the statement in Parliament the other day by the Acting Minister of Railways, 4,057 miles of road is now under government operation. It was furthermore encouraging that he was able to report that the Intercolonial had experienced the best year in its history, showing a surplus for the fiscal year ending this month of \$1,056,510, after making allowances for equipment and renewals out of revenue. There was a marked increase in traffic through securing better connections from the West and in other provinces, without which such enterprises are seriously handicapped. The "Safety First" movement inaugurated on the government railways for the two years ending Dec. 31, 1915, as compared with the two years before, shows the following decreases: 30 fewer persons killed, a decrease of 33 per cent; 401 fewer persons injured, a decrease of 27 per cent. Another feature of the statement which, in view of all the trying initial circumstances, will be regarded as hopeful, was that the first twelve months' operation of the National Transcontinental Railway income and outgo would about break even. From early in September last till the close of navigation, 26,173 cars of grain were delivered at Fort William by the N. T. R., about two and one-half times that handled the previous year. In connection with the still more northerly enterprise under way, the Minister expressed his confidence in the successful navigation of the Hudson Bay and Straits for "several months" in the year, but he was less vague regarding expenditures to date upon the Hudson Bay Railway and terminals amounting to the tidy sum of \$15,466,304. The Minister thought it would serve a useful purpose in opening up territory of considerable agricultural value, prospective mineral resources and fisheries, but it will probably occur to most people that the country has already a plethora of such undeveloped resources on its hands for times like these. The new Quebec Bridge is to be ready for use by National Transcontinental trains by the end of next year, and when finally completed the outlay would reach about \$27,000,000.

### A Few Facts.

BY PETER MCARTHUR.

I wonder if there is any way to make the gentlemen at Ottawa understand that it does not matter a bit whether they investigate the doings of the shell committee or not? They might prove the charges or disprove them but their findings would have so little effect on public opinion as it is forming that it would not be worth taking into account. It is the same with all the other big matters that our big men are discussing. The plain people do not understand them and are not trying to understand them. Their attention is wholly taken up with things that they do understand and they are forming their opinions on evidence that is within their own experience. During the past few weeks I have visited many parts of Ontario and everywhere I have found the talk to be the same. Because I regard the opinions that are being expressed very dangerous I am willing to take the responsibility of turning the light on them. In doing this I shall deal

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only with facts that are within my own knowledge and I am willing to be held accountable for every statement I shall make. I find that a strong opposition to the war and to recruiting is developing and it is not because of any alleged mismanagement in high places. The arguments in support of this opposition are in many cases so trivial that they will doubtless be scorned by those who are accustomed to viewing matters in a large way, but everyone who has studied the formation of public opinion will realize that they are the hardest arguments to answer.

It is said that in the battalions now being raised there are men who are unfit for service, who will finally be rejected, but who are drawing more wages while taking a training that is useless, than they could get in any other occupation. I have taken the trouble to secure the names of men of this description and although it will be impossible to prove that they are unfit without having them examined by a duly qualified medical examiner I must say that the accusation against them appears to be well founded. I know that two of them are many years past the military age for recruits. I have been told on what seems to me reputable authority that one of them was rejected by a medical examiner for one battalion and then offered himself to a county battalion where the examination was lax and was accepted. Cases of this kind are matters of common talk in all parts of the country and the people who will be taxed to pay for this useless training regard it as a shameful graft. It is really a small matter that may be inseparable from the work of recruiting but it must not be forgotten that the amounts involved are really large to the people who are complaining. These men are drawing better wages and having an easier time than if they were employed as hired men on farms or as unskilled workers in the towns and villages. Few people can realize what it means to have millions of dollars wasted in graft but everyone knows what it means to have a dollar and ten cents a day mis-applied. Only those who know how people talk in the country and in the small towns can realize the deadly effect of this kind of gossip. The people see what they regard as graft and jump to the conclusion that there is grafting through all the military organization. A careful medical inspection would at once clear the air on this point and it would do more to increase respect for the soldiers who are honestly offering their services and to free our army of the suspicion of graft than all they can do in Ottawa. When the people see graft that they can understand they suspect that there is much more that they are not seeing and both the soldiers and the government are viewed with a suspicion that puts a damper on all enthusiasm for recruiting.

Another matter that provokes much criticism is the amount of sickness among enlisted men while undergoing training. While I have heard of recruits from this district being down with pneumonia at various times I have not kept a list of the cases so shall confine myself to cases of which I have absolute knowledge, because of the tragic consequences. I have made a list of the boys with whom I was personally acquainted before they enlisted. As nearly as I can remember at the present time I knew twelve boys who were friends of my children or sons of my friends. Of these, two are already dead without having gone to the front. One was reported as suffering from meningitis and his relatives went to see him. They were assured that he was on a fair way to recovery and returned to their homes. A short time later they got word of his death. The other died of pneumonia and his parents received no news of his serious illness before they got a telegram notifying them of his death. I do not assert that the mortality among recruits is so high as this, but I say that this is my personal experience and I can furnish the names of the recruits I have had under observation. In this connection an illuminating letter appeared in the Toronto Star a few weeks ago. It was written by a private soldier who complained that when the boys suffering from colds mentioned the matter to the officers to whom they were obliged to report in case of sickness they received scant attention. The Star also reported that after an important review in Toronto which happened to be held during a raging storm several cases of pneumonia resulted and one soldier died. A few days later I saw in the same paper a photograph of a couple of commanding officers at a review and they were provided with doormats to stand on. Evidently they knew the danger of contracting chills while reviewing troops in a storm. Surely it is not necessary for the boys to be exposed in this way while in training. Whatever they do with our money, they must not be allowed to waste our boys.

There are other complaints of the same kind that I can offer for investigation but these are enough to indicate what the plain people are talking about. I have made my observations at the point where the military machine touches the great public from which it must draw recruits and funds to prosecute the war. These are the facts in which people are interested because they come home to them, not only as they affect their pockets but as they affect the lives of their sons. The charges of graft and inefficiency at Ottawa are only the rumble of distant thunder compared with these matters. If the people give their money they do not want to see it miss-spent before their eyes and above all they do not want to feel that their boys are exposed to unnecessary danger. Moreover, these are matters that require urgent and immediate attention. To those who are bearing the burdens of the war and to mothers whose hearts are sore these matters are infinitely more important than scandals involving men of place and title. Here is a case where justice is demanded right at

the foundation of things. Later on it may be meted out to any who are coining the blood and tears of the people at this time when Canada is fighting for her life.

As I have already put myself on record in these letters as believing in universal service in such a war as the one in which we are engaged I need not further discuss that phase of the subject. I have no hesitation in asserting that the voluntary system will not enable the government to get five hundred thousand men. Moreover, the insulting attitude assumed by some recruiting officers towards those who have not enlisted is rousing much resentment. Of course I am not blind to the fact that those who are most willing to regard themselves as insulted are in many cases those who selfishly refuse to make sacrifices of any kind. They do not realize the danger in which we stand, or even if they do they are willing to let the work of defence and the support of patriotic funds be attended to by others while they enrich themselves through the business activity caused by the unexpected demand for munitions and supplies. The great trouble is that because there is no properly organized method of recruiting those who are selfish have good arguments to offer for their opposition. No one who gives the subject thoughtful consideration can deny that recruiting should be done in such a way as not to weaken the country's power of production. Behind this outstanding fact all kinds of people are sheltering themselves. If the authorities would make it clear just who is entitled to immunity because his services are needed most at home the selfish would be divided from the unselfish and much suffering and anger would be avoided. But this has not been done.

**Nature's Diary.**

A. B. KLUGH, M. A.

A track which is easily distinguished from that of any other bird is that of the Ruffed Grouse, shown in Fig. 1. As can be seen, the outer and inner toes stand out nearly at right angles, and behind each track is a little tick where the foot has touched the surface of the snow in being brought forward.

In Figs. 2 and 3 we have tracks which are much more likely to be seen as spring approaches—the tracks of the Skunk. Fig. 2 shows the tracks left by this animal



Fig. 1—Tracks of Ruffed Grouse.



Fig. 2—Tracks of Skunk, walking.



Fig. 3—Tracks of Skunk, galloping.



Fig. 4—Tracks of Raccoon, bounding.

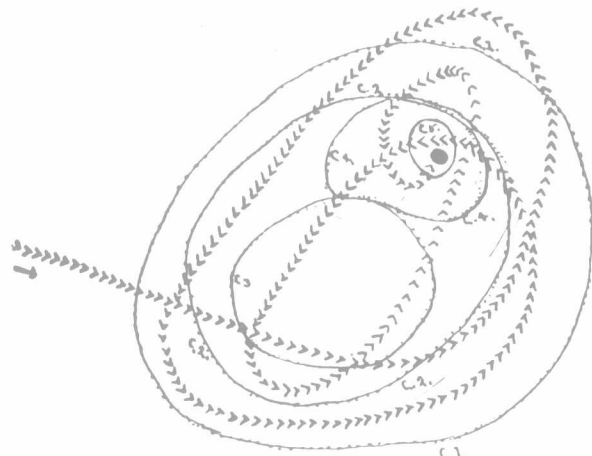


Fig. 5—Diagram showing how to locate an animal that has made a maze of tracks.



Fig. 6—The story of the Hare and the Goshawk.

in walking and Fig. 3 in galloping. In walking the tracks of the hind feet fall on those of the front feet and obliterate them, but in galloping the tracks of the front feet show between those of the hind feet.

Fig. 4 shows another track which is to be seen more often towards spring than earlier in the winter that of the Raccoon. In this illustration the tracks are those left as the animal bounds along. In walking the tracks of the hind feet fall on those of the front ones.

Fig. 5 is a diagram showing how to locate an animal which has made a maze of crossing and re-crossing tracks. To try and follow such a maze of tracks is practically impossible, particularly as our own tracks deface the trail badly. The way of operating is as follows:—Make a wide circle and count the number of times the trail crosses this circle. If it crosses the circle an odd number of times the animal is within the circle, if an even number of times it is not. In this case the trail crosses our first circle (marked C.1.) three times therefore the animal is within the circle. Next make a second circle within the first, counting as before. In this case the trail crosses the second circle (C.2.) seven times, and consequently the animal is within this circle. On making our third circle, (C.3.) we find that the trail crosses it six times and we know that the animal is not within the circle. It is therefore of no use making another circle within this one, and we make another circle (C.4.). We find this circle is crossed five times by the trail and therefore the animal is within it. Consequently we make another circle within the last. In this case our last circle (C.5.) is crossed three times by the trail and is so close to the animal which is indicated by the black dot at the end of the trail in our diagram that we are sure to flush it.

In Fig. 6 we have a little story written in the snow. We see the tracks of a Varying Hare coming in from the left, and then suddenly ending as if the animal had vanished into thin air. And it has vanished into the air for at the point where the tracks end we see wing-marks which from their spread we know to be those of the Goshawk, and we can read that the Hare was caught in the middle of a bound by this large Hawk and carried off.

This studying of tracks and trails, this reading and interpreting of stories written in the snow is a phase of natural science which I can heartily commend to all who love out-door life, as a pursuit which is not only most fascinating but will furnish a lot of interesting information.

**Study in Political Economy—III.**

EDITOR "THE FARMER'S ADVOCATE":

Consider the case of a man who seeks out a home for himself on the frontier of civilization. He will obviously select a spot which, all things considered, seems to him most suitable. Here he will establish his home and apply his labor to the raw material about him so as to gain a livelihood for himself and family. He will have no rent to pay because the land is free. Therefore, making due allowance for any capital which he may have brought with him in the shape of tools, etc., he will get the full product of his labor. There will be no problem of distribution, except in so far as his earnings are dependent in part upon capital in whose production other people had a share. And, if we suppose the man in question to have started without any capital, the problem of distribution would be non-existent.

Now, suppose that a second settler comes along. His range of choice would be limited by the fact that the most favorable land or location had been already chosen. He would, therefore, choose the next best site, having in mind the desirability of living near the first settler. It would now be mutually advantageous for these two men to co-operate, both by the combination of effort and by the division of labor. Exchange would spring into being, and difficult tasks might be undertaken by the two working together. In many ways the total product of the two men working together in this simplest of communities would exceed the sum of what each would produce if working independently. Each has evidently increased the efficiency of the other's labor. To a certain extent what has been produced, has been produced socially. Therefore, the problem of distribution arises in its simplest form. How is it to be met? Consider this question: What advantage has one man over the other that is not dependent upon personal intelligence, skill or industry? Answer that question and you will have the key to the solution. What is the answer? Obviously this. The only advantage which the one possesses over the other is that derived from the superiority of the first location. This aside, each is free to reap the full reward of his own labor, mutually increased by the possibilities of co-operative effort. Therefore, if the advantage which the first site possesses over the second is equally divided, the two workers will be placed upon an equality with respect to getting a just return for their labors.

The significance of this will be seen more clearly if we follow our imaginative experiment a little farther. Suppose that a third settler next comes along. He will have to take third choice. He will take the best land available, with due regard to the importance of being reasonably near his neighbors. The addition of a third man to the community will add still more to the efficiency of the labor of all, because it will permit a certain amount of specialization, the advantage of which will be equally shared by exchange. But, though the total product is now more than three times what the product of each would be if he worked independently of the others, the difference between the reward of labor on the first location and an equal

quantity and quality of labor on the third location becomes quite appreciable. It is represented by what the third man would give the first man if he could get first choice instead of having to take third. In the terminology of Political Economy it is called rent or ground rent. It must be carefully distinguished from rent in popular usage which includes both rent of ground and interest on capital, as, for example, when one rents a house and lot.

Now, let us carry the inquiry a little farther. What will happen when several more settlers come? The addition of each worker will, in ways which are familiar to all, increase the average efficiency of labor in the community. To that extent all will be benefited by the growth of the industrial organism. But, though all may benefit, all do not benefit equally. Those first upon the scene benefit disproportionately, to an extent represented by the rent which their holdings can command. Rent is thus seen to depend, not upon the labor of the possessor, but upon the competition for land, which becomes keener as the community grows in size and as the efficiency of labor is increased by industrial organization. Its magnitude is determined according to the well-known law of supply and demand.

Carry the inquiry farther yet. The continued growth of the community will, by and by, need a store, a post office, a school, a church, a blacksmith shop, etc., together with that industrial specialization which these involve. By and by a railway reaches the little community center. All these advantages benefit every member of the community; but they do not benefit all equally. There is a growing disparity between the benefit conferred by these advantages upon those near the community center and that conferred upon those farthest away. For example, consider the advantage which is possessed by the wheat grower who has but one mile to haul his wheat to the railway over him who has to haul his wheat fifteen miles. Consider also other similar advantages of proximity to school and church, store and blacksmith shop, etc. The sum total of all these advantages of location is measured by the Ground Rent. They render labor applied at one place more effective than labor applied at another, and to this extent the just rewarding of labor is prevented.

Now we set out to solve the problem of just distribution, that is, of determining what conditions will ensure to each worker as much as he justly earns, but no more. And we have arrived at a point where we see that the problem of Rent is a disturbing factor in the situation. We have traced the origin and growth of Rent, have discerned its nature, and have seen its effects in preventing the just distribution of wealth. We must now digress for a brief time in order to clear up this point, of which I shall treat in my next letter.

Brant Co., Ont.

W. C. GOOD.

## THE HORSE.

### Better Horses Wanted.

At a recent meeting of the Board of Directors of the Percheron Society of America, the registration fee on imported horses was increased to \$100 per head, taking effect July 1, 1916. The object sought is to discourage the importation of inferior horses, and it is believed this high fee will have the desired effect. Provision is further made to refund \$85 of the \$100 paid by importers, on horses that are good enough to win at fairs recognized by the Percheron Society of America. It is believed this action will effectually bar inferior horses, without interfering with the importation of really valuable animals. Members of the Percheron Society have already been advised of this action, and breeders generally appear to be heartily in accord with the new ruling.

Forty-one fairs and expositions in the United States were accorded recognition by the Percheron Society for 1916. Provision was also made to recognize, with a special classification, all Canadian fairs that obtain recognition from the Canadian Percheron Association. Strong exhibits of Percherons at the fall fairs will benefit the Percheron breed, and all breeders. Special attention is directed to the Futurity Stakes—for colts foaled in 1915—to be held at the Iowa, Illinois and Ohio State Fairs, and the International in 1916. Breeders should fit good yearlings for these shows, and help to demonstrate that America can produce Percherons second to none.

Records in the office of the Percheron Society show an active trade, particularly as to sales made by breeders. Prices are gradually growing stronger on good Percherons, but demand is slack for poorer sorts. More men are seeking stallions of exceptional merit, fit to head pure-bred studs, than at any time in the last three years, and more confidence is expressed by purchasers generally.

More than 112 million dollars' worth of horses, and over 23 million dollars' worth of mules, have been exported from the United States in the 16 months ending January 1, 1916. This is a greater total in cash received, than we obtained for all horses and mules exported during the preceding 16 years, and our shipments show no signs of lessening. Good draft geldings are in keen demand also, and are bringing from \$275 to \$325 on the Chicago market, despite the pessimistic comments of country horse buyers, who generally seek to give, for selfish reasons, the impression that drafters are not wanted. Farmers who cannot secure satisfactory prices at home should club together, and ship their draft geldings direct to the large

markets. Country horse buyers are doing all they can to hammer down prices on drafters in the country, for their own profit, and are having fair success. The war horse demand keeps business going, and if a big drafter is passed by often enough, the farmer who owns him may take the price offered. For this reason, direct shipments should receive consideration.

The urgent need—more apparent than ever before—is for men to assemble small but select bands of mares, absolutely sound and right in every way, breed them to really high-class sires, and develop and show the colts. From such hand-picked studs, stallions can be developed fit to head any band of pure-bred mares. This is precisely what American breeders are most urgently in need of now, and the opportunity is a great one.

WAYNE DINSMORE.

### Lameness in Horses—XIV.

#### BONE SPAVIN.

Bone spavin is a very common cause of lameness and unsoundness. The condition is commonly called "a Jack," but why it should be called Jack rather than Tom, Dick or Harry is hard to understand. In order to be able to diagnose a bone spavin when lameness is not present, it is necessary that a person be a good judge of the different conformations of the hock, as an apparent roughness that may be a spavin in one horse, may be merely a peculiarity of congenital conformation in another. A bone spavin may be defined as an exostosis (a bony growth) on the hock, usually appearing on the inner and lower portion of the anterior surface of the joint, but may be on any part.

Causes.—Like ringbone, splint, and other bone diseases, bone spavin is usually, but not always, caused by concussion. In this way inflammation is set up in the cancellated tissue of some of the bones of the hock. This extends and involves the compact tissue, an exudate is thrown out, the articular cartilage is destroyed, the exudate becomes ossified, (converted into bone), and two or more bones become united into one; this process is known as ankylosis. It is often claimed that a bone spavin is the result of a kick or other injury, and, while it is possible that such may be the case, it is very improbable. There is usually a congenital or hereditary predisposition, and where spavin is present if the progenitors of the horse for several generations on each side can be definitely traced, it will generally be found that some of them suffered from spavin. This predisposition may exist simply in the general conformation of the hock, weak, small hocks being more liable than deep, broad and angular ones. At the same time there is, no conformation of hock that can be said to be immune.

Symptoms.—The typical symptoms of bone spavin are characteristic, and diagnosis is comparatively easy. After standing for a greater or less length of time, the horse, when asked to move—for instance, when asked to stand over in the stall in the morning, after being in the stable all night—he will tread simply with the toe of the affected limb, and move quite lame. If backed out of the stall he will step short and lame, and go on the toe for a variable distance; in some cases for a few steps only, in others for a few rods, or even farther, and then go practically, if not quite sound, and will continue to go sound until allowed to rest for a few minutes or longer, after which he

will start off lame again. There is practically no detectable heat or tenderness in the part, but there is usually an enlargement which can be noticed. In cases of suspected spavin the observer should carefully observe both hocks. If an enlargement of greater or less size can be noticed on the hock of the lame leg, (usually on the inner and lower part of the front of the joint), and there is an absence of a like enlargement on the other hock, and the characteristic lameness noted be present, there is no difficulty in diagnosing spavin. Unfortunately, however, we do not always observe these definite symptoms. The lameness does not always disappear on exercise, but in the majority of cases it decreases. Neither is there always a well-marked enlargement. In other cases there is a roughness resembling spavin on each hock, which may be a congenital conformation and quite within the region of soundness. In some cases lameness is present before any enlargement can be noticed, and in some cases, especially when the true hock joint is involved, there is permanent lameness and no enlargement. This is called *Occult or blind spavin*, and the lameness is incurable, and the case is hard to diagnose. It is not unknown for a well-marked spavin of large size to be present without causing lameness at any stage. When spavin lameness is suspected, but cannot be definitely diagnosed, it is good practice to get an assistant to hold the horse on level ground or a floor while the examiner lifts the foot and forcibly flexes the hock for some time, say a minute, and, as soon as he releases the limb, have the assistant walk the horse straight ahead. This will, in most cases, cause him to go quite lame, with the characteristic lameness of spavin, for a few steps. But even this test is not always satisfactory, and, in cases where the typical symptoms are not well marked, the examiner must judge by the general symptoms shown, and the absence of apparent causes of lameness in other parts of the limb. It will be noticed that while there is little difficulty in diagnosing a typical case of bone spavin, there are many cases in which diagnosis is very difficult and requires a person of experience who has paid particular attention to the various conformations of hock, and the different kinds of lameness caused by the disease.

Treatment.—As with other bone diseases, treatment should be directed towards hastening on the process of ankylosis, thereby causing a subsidence of the inflammation and lameness. In all cases there is a union of two or more bones into one. There are really four articulations in the joint, the uppermost being called *the true hock joint* where extensive motion exists. When this articulation is involved the lameness is constant. The articulation below this, while somewhat extensive is simply gliding in motion, the one below this is also gliding but not extensive, while the lower one—also gliding—has very little motion. Motion in either or both of the lower two may be removed by ankylosis without causing noticeable alteration in action, but ankylosis of the third from below will cause a stiffness. Fortunately it is usually the lower articulations that are involved. As stated, treatment should be directed towards terminating the process of ankylosis, and this can be best done by counter-irritation in the form of blisters or the firing iron, followed by blisters. Unscrupulous or ignorant vendors of medicine claim to be able to remove spavin and leave the joint in a normal condition, but when we understand that the whole bone is involved, and the articular cartilage destroyed, we can readily perceive the fallacy of such claims. In quite young ani-



Two of a Kind.

Two colts generally do better, running together, than one alone.

mals repeated (when they do not express majority of As with r as soon as continue appeared it is wis cannot be determined. W menta.

### London

EDITOR "T

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mals repeated blistering will sometimes effect a cure, (when the lameness disappears we claim a cure, we do not expect to remove the enlargement), but in the majority of cases it is necessary to fire and blister. As with ringbone, the lameness does not always cease as soon as the action of the operation ceases, but may continue for some months. If lameness has not disappeared in ten to twelve months after the operation, it is wise to fire again. We find some cases that cannot be cured, and the prospects of a cure cannot be determined by the size or situation of the enlargement. We simply have to operate and wait developments.

WHIP.

**London Shire Show a Great Success.**

EDITOR "THE FARMER'S ADVOCATE":

The London Shire Show for 1916 is over and was a huge success, farmers from all over the Kingdom crowding the Agricultural Hall at Islington for two days. There were 527 entries for the £2,230 offered, the figures being the same as 1915, but the average quality far better than that year. Indeed it was one of the best shows for years, and a lot of new reputations were made, because most of last year's winners could now only find "places," i. e., thirds and so on. The progress a breed is making is said to be marked by the excellence of the class for yearling colts, and if this saying is correct, certainly Shire horse breeders have good right to be satisfied with the progress that their breed has made and the position it occupies. For the yearling colts are just a trifle above the average, the level character of the rank and file of the exhibits being remarkable. The Edgcote Shorthorn Company's winner, Edgcote Conqueror, stood out from the rest, conspicuous for his width and substance, in which he takes after his famous sire, Babingley Nulli Secundus. Sir Walpole Greenwell was second with Marden Dagnam, a colt with very great promise, and if not quite on such powerful lines or so big as the winner, has substance and character, and may best him some day.

Two-year-old stallions made a very strong class, both numerically and for quality. R. L. Mond's Sundridge Coming King, a vastly improved sort, was a clever winner. He was highly commended last year. John Rowell's second-prize colt, Bury King-maker, is a big, powerful colt, with great bone and excellent feather.

The class for three-year-old stallions was, as is generally the case, numerically the strongest, in the show. This year the entries numbered 73, which were reduced to 25 by the preliminary examination. It is notable that all the horses sent to the veterinary inspectors were returned sound. Mr. Whinnerah and Mr. Gould placed at the head of it John Rowell's Bury King's Champion, which has grown into a very handsome horse, and evidently has a great career in front of him. He was, however, by no means an easy winner, Colin MacIver's Blaisdon Draughtsman running him very hard. Denby Collins was a very good third with Primley Freeman, which made a brilliant show.

In four-year-old stallions the Edgcote Shorthorn Company's famous horse, Orfold Blue Blood, was in his old form again, and was a very clever winner. Last year he was only placed fourth in London, but the year before he was about invincible, winning in London at the Royal, the Oxfordshire, Peterborough and the Royal Lancashire. A powerful and promising horse was second in Mr. Fernihough's Forage Conqueror, a black with a strong look of his sire, Danesfield Stonewall.

The stallions 16 hands 2 inches, over four and under ten years old, was another very good class, with an entry of 42. First prize went to Messrs. Forshaw's Rickford Coming King, which never looked so well in his life. Indeed, he was, if anything, a trifle too forward in condition, a very good fault at this time of year. Sir Arthur Nicholson's Champion Clansman, a big, powerful brown by Childwick Champion, made a good second, and the third prize went to H. H. Smith Carington's Blaisdon Jupiter, a horse of fine quality, size, and substance, which was champion in London last year, but seemed rather dwarfed by the two placed in front of him.

In the class for stallions ten years old and over, judged by Mr. Ibbotson and Mr. Gould, A. Grandage won with the evergreen Gaer Conqueror, another old London champion.

Seldom has such a good lot of yearlings been gathered together. Dan Massey's Crumleigh Lady Sensation, the Ashbourne champion's foal, won, though she had not much in hand. In two-year-olds J. G. Williams' Pendley Royal Princess, which has a fine prize-winning record, won, but a good second was J. H. Appleby's fine mare Bradgate Pearl. Three-year-olds numbered 37 entries, of which 22 came into the ring for final awards. Premier honors went to the Edgcote Shorthorn Company's handsome mare Fine Feathers, which has an almost unbeaten record. She won a little cleverly from Whitley's Primley Fascination, a weighty filly with quality, built on the lines of a brood mare. In four-year-olds the Edgcote Shorthorn Company won with Chirkenhill Forest Queen. A well-known winner was third in F. W. Griffin's Boro Brilliant.

In mares under 16 hands, five years old and over, J. G. Williams won with a mare which shows as much power in as small a compass as is possible. Mares of the same age, 16 hands and under 16 hands 2 in., saw J. G. Williams' powerful, well-ribbed Maid of Athens, which was fourth in London two years ago,

win from the Duke of Devonshire's Chatsworth Ann. In mares 16 hands 2 in., it was a very near thing between W. & H. Whitley's Lorna Doone and Williams' Lady Snelston, but the former won, with the Duke of Westminster's big, handsome mare, Chippenham Merle, third.

The junior cup for mares went to the Edgcote Shorthorn Company's Fine Feathers, with Whitley's Primley Fascination reserve; the senior cup went to Whitley's Lorna Doone, with Snelston Lady reserve; and the champion and challenge cups were won by Lorna Doone, with Snelston Lady reserve. The junior cup, for stallions, went to Rowell's Bury King's Champion, with Mond's Sundridge Coming King reserve; the senior cup, for stallions, was won by Edgcote Shorthorn Company's Orfold Blue Blood, with A. Grandage's Gaer Conqueror reserve; and the supreme championship went to Bury King's Champion, with Orfold Blue Blood reserve.

The King and Queen, with Princess Mary, visited the Show and the King gave the Cups to the successful owners amid much cheering and singing of the National Anthem.

H. R. H. the Prince of Wales has signified his willingness to be elected President of the English Shire Horse Society for 1917. He breeds the type on his Cornwall farm. He has also joined the National Pony Society, being deeply interested in Dartmoor ponies.

The Shire Horse Society has decided to embark upon an advertising campaign in Canada and the colonies.

The sale of pedigree Shires, held in connection with the Show, made history. It is true the aggregate realized has been exceeded, but the general average has not been equalled. This works out at £157 4s. 5d. for 127 head sold, which realized £19,968 18s. In years to come younger breeders will have occasion to recall the notable satisfaction that was expressed in 1916 at the result of the first day's sale. Forty-five three, four and five-year-old and mature stallions



H. R. H. The Prince of Wales. To be President of the Shire Horse Society of England.

were sold at prices ranging from 1,600 guineas, averaged £207 15s. 8d. The leading prices in three-year-old stallions were: Mrs. Gardiner's Sandside Sensation, sold to Mr. Garton at 520 guineas; Mr. Boddington's Highfield Friar, to Mr. Body at 450 guineas; Mr. Wythes' Copped Hall Chamberlain, to J. Somerville at 400 guineas; and John Measures' Snelston Gentleman to the Holderness Live Stock Association at the same figure.

The four-year-olds ranged from 1,600 guineas, paid by F. Farnsworth for Forage Conqueror, A. H. Fernihough's second-prize colt, to 320 guineas.

In older stallions, top price was 250 guineas for the seven-year-old Brantham Blend, owned by A. H. Fernihough, and sold to D. Morgan for Ireland. The top priced two-year-old was 440 guineas for the Duke of Westminster's sixth-prize winner, Catterall Drayman 2nd; and 300 guineas were paid for John Measures' Bourn Champion, by the Leighton Buzzard Stud Co. Fillies and mares were not in such demand. The top price for a yearling was 200 guineas paid for the first-prize winner, owned by Dan Massey, and sold to S. Boddington. The top priced two-year-old was 250 guineas for Sir Berkeley Sheffield's fourth-prize winner, Normanby Chessie, sold to Mr. Barclay. The three-year-old mares sold from 350 guineas, paid by Mr. Heddington for Orfold Black Girl, to 200 guineas, paid for Clumber Patience, by R. J. Gardiner. Four-year-old mares sold up to 400 guineas for F. W. Griffin's Boro Brilliant, to Mr. Alcock. Brood mares ranged to 250 guineas for Billingfold Symphony to Mr. Withers. The best price for the geldings was 110 guineas twice.

The general averages were: Yearling stallions, £98 for three; two-year-olds, £175 8s. 9d. for twelve; three-year-olds, £209 5s., for twenty-one; four-year-olds, £415 15s., for six; five-year-olds, and above, £138 1s. 8d., for eighteen. Fillies and mares, yearlings, £118 8s. 9d. for five; two-year-olds, £110 19s., for eighteen; three-year-olds, £138 3s. 7d., for fifteen; four-year-olds, £191 12s. 6d., for four; five-year-olds, and upwards, £114 10s. 1d. for twenty-one.

Sixty stallions averaged £195 16s. 4d., and the sixty-three mares and fillies, £129 2s. 6d. ALBION.

**LIVE STOCK.**

**Constructive Breeding.**

Several weeks ago Prof. H. Barton, of Macdonald College, delivered an address before the Canadian Ayrshire Breeders, assembled in annual convention in Toronto, and the theme of his discourse was "Constructive Breeding." The advantages that accrue from the application of principles enunciated by him at that time are well exemplified by a sale of cattle in the United States, which is reported in another column of this issue. The owners of the herd in mention have for twenty years spared no efforts in their endeavor to develop a type of Hereford to conform with an ideal which they established in their minds. To accomplish this they chose the blood that would mate to that end, and when once secured they used it to the extent of its possibilities. No better example can be cited of constructive breeding than where six sons of one sire were sold for an average of \$3,642, and 24 sons and grandsons of the same sire were sold from the same farm at an average price of \$1,766. This was the direct result of the application of a principle throughout a number of years, the selection, and retention in the herd, of desirable foundation stock, and mating with a purpose or ideal in view. Prof. Barton described constructive breeding under four heads, which were: 1, the use of the bull that should produce the desired results, or, in more general terms, a good bull; 2, the extended use or service of the good sire; 3, the elimination of all inferior stock; 4, preservation and extended use in the herd of the good females. Uniformity of blood, he said, would make for a uniformity of type and to obtain a herd of improved merit the absolute destruction, for breeding purposes, of all inferior stuff was necessary.

We have in this country, some bulls that are known by their offspring. They are the sires that should be carefully managed, and have their days of usefulness prolonged. A Gainford Marquis, a Butterfly King, a Hobsland Masterpiece, or a Bright Prince, will make history in their respective breeds, but only after they are dead will the country and the men who owned them realize their true value. Thomas Bates, with a continuity of purpose, used the bull Belvedere even upon the sire's kin to fix a quality in the herd that was outstanding in the sire, and which Bates wished to see developed to its fullest extent. As a result of persistent and intelligent breeding we have the Duchess, Oxford, Waterloo, Cambridge Rose, Wild Eyes and other tribes which to this day inherit milking proclivities and a gaiety of carriage along with their beef conformation. History says Bates, "was mercilessly exacting in the matter of regular breeding, condemning to the knife his choicest Duchess or Oxford, Cambridge Rose, Foggathorpe, Wild Eyes, or Waterloo, if she failed to breed within what he deemed a reasonable time, either as a heifer or since she had last produced a calf."

None were more careful than the Booths. They, too, set an example in constructive breeding which may well be followed at the present time. For over a century the Booth family bred Shorthorns along systematic lines, and now we have the tribes known as Cherry Blossom, Fairholme, White Strawberry, Anna, Isabella, Bracelet, Moss Rose and others which are the results of selection of blood, and proper matings. It is said that "when fresh blood was admitted it was not new and untried but well-proved patrician blood, and had undergone further probation before final acceptance."

Who has not heard of the Scotch tribes Violet, Venus, Broadhooks, Orange Blossom, Brawth and Lancaster, Lavender, Spicy, Lovely and others? The quiet, persevering, patient character of one man was responsible for their type, and that man was Amos Cruickshank, of Sittyton fame.

We have cited cases particularly in one breed, but there are notable instances where a well-thought-out plan has been followed by single breeders with ultimate success. Stockmen of the present era should not venture on the perilous ground of in-breeding unless they first acquaint themselves with the results that usually accompany such a practice. They can, however, by the extended use of good sires and females, the retention in the herd of the good and the destruction of the bad, attain, after a period, to a degree of prominence in live stock circles. It can not be done in a few years. Decades are required to consummate what O. Harris & Sons, of Missouri, accomplished at their sale on March 1. For over 20 years they have been noted for their efforts to attain to that ideal in Hereford type which finally brought results, and at that sale the blood of one sire was dominant—Repeater.

Present-day breeders should fix a type or ideal in their minds and strive to attain it. More "Constructive Breeding" is required by the live stock industry.

### Our Scottish Letter.

February has been a very wintry month. We have had snow storms, thunder and lightning, tremendous hail, and rain without failure. Farm work is generally very far behind—perhaps six weeks in arrears and the prospect of overtaking this with depleted labor ranks is far from bright. In England great efforts are being made to introduce female labor into outdoor farm work. Lord Rayleigh, the famous chemist, and joint discoverer with Sir William Ramsay, of argon, is an extensive landowner in Essex. His farms are managed by his brother, the Hon. Mr. Strutt. His lordship keeps a large number of farms in his own hands, and also conducts profitable dairy business in London. He has made a strong effort to utilize female labor, in the way indicated, and apparently with a large measure of success. There is, of course, nothing new in the employment of female labor at outdoor work on the farms in Scotland. Here we have long been familiar with it. Perhaps the unique feature in Lord Rayleigh's venture is the class of women whom he is interesting in the subject, and who are going out to the fields. Judging by the photographs which have been published of them, they seem to be rather a jolly lot, and to treat the business so far as rather a good joke. It is to be hoped this way of regarding it may hold until the War is over. After that possibly there will not be the same dearth of labor on the land, but meantime women are as much needed there as in the munition works. There, by all accounts, they are putting men to shame by the extent of their output, and the deftness with which they handle the tools and otherwise perform their duties. The Board of Agriculture and Fisheries is pushing the female labor question for all it is worth. They have a regular propaganda with this end in view, and in the eastern counties of England the idea has caught on. Labor on the farms is certainly scarce, and so far as we can see it is likely to become scarcer. In the judgment of the writer everybody in this country will require to work harder, spend less, and live more plainly than they have done, if the war is to be brought to a speedy and a successful issue.

February is the great month for the sales of young bulls. All the pure-breeds having their homes in the north are represented at these sales, and the past month has witnessed a phenomenal trade for the best of all breeds. Average prices are all on the up-grade, and the demand, especially for Shorthorns, has been quite unprecedented. We seem almost to have got back to the days of the New York Mills' Sales, only it is no longer Bates but Cruickshank tribes that are in the ascendant. Nobody bothers about Duchesses or Waterloos now. What men want are Clippers, and Secrets, and Princess Royals and Claras. The jargon is painful to listen to, especially when one remembers the Bates craze, and what came of it. One wonders what old "Amos" would think of it all. He kept his head while men were going mad over Bates tribes, and built up the Shorthorns of Aberdeenshire—the little Red Cruickshank type," as some men called them who did not like the importations of James Davidson and the other pioneers of Sittyton blood in Canada. But the "Quaker's cattle" had come to stay, and to-day the risk is that they may be destroyed through the efforts of over-zealous friends just as the Bates tribes were.

Reviewing the February sales briefly, it will be better to take the breeds in the order in which they were sold. The Aberdeen-Angus had first innings at Perth in the second week of the month. The general average was up nearly £10 a head for 392 bulls and heifers, as compared with the figures for 1915. The best herd average was made by Sir George Macpherson Grant, Bart., whose figure was £192 11s. 5d., and his highest figure £462 for Jason of Ballindalloch, which was purchased by J. Ernest Kerr, of Harviestoun, Dollar. Mr. Kerr's own average was almost as good as that of Ballindalloch. It was £192 10s. The very fine average of £153 13s. was made by a young herd, that of Walter Wilson, at Inchgower, Cullen, Banffshire. Mr. Wilson is a son of the famous Shorthorn breeder, the late John Wilson, Pirriessmill, Huntley. The young man bids fair to excel with the blacks, as his father did with the red, white and roan. I. M. Marshall, of Bleaton, Blairgowrie, is rapidly building up a fine herd. He made an average of £120 11s. 6d. In the West of Scotland James Kennedy, of Doonholm, Ayr, has a fine herd, and he made an average of £113 11s. 6d. for his lot. He had first prize for the best group of three, making an average for them of £156 2s., but Ballindalloch, who was second for the group prize, made an average of £287 7s. for his three. He sold a second one in the three for £315 to D. M. Macrae, of Stenhouse, Thornhill, in Dumfriesshire. Two new herds of A. A. cattle have been started this year, and one of them is in Dumfriesshire. It is owned by J. Bryce Duncan, of Newlands, Kirkcubright. One would have liked had Mr. Duncan taken up the Galloways, but the other black polls have greater attractions for moneyed men. The second new herd has been founded by Sir John Dewar, Bart., at his estate of Dappin in Perthshire. Before we leave the Aberdeen-Angus breed, it may be of interest to mention that three of the leading herds are in charge of three brothers, who have a perfect genius for "bringing out" black cattle for show or sale. John Grant is herdsman at Doonholm for Mr. Kennedy; George Grant is herdsman at Pallisalloch; and Arthur Grant is herdsman for J. R. Findlay, of Aberdeen. A fourth brother is an agricultural journalist. They are a fine quartette, and splendid fellows all.

Trade for Aberdeen-Angus cattle was good enough in its way, but the third week of February witnessed

Shorthorn sales in Perth without precedent there. The bulls were undoubtedly of unusual merit. The classes were well filled, but even their merits did not altogether account for the phenomenal trade that was experienced. One very prominent Argentine buyer, Donald Maclellan, was absent. Unhappily this splendid specimen of a Scotsman is not in good health, and the Perth sales missed him badly. Yet other buyers from South America made things very lively, and home breeders were not slow to operate and to bid high prices. The gross average was up £29, as compared with the figures for 1915. Four hundred and thirteen young Shorthorn bulls made the splendid average of £93 10s. 8d. each, as against £64, 4s. 1d. for 326 in 1915. The herd averages were in keeping with this grand total. Millhills herd in Perthshire, owned by Duncan Stewart, tops the list with an average of £569 2s. for five. Next comes the very old herd of Lady Cathcart at Cluny Castle. Monymusk, Aberdeen, which with six head had an average of £352 2s. One of the youngest herds, that of J. J. Mowbray, of Naemoor, Rumbling Bridge in the very heart of Scotland, came third with an average of £277 13s. 4d. for nine head. The Messrs. Law, Mains of Sanquhar, Forres, who are among the leading breeders in the north, had an average of £267 15s. for four. This herd contains a famous family of Zoe's, a branch of the celebrated Clippers. They are splendid cattle. One of the youngest herds, that of J. Napier Reynard, at Manuel, in West Lothian, came next with £244 13s. for three, and William Anderson, Saphock, Old Meldrum, Aberdeenshire, came in next with £217, 17s. 6d. for six. The famous Ross-shire herd of Balnakyle, now owned by Captain James Cameron, had an average of £212 2s. for five. Major A. T. Gordon, of Newton, Aberdeenshire, had £267 15s. for two. Individual prices ruled very high. Millhills had the first-prize group of three, and these made an average of £861 each. The second group was from Cluny Castle, and they made an average of £483 each. The third group from Naemoor far surpassed this. They made an average of £661 10s. each, and the highest price of the sale £1,627 10s. was made by one of these, Velox of Naemoor, a wonderful youngster, and champion of the show. The second



Some Good Young Shorthorns.

highest price was made by one of the Millhills' lot—King Cruickshank, which went at £1,575 to the same buyer who got Velox of Naemoor. The third highest figure was £945, paid for Captain John McGillivray's Ramsden Regent, the reserve champion of the show. All of these bulls were purchased by Argentine exporters. The fourth highest figure was £819, which Lord Lovat, Beaufort Castle, Beaulieu, paid for Cluny Augustus, which happily remains at home. After such prices as these the figures made for Highlanders and Galloways appear tame indeed. Still, both breeds were making records, and altogether, the Springhill sales of 1916 have been memorable.

Cattle of that class do not wholly monopolize our thoughts these days. A notable experiment in feeding Ayrshire bullocks was made by Sir Mark J. McTaggart Stewart, Bart., Southwick, Dumfriesshire. Thirteen of his bull calves of the season 1914, which were not considered good enough to be kept as sires of Ayrshire stock, were steered and fed at home as bullocks. They were brought to Craig's market at Ayr, in the beginning of the month, and made the excellent average price of 53s. 6d. per cwt., that is 112 lbs. This works out at almost sixpence per lb. Many do not believe that Ayrshire bullocks can be fed to profit. But this is a delusion. Butchers who handle such beefs speak highly of them, and in the west country markets they are in quite good repute. Of course, there are Ayrshires and Ayrshires, but no reason exists why bulls should be used of that breed which are only capable of producing calves to be sold almost as soon as they are born for a few shillings. The process is most wasteful, and it should not be tolerated. On all hands farmers are being counselled to produce more food. They are endeavoring to do their best, and this is one avenue in which there is room for improvement.

We are now on the eve of the great horse shows. It is a tribute to the stolidity of the British race that in spite of war conditions such shows are being held. Last week the Shire Horse Show was held in the usual hall in London, with an entry of over 550 horses and mares. The male championship was won by John Rowell, Bury, Huntingdon, with his three-year-old horse, Bury King's Champion. He was cham-

pion at the Royal at Nottingham last summer, and is a wonderfully thick, short-legged, well-coupled bay horse with very good action. He has the usual Shire profusion of hair on the legs, and in some things is rather away from the Clydesdale ideas. The champion mare was Messrs. Whitley's Lorna Doone, which won the same honor last year. Mr. Rowell has won the supreme honors twice, his former victory taking place thirty-one years ago, in 1885, when he had the Elsenham Challenge Cup with Prince William. He has also been twice reserve for supreme honors, and for a long time he held the record for a Shire stallion price with Bury Victor Chief, which secured champion honors after he was sold by Mr. Rowell. The Shire Horse Society has done a world of good to the English breed. The first Shire Horse Show attended by the writer was that of 1886, thirty years ago. He has been at many since, and the difference between the horses of last week and those of thirty years ago, so far as certain external features are concerned, is marked indeed. In respect of colors there has been a vast improvement. Only three greys and two chestnuts were seen last week, thirty years ago roans, chestnuts, greys and blacks were found in about equal proportions. This year bays, browns and dark browns were the prevailing colors, and there was no excess of white markings. In respect of soundness also there has been a great improvement. The type, however, remains very much the same as it was thirty years ago. For a time it almost seemed as if there was an approximation to the Clydesdale idea, but this was not apparent last week. The very rough-haired horses were very much in evidence, and there were fewer of the clean, hard-boned sort that a Scotsman likes to see.

The Glasgow Show of Clydesdales takes place this week, and the Aberdeen show in the following week. Up to this date no fewer than 169 Clydesdale stallions have been hired for 1916, and 32 have been hired for 1917. There is every prospect of a great show and keen competition.

SCOTLAND YBT

### Record Returns from Hogs.

Early last week hogs reached an unprecedented price on Toronto market. On Tuesday, the high-water mark of \$11 per cwt. live weight, weighed off cars was reported. It pays to feed expensive grain to pigs at that price. Suppose it takes 400 lbs. of meal, or its equivalent, to make 100 lbs. of pork, this would mean, say, 800 lbs. of wheat for a 200 lb. hog. At \$1.25 per bushel the wheat would be worth \$16.66. At one dollar per bushel it would be worth \$13.33. But the pig was worth \$22. He paid \$1.65 per bushel for 800 lbs. of wheat. Suppose the pig was fed on barley and oats. He paid \$1.37 per bushel for the barley. Suppose he was fed on 25 bushels, of oats. Suppose he was fed on a mixture of one-third of each by weight, then he paid \$1.28 1/2 cents per bushel for the mixed grain and the feeder had the manure to pay for the labor. If the owner was an especially good feeder he may have made a pound of pork on less than four pounds of grain. Some experiments carried on last year indicated that it could be accomplished. He may have also utilized by-products from his dairy and swill from the kitchen. Surely pigs at such a price must have paid even higher than market price for grain consumed.

### Butterfly King Dead.

A few weeks ago the Shorthorn bull, Butterfly King, owned by the Alberta Government Demonstration Farms, died of paralysis at the age of 13 years. He was reputed to be one of the best, if not the best, milking Shorthorn bull in Canada. He was himself of outstanding conformation, and he proved himself an excellent sire, for his progeny are showing milking proclivities as well as good beef character. Another bull of considerable merit has been purchased by the Alberta Government to take up the work where it was laid down by Butterfly King.

Steers that get a liberal allowance of roots or silage from now until May will be in better condition to go on to grass than will cattle that are fed on dry roughage and chop. The loss will not be so severe in consequence of the change if the animals are prepared by the proper rations.

Get a suitable farrowing pen ready for the sow and put her in it a couple of weeks before she is due to farrow.

Feed the sow and the young pigs, when they will eat them, a few mangels. Roots are succulent, laxative in effect and cooling to the system.

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# Keeping the Eggs in Three Baskets.

One man who has adopted a system in his farming that embraces, in the main, three distinct lines is W. C. Shearer, of Oxford county, Ontario. In one sense the lines are distinct because they are different, while from another viewpoint they appear so interdependent that the system might be called a machine, and the cows, hogs and chickens, which produce the revenue, each a cog in the big wheel. The farm is not a large one. It is the ordinary size, or perhaps smaller than thousands of farms in Canada for the railroad ate up a few of the 100 acres and 13½ acres are down to permanent pasture on account of roughness. This leaves about 32 acres of arable land. Because of the similarity of conditions under which Mr. Shearer farms to those existing very generally throughout the country, a few ideas gathered by a visit to this Oxford county homestead should be of interest to those who till the land and feed live stock.

Literally speaking the cows do not depend upon the swine end of the business, yet in one sense they do, for the dairy returns would not be so gratifying if the skim-milk and whey were not fed to something that could use it to some financial advantage. The chickens also receive skim-milk in winter, and they too are utilizing a by-product of the dairy which is converted into actual and profitable returns. The cows of course depend upon the fields for their sustenance, but they also depend upon the hogs and chickens to assist them in commuting into currency a part of their production. Whole milk is not always a finished article. Its casein and butter fat are, when manufactured into cheese and butter, but from the process there is still a by-product—milk or whey. These still belong to the farm. Mr. Shearer is a swine enthusiast and he annually sells from 50 to 60 finished hogs. However he keeps his eggs in three baskets. Let us consider these baskets in the order of their importance.

## The Dairy Basket.

The dairy business on this farm is linked up with the factory in the community. From 15 to 18 cows, in addition to the young stock, are maintained. Whole milk is sold in the summer to be manufactured into cheese, but the whey is brought back home. It is the aim to have a number of cows freshen in the fall of the year. Their milk throughout the winter period is separated, and the cream is sold to the factory to be made into butter. This leaves a quantity of skim-milk to be used in the piggery and hennery. The cows are a well-bred-up lot of grade Holsteins, but one pure bred is being used for foundation stock, and is now entered in the R. O. P. test. A number of heifers are due to freshen in the spring, in order to provide a very appreciable quantity of milk throughout the factory season. The average daily return this winter from 5 cows has been \$2.35. This short paragraph reveals the source of part of the swine feed.

## In The Piggery.

As previously stated from 50 to 60 finished hogs are sold annually. To produce a part of this stock, two brood sows are maintained. In addition, some feeding sows are purchased to make up the required number. The taxes have risen "on account of the war," so another sow will be added to the parental stock that an additional litter may be ready next fall when the taxes are due.

Mr. Shearer entertains two unusual ideas regarding breeding and feeding swine. To obtain a moderately large litter the sows are not bred until the second day in season. When bred later than this he claims, the litters are unnecessarily large while breeding prior to that time will result in litters too small.

With reference to feeding, it is the practice to give the meal ration only twice each day. Mr. Shearer claims in this connection that it requires more than five hours for the stomach of the hog to perform its work. Another feed of meal or grain before the previous one is thoroughly digested would only force the stomach to evacuate its contents before the processes of digestion, peculiar to that organ, were completed. Furthermore, the absorption from the intestines, when three feeds of meal daily are given, is interfered with, and the result is that the hog excretes undigested material. It is the practice on the farm in question to feed in the morning and again in the evening, thus dividing the periods, day and night, as near as possible, into twelve hours each. At noon, in the winter, a few mangels are fed. Sometimes with a little meal on them, in order to entice the smaller hogs to devour them readily. For six months in the summer, whey is given as the mid-day allowance.

It is the custom on this Oxford county farm to wean the pigs when from eight to ten weeks of age. They are not dependent on the sow, however, all this period for their rations. They are allowed to run into a small pen and there are fed in a trough of their own. The writer saw on March 10, a litter of ten pigs which were being taken from the dam on that day. Some of them weighed over 50 lbs., and the average would be above 45 lbs. Not until the pigs weigh 40 lbs. or more, as an average, are they weaned. As soon as these 10 pigs would take to extras they were enticed to their separate troughs and there given half a pail of warm skim-milk brought to about the consistency of cream by stirring with it some middlings and a little oil cake. They were not given one-half pail of this twice a day at first, but they gradually worked up to it. Before the mother was fed, this was poured into the trough for the young ones; often they were through in time to get back to

the other pen and help the sow finish her allowance. The little pigs also got a few mangels at noon.

From weaning time up to the period when the young will weigh between 80 and 100 lbs, middlings, oil cake, and milk make up the greater part of the ration. After this more chop is introduced. After this period middlings are omitted, or replaced by a chop consisting of two parts oats, two parts barley and one part of fall wheat (by measure). About one-half pound of oil cake is fed to each pig. The practice is to mix the chop and oil cake and allow it to soak in water for twelve hours. At feeding time the warm skim-milk is poured into the barrel and the whole quantity thoroughly stirred. This raises the temperature of the mixture and makes it very acceptable to the hogs. At this stage also what pulped mangels they will consume at noon are given with some dry meal scattered on them.

Up to 120 lbs. of weight, the pigs are not fed heavily on grain. When past that stage the finishing period commences, and then grain is fed more liberally. They are considered finished when they weigh between 200 and 220 lbs.

Cleanliness and dry pens are emphasized. Plenty of dry litter is provided and the pens are cleaned out often. This practice together with ample succulent feed and oil cake, which is laxative, keeps the swine healthy and seldom is a case of crippling encountered.

## The Economics of Feeding.

The economy of this feeding practice may be summed up in the following brief points: The daily returns and gain from 29 feeding pigs amounted to \$3.60 per day. The same 29 hogs over a two-weeks period put on gains at a cost of 4½ cents per pound. Nine out of the 29 hogs weighed 65 lbs. each; 12 weighed 120 lbs. each, and 8 weighed 198 lbs. apiece. It will be seen that there was considerable disparity in the weights of these different lots. Cognizant of the fact that older swine put on gains at greater cost than do young ones, Mr. Shearer expressed the opinion that the heavier hogs might have cost 5½ or even 6 cents per pound of gain. This of course would signify that the young pigs were making very cheap gains. On the day of our visit to this farm, hogs were quoted at \$10 to \$10.15 f. o. b. country points. "That sounds good to me," said Mr. Shearer, "I have about a dozen that are ready to go." "I can remember one year," he continued, "when a bunch of pigs ate up almost all the feed I had and I was then obliged to sell them for \$3.85 per cwt." The cost of 4½ cents per pound of gain includes the skim-milk and mangels as well as all home-grown feeds at market prices. There are of course a few items not entering into the calculation such as interest on investment, etc., but the majority of the items concerned are included in the estimate. Unfortunately, for the farmer hogs do not always sell for \$10, f. o. b. country points, but when they do there is a fairly good margin between 4½ cents and 10 cents.

## Chickens as a Class of Live Stock.

Another branch of the live stock industry on this same farm, is a flock of approximately 200 Leghorn hens, and throughout the winter they have been yielding a revenue of \$2.40 per day. A flock of 78 pullets, was reared last summer in colony houses, in the fields. Last fall they were drawn up to the buildings and placed in a suitable location. The houses are 6x8 feet; with shingle roofs and dressed pine and battens for sides. They cost \$16 each. Seventy-eight pullets have been wintered in these three houses, and their record has been as follows: September, 43 eggs; October, 295 eggs; November, 330 eggs; December, 567 eggs; January, 833 eggs; February, 1,262 eggs. They are increasing in production as they approach the spring season, but they have been a very profitable side line throughout the winter. In another pen a bunch of old hens and younger pullets have wintered. They have not layed so well, as the three pens of pullets but there have been days when the total production of the old hens and pullets reached the hundred mark. These chickens are fed 2½ ounces of grain each per day; one-and-a-quarter ounces in the morning and again at night. This, of course, is not weighed to them each time, but it was weighed accurately at first and subsequent feedings estimated. At noon one pail of scalded chop and middlings with a

little oil cake added is fed to the entire bunch. Oats, barley and fall wheat is the grain fed. Plenty of mangels are placed in their runs and they receive one pail of skim-milk daily. Green cut-bone twice per week is also provided. "The hens are beating the hogs", said Mr. Shearer, "I find them a very profitable branch of farming, and I intend to increase the flock in size."

## What the Three Lines are Doing.

The gross income per day, during the winter, has been calculated by Mr. Shearer as \$8.35. Five milking cows return \$2.35; 29 feeding hogs yield \$3.60; 190 hens yield a revenue of \$2.40; It is the aim and purpose, by increasing along various lines, to force the daily income up to an even \$10. It has been found that these three branches of live stock can be worked very well together. The hogs and chickens require skim-milk, especially the hogs, and when it is available it is not difficult to get results from the two lines mentioned. The dairy is largely a branch unto itself but by making good use of the by-products it can be made all the more profitable.

## The Farm Practice.

It might be interesting to note something of the farm practice adopted. The system of rotation adhered to covers a period of five years for each field. The field is one year in hay, the next year in pasture, at the end of which it is ploughed up and sowed to mixed grain. During the fourth season it is manured, planted to corn and roots, and cleaned. The fifth season sees the same field in oats or barley and seeded down. The mixed grain referred to grows from the following mixture of seed: One-and-a-half bushels Oats; ¾ bushels barley, and about 4 lbs. of flax. The flax is sown from the grass-seed box, care being taken that it is not harrowed too deeply into the soil. This mixture is grown for the hogs chiefly. There is almost too much barley in it for dairy cows, but by chopping one bag of the resulting grain with a bag of oats the proportions in the chop are almost correct. The flax in the mixture helps to support the barley until the oats are mature.

# THE FARM.

## A Farmer on Growing Corn.

EDITOR "THE FARMER'S ADVOCATE":

Preparations should by this time be under way for the year's corn crop, and it perhaps will not be amiss to give my opinions on the subject. One of the first considerations is the purchasing or selecting of good seed. When obtaining seed be sure to get a variety suitable for the locality. If the growing season is not long enough late varieties will not ripen properly and are thus likely to be damaged by frost. Golden Glow seems to be a good all round variety, while Wisconsin No. 7, although an excellent sort, is somewhat later to mature. Farmers who have considerable spring seeding will find it to their advantage to select an early variety.

Only the very best ears should be selected, and when purchasing it is always well to buy on the cob. You not only see what you are getting, but it is then in the proper condition to test for germination. You have only yourself to blame if you fail to get a good stand of corn through the carelessness of planting seed of poor vitality. A few hours' work now, when there is no great rush, will give you good, strong seed that will grow evenly in the field. The operation of testing is by no means difficult, and, as it has been described from time to time in these columns, it is not necessary to repeat here. The corn should not be shelled until shortly before planting, but before shelling break off the butts and tips to ensure seed of even size so as to work more evenly in the planter. Also the kernels on the tip do not make as good seed. These should be saved, however, in case there should be a shortage of seed.

Almost all classes of soil are suitable for corn, but it should be in fairly good tilth. No crop will do its best on poor land, but there are others that are more suitable for it. Corn needs fairly rich, well-cultivated land which is warm and well drained.

I have generally noticed that good, spring ploughing gives better results than fall ploughing. It is certain, however, that fall ploughing will be better where the spring work can not be done properly



A Few Good Herefords at Pasture.

Spring ploughing should not be left until the land is too dry, or the work will be very heavy, and it will be next to impossible to prepare a fine seed-bed. On the other hand the ploughing ought not to be done while the land is too wet, for it will be likely to bake. Spring ploughing opens the soil, lets the air circulate through it, and if a green clover sod, with a good coat of manure, be turned under, it will be found that the soil will warm up much more quickly than that of fall ploughing. In my estimation this constitutes the ideal soil for corn growing, and where a three-year rotation is practiced this will not be hard to get.

A good seed-bed is very important. The plough should be followed with the drag harrow. It should then be allowed to dry off some on the surface so that it will not stick when rolled with a heavy roller. In this way the moisture would be conserved as much as possible. The cultivator or disc harrow may now be used to prepare a deep seed-bed. The drag harrow should again be used to smooth off the surface and break any large lumps. If the ground is soft it would be well to roll again. This may be done just before planting if it is desirable to see the marks more plainly.

Do not plant too soon. It would be more profitable to wait a week for the ground to warm up, because corn will not do well in cold soil. The two-horse planter is good if properly handled. The depth of planting would likely be more even than where a hand planter is used, although, with care, good work may be done by hand. Where a large acreage is planted the horse planter would be more profitable on account of speed, but small fields up to about ten acres in size will not warrant the expense. Be sure to plant deep enough. Two and a half or three inches is none too deep. Nine-tenths of the destruction by the crow and blackbird is caused by shallow planting. Also do not leave any corn scattered around; if you do, the birds will get it and look for more. After planting, especially when the hand planter is used and the ground marked out in squares, it is well to go over it with a light, straight-toothed harrow. I do not advise harrowing after the corn is up.

I have not spoken of row planting, because I believe hilled corn is far better. Larger and better-matured crops are generally obtained. Also, as the hoe is not a favorite implement on some farms, hilled corn has the advantage of being cultivated both ways to destroy weeds. But the hoe should not be dis-

carded, not only for the sake of killing weeds, but the hoe is the only implement that will loosen the ground close up to the corn without doing any injury to the young plants. One or two hoeings will be found greatly beneficial.

Cultivation is the greatest secret of corn growing. You cannot do too much. Cultivate after a heavy rain rather than before. Once a week is none too often. At first work deeply, then shallower so as to avoid doing any injury to the rootlets. It is well to throw the earth up to the hill in the last two or three cultivations.

Those who grow for silos will know the proper time to cut, but for husking Dent corn should be cut when the corn is well dented. After cutting the corn should be allowed to lie on the ground to wilt. By so doing it will rapidly lose weight and be that much easier to handle, and will also keep better in the shock. If there is much danger of rain it would probably be better to keep it set up so as not to have too much down at a time.

Lambton Co., Ont.

K. S. OKE.

[Note.—We always harrow our corn to good advantage just as it is coming up or a short time after it is through the ground.—Editor.]

## Taking a Tip from George Regarding Spring Cultivation.

By One of George's Neighbors.

The morning found the earth enshrouded in a heavy mist, which, by the time I had completed my chores, lifted, leaving behind a steaming soil warming up for the seed and the growth of spring. About half past nine the sun came out bright, like a ball of fire burning through the rising mist; song sparrows burst into melody on every hand, and as I glanced up after finishing the piling of the finely-split summer's wood, handy to the rear of the summer kitchen, I saw a four-horse team gingerly breasting across my neighbor's big field on the west side of his farm. What was George up to now? There were still to be found small patches of icy snow in exposed spots at the north side of buildings, and occasionally in a northerly exposed, brush-protected fence corner. The spring feeling had manifested itself in many ways. I had my last year's straw hat on. The hired man was unusually hard to separate from his bed, complaining that it "pulled so." The womefolk were on their spring chase after dirt, and the safest place on the farm was not in the house. The cattle, on the sunny side of the leaning straw stack in the farmyard, sniffed and moo-ed. The colts in the yard tried the stability of the fence. Young lambs in groups scampered in and out of the open pen, and the old sow came grunting up from her bed in the side of the stack, and nosing along to the head of the lane prospected for early grass.

### George Begins Work.

It was spring without a doubt, but the land was surely not ready for the seed. What could George be doing? Filling furrows had generally been the first work on the land. I had walked over my driest 15 acres the day before, and it seemed a little wet in three spots which should be underdrained. If it hadn't been for them I would have been filling furrows that very morning. No, George wasn't filling furrows. Curiosity is always more irresistible in spring than at any other time. I had my seed all cleaned three times through the fanning mill, using large screens and plenty of wind. My harrows were brought home from the blacksmith shop the day before, sharp, and ready for the field. A new double-tree had been supplied for them, and two more sections, and we intended to use four horses and get over the ground faster. The cultivator, disc, and drill were all ready for the field. The old gang plow had been pulled from its corner of the implement shed and made ready to fill the furrows. Enough mill-feed was in the bins to do the stock over the spring rush. I was ready, but could it be possible that George had beaten me on to the land?

There is always a wholesome rivalry as to who in this neighborhood will be the first to start and finish seeding. I remember one year, Joe, another neighbor, anxious to be first done, sowed an acre or so of undrained, wet land by hand on top of fall plowing, and harrowed it over once because he couldn't get his horses over it on the drill, and he nearly mired his team on the drag harrows. He might have saved his seed on that piece for it came to naught.

### Harrowing First.

George's team came steadily on, and I laid the last stick of wood on top of the pile, slipped on my vest, and started across to see what it was all about. By the time I had reached the line fence he was across the field on his second round, with his widened harrows sharp, and his horses in perfect fit for the work. Harrowing fall plowing first with the drag harrow! Exactly what he was doing. George explained that he had been reading how such a practice aided the top soil to dry out, and, by forming a mulch, retained moisture below. George had been attending a Short Course in our county town, and had also heard this subject discussed. He explained, and what he said sounded reasonable, that he was pulverizing the top soil so that it would not crust. He was improving the physical state of his soil, and was putting it in a condition to hold moisture and to hasten growth when the seed went in. George said that he planned to harrow all his fields that were ready first, and then follow with the disc or plow to fill the furrows, and next to cultivate once or twice, as needed, and drill

in his grain after. He had purchased a new four-horse cultivator and a wide drill, so that he could get along, with his young son to do the chores, without a man. He planned to do with his four-horse team what two men formerly did with two two-horse teams. His hired man enlisted in the fall of 1914. Mine offered his services but was rejected and he was for a time very restless, because George's man explained to him that soldiering was preferable to farm work, as the farmer never shouted to his man: "Stand at ease!" Later, they were not so particular about the physical condition of the men enlisting, and my man got a letter from George's man at the front and offered himself again, and his bad teeth were not such a drawback. He left us to get the seeding and harvest done ourselves. But we were prepared with the wide implements, and the seed was ready, and the horses we couldn't sell to go to the war, or to go anywhere else, were in good fettle. We planned to ride all the implements, even a cart behind the harrows, to change horses when necessary, and to do all we could to let the man go. He felt it his duty, and we were willing to help all we could. He went and we got through last year, and this year we'll get the crop off somehow with the boys from school, and perhaps we can get a man from across the border, or maybe cousin Bill from the city will spend his holidays helping us this year.

But I was speaking of George starting his harrows in the spring of 1915. I took his tip, examined the 15 acres again, got out my four 1,500-pound Clydesdales and went at it. Last year was not a dry season. Far from it. But early on it was dry and the harrowing did good, for it kept the last field to be sowed in nice condition until I got it done. I talked over this practice with a friend of mine from the adjoining county, and he told me that they had practiced it over there for a few years with good success. This spring, as soon as the fall-plowed land is dry enough, I intend to give it a stroke with the drag harrows, which have again been sharpened and are ready.

I have watched different men filling furrows. Joe uses the disc harrows, going only once over, but that doesn't seem to fill them up very level. Jim goes twice over his and makes a better job. I use a two-furrowed light gang plow, going one round on each, plowing about three inches deep, and then cultivate crosswise of the plowing. This levels up the dead furrows very well. No one should think of leaving them as they are. It is too hard on the farm implements and machinery bumping over them in seeding and at harvesting, and, left unfilled, the furrow space produces very little, and so is a direct loss. My own opinion is that in plowing too many of us throw our crowns up too high and allow our plows to dig in too deeply in finishing each land.

### The Cultivator Valuable.

For preparing the seed-bed on fall-plowed land, I like the spring-tooth cultivator best. That is, for stubble land. By putting on plenty of pressure and going crosswise, I was last year able to prepare a very good seed-bed on two fields by once over with the cultivator after harrowing, as suggested. Without the harrowing, one field at least would have required two strokes of the cultivator. For a field slightly grassy, or one which does not work up very well, I always go twice over, once crosswise and once lengthwise of the plowing. Then I drill in the grain, always sowing my grass seed ahead of the drill spouts. My sod I like to work down with the disc. Twice over with the discs, followed by a stroke with the drag harrows, generally makes the fall-plowed sod ready for the seed, unless it is left late and grows up grassy in the seams. I always like to get my sod sowed as early as possible. With a spring-plowed sod a nice finish can sometimes be made by turning the drag harrows upside down and dragging corners of the field. In the old days, when much sod was spring plowed for peas, considerable of this was done.

I like a wide drill, and always keep the horses

walking right up on the bit when drilling. The seed seems to feed down better, and, anyway, short-handed as we farmers are, we must hustle, because every day's delay after the land is fit to work means a bushel or two per acre loss in crop yield next fall, and we do not get too much with the best of management. I like to put a little pressure on the drill unless the seed bed is particularly mellow and loose.

After drilling we give one stroke of the drag harrow either the same way as the drilling, or crosswise, according as to whether two teams are working or one, where a team is following the drill the same way and where the field is all sown before the harrowing commences, crosswise.

### Harrow After Rolling.

A few years ago the surface of the sown land was always left rolled smooth. One spring, George was noticed harrowing a field after rolling, and it happened to turn out a dry year following heavy downpours in seeding. George harrowed that field again after the grain was up to break the crust which had formed, and his crop was much heavier than our field across the fence, left rolled in the spring. Where the land is in real good condition, we do not roll now. Where it is lumpy, or requires packing, we sometimes roll before sowing. Where rolled after sowing we invariably give an extra stroke with a light harrow to leave a mulch and prevent crust forming, which means retarded growth and loss of moisture.

### Everything Ready.

This year one four-horse team will have to put in the seeding, but we have eight horses, two or three of which we could have spared in the winter, and we think one or two of them would have made as good army horses as some bought in the United States. However, there was no sale. This spring they will have to partially pay for their winter's feed. We plan to work them a half day each and push them right along. The implements are all ready. The seed is cleaned. I have the formalin ready to treat the seed according to directions published in your column March 16. I cannot afford to risk smut loss this year. I prefer sprinkling where thoroughly done. It is quicker, handier and just as efficient as immersing. provided care is taken. It is necessary to have the grain thoroughly dry before sowing, and it is sometimes swollen so that the drill must be set considerably in advance of the indicated amount required. On this point, I always measure exactly two bushels of grain into each bag to be taken to the field for sowing. When the first bag is sown, I step off the strip and check up on the drill, and if it is not right adjust it. While the horses are "blowing" from time to time I keep further check on the drill by measuring off what is sown. This avoids the getting of too little or too much seed on the field. I remember once, however, that the man in my absence neglected to check up the drill, and got in only one bushel and a peck of oats per acre on four acres. The field had been heavily manured, and while the crop looked spindly and sickly for a long time, it came on with a rush at stooling season and yielded nearly 70 bushels per acre. I prefer to sow from two bushels to two bushels and one peck of oats per acre, about seven pecks of barley per acre, about two bushels or a little better Goose wheat per acre, and where a mixed crop is grown one bushel of Daubeney oats and one bushel of O. A. C. 21 barley.

### Use a Seat.

I would like to emphasize arranging all implements so as the driver can ride. There are plenty of chores to do in the spring to give one all the exercise required. Of course, the cultivator and disc have a spring seat. Harrowing, however, is the leg wearer. I remember when a boy of getting so tired one day harrowing that about four o'clock in the afternoon I had to mount old "Kate," one of my team, and ride the rest of the day. A cart arranged with a hook in the draw clevis or the doubletree will work all right.

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and will save "father's" legs while the boys and the hired men are away fighting the battles for freedom. Well, the days are warming up again. I have my old straw hat in the back stairs, and on mild days put it on. The summer wood is all sawed and nearly all split. We had a "bee" to do it. Most of the neighbors entered into this "changing work," and we got in a sawing machine. I am piling it as it is split. Everything is about ready for seeding. The horses are exercised each day and seem "fit." I am going to keep an eye on George that he doesn't get the start on me this time. Whether he beats me through seeding or not I'm going to put all mine in well. He always does, and it pays. A leader like George in a community is a great stimulus to greater effort. Here's for an increased production in 1916! Seed right and have no regrets.

**Fifty Below Zero.**

EDITOR THE "FARMER'S ADVOCATE."

This is a tale of Cold—  
Cold that bites and stings;  
Cold that chills the nasal ducts  
As with streams of liquid air.

We knew a severe winter was due. Summer had been a gem, the finest, I think, that I have ever experienced. The preceding winter had been equally so, and the winter before that sufficiently innocuous to put old-time raconteurs of "first-winter-we-were-in" hardships distinctly on the defensive. It was time for something to happen—and something did.

December was innocent enough with only six nights below zero and 10.5 the lowest register of the official instrument. January set in to make up for it. Dropping to thirteen below on New Year's Eve, the mercury hovered for over two weeks between a maximum midday register of 26 and a minimum night record of 48.5.

Contrary to Grande Prairie precedent, the cold was frequently accompanied by nippy northwest winds. There were no blizzards. I have never seen or heard of one in the Peace River Country. But it does not take much of a breeze to make thirty below uncomfortable.

We said 48.5 was the lowest dip. That was by the Meteorological instrument under my own care, but we are favorably situated on high land. A similar instrument three miles distant recorded 55, while unofficial readings at some other points on the Prairie, especially in localities farther eastward, denoted drops to 60, 65 and even 70 below zero.

It was a new experience stepping out into the tingling air that coldest morning. It made one imagine the sensations of an Arctic explorer braving the rigors of terra incognita. We knew it was cold by the "feel" of the house, by the strong draft which poured through the keyhole, and by the thickness of ice on water and sloop pails near the door. Besides, it had been 32 the night before, had been cold all day long, and had set in clear and calm at eventide, giving fair warning of a "singer."

Now, thirty-seven below was the coldest your scribe had ever experienced, and it was with an exhilarating admixture of curiosity and dread that he stepped quickly out, closely muffled in cap and sheepskin coat, glanced at the thermometer and hiked for the stable, pig feed in one hand and milk pail on the other arm. Many a warning had been heard of these treacherous, still, cold mornings freezing cheeks, noses and other exposed cuticle before one was aware the parts were cold. It was prudent to make haste. Forty-eight and a half below! That was something to write home about. It was what the people back there would expect from "Ultima Thule." Arrived at the barn after a two-hundred-yards dash, it was almost with a feeling of surprise that no evidence of frostbite could be discovered. The September shoats scampered squealing from behind the burlap curtain which protected the creep in their open-air quarters, ready as usual for their feed. The rime-coated oxen groaned a bit, but took hold of their sheaves promptly. The calf bawled and the cow gave milk as usual, though her teats were like icicles at first, and milking in a sheepskin top-coat is operating under difficulties. The chickens appeared to mind it most. They sat mopeishly upon the perches until a very fashionable hour late in the forenoon. The roosters were too subdued to crow. When at last they condescended to descend they pecked about indifferently at the oven-warmed wheat thrown before them, balancing themselves most of the time on one limb, and presently hopping upon the roosts for another twenty-four hours reverie in Poultry Dreamland. Few hens laid during the cold snap, though I want to record that a neighbor lad with a hundred birds in a house whose twenty-foot south wall comprised eighteen feet of cotton succeeded in getting an average of about two dozen eggs a day throughout the month.

About the middle of January, Nature repented with a gentle Chinook, when for three nights the fluid kept above 0, and for three soft, balmy days we made haste to replenish water cans and cisterns, chop out pig troughs filled to overflowing with frozen slop, clean stables and stove pipes, haul feed and get up wood. Everyone thought the worst was over, but it was best to be prepared. It was indeed.

On the night of the nineteenth down came a howling Nor'wester to the tune of twenty below and for nine long days—I mean mostly nights—a varying but incessant northwest draft was accompanied by temperatures never higher than twenty below and ranging down to 45. On four different days the warmest moment was 34. Frozen manure again piled deep in stables. Range stock refused to go to the "settings" and straw had to

be hauled to the sheds. Our own store stock and dry cows had to brave the daily ordeal of a mile walk to water through the stinging cold and back against that cutting northwest wind which a man muffled to the eyes could scarcely face. Horses can do well without water when there is snow to eat but cattle fail sadly under that regimen. The cold is hard enough on them without suffering from thirst. Those who hauled water for stock that could not go to it found their cisterns getting low and in some cases snow had to be melted for household and stable use. On one of the worst days I hauled a tank load two miles. It was not all ice when I arrived. Bridle bits dipped into water would instantly congeal an eighth of an inch of ice. Even dogs suffered. When out doors they would often crouch piteously, holding up one paw out of the snow. Settlers who had not provided themselves with coal from the local mines burned half a cord of stove wood a day. Many fired day and night. The penetrating power of that bitter-cold air is great. The smallest chink admits a keen draft and every cupful of outside air reduces a hundred cupfuls of inside air about one degree. Forty-eight below zero is seventy degrees of frost. No wonder it soon chills exposed parts of the body. One keeps his mouth closed instinctively. Every breath seems like a stream of liquid air coursing through the nasal chamber.

The cold became monotonous. It got on one's nerves. Swine became quarrelsome, horses crabbed and their owners grouchy. It was easy to understand the surly gruffness of Arctic exploring parties tested to the limit with fatigue, hunger and cold. Would it ever end? Three or four days is the usual limit of a Grande Prairie cold snap but this ran away into the second week. The sun shone clear on a few days, but seemed to have lost its power. Often the atmosphere was dull with a falling hoarfrost. And ever that biting breeze. That was the unusual part of it, compelling the oldest inhabitants to admit it was, all things considered, about the worst winter since they had been in the country.

At last, one morning we went out to find it calm and clear. Hurrah! It was only twenty below. We hustled about joyously, coats carelessly open, caps stuck lightly on the top of our heads, mitts on or off as was handy. The cold spell was broken. It felt like spring. It turned out that two weeks of pretty steady weather was yet to come but it was wind-still and the mercury rose well above zero at noontide.

The middle of February it turned mild and remained so to the end of the month. For a week it hardly ever froze. The second week it congealed a few degrees at night. Soft, genial days mild as summer followed right along. The snow-clad Rockies showed clear on the southwestern horizon. The poultry awoke to life and commenced laying as in springtime. Cattle roamed over the fields, gleaming stubble and stem-cured grasses. Children played and teamsters made haste to avail themselves of the fast-disappearing sleighing. The river ran high above the ice. House and stable doors stood wide open. The settler took stock and found his worst loss had been perhaps the stiffening of a pig or two, some loss of flesh on his cattle, a few dead hens or in most cases nothing more than the frosting of a few chickens' combs. Reports came back of one or two people frozen to death on the long trails but that was due as much to lack of accommodation as to anything else.

It was all over. Our usually fine February—for February is nearly always an incomparably fine month with us—was vindicating its reputation after all. The cold spell was already a memory. The Grande Prairie winter was behaving itself again.

Peace River District, Alberta.

W. D. ALBRIGHT.

**How a School Garden Made Good.**

EDITOR "THE FARMER'S ADVOCATE":

During the past few years, agriculture has been creeping, little by little, into our schools, until finally, at the present time, it has found a definite place in our work. It now seems evident that inside of a few years it will be one of the most important topics on our school curriculum. The interests of agriculture may be promoted in many ways, and by no means the least of these is by means of a school garden.

When I attended Normal, school gardening was placed in my mind almost as a beacon light, which, if I followed, would eventually lead me to success in my teaching. This impression was given to me partly by the teacher who had charge of that line of work, and partly by a professor from Guelph, who spent a day lecturing to us on the benefits to be derived from teaching agriculture.

As it happened, at the school where I have been teaching, the farmer who owns the land adjoining the school kindly offered to allow me to use as much of it as I wanted, if I would start a garden. Besides this, he offered to plow and fence it.

He was as good as his word. Late in the fall he plowed a piece of land beside the schoolyard. It was old sod and very poor soil. The man, who had worked it a few years previous, told me that he could grow scarcely anything on it. The ground was cold, damp and sour. However, during the winter I managed to get a little fertilizer on it, and we spread nearly all the ashes from the furnace over it.

In the spring, when the snow was leaving, I began to wonder just exactly what to do with the garden. I had already written to our Agricultural Representative for a few ideas, but instead of sending me some, he referred my letter to the professor already mentioned, who, in his turn, sent me a little pamphlet which was absolutely no use to me at all. A similar

one was already in the school, and it dealt principally with school garden grafts.

Being thrown, therefore, on my own resources, I went out into the garden one evening after four o'clock and with a couple of the boys measured the ground that had been plowed. We found it to be about seventy feet long and about thirty-eight feet wide. From this I calculated that we could make twenty-eight plots, each nineteen feet long and about five feet wide. Accordingly, next day, I drew the plan which I had in mind, on the blackboard for the pupils to see, criticize and offer suggestions on. I also had the pupils make a copy of it to take home to show their parents, and, if possible, get suggestions from them. The result of it all was that we left the plan practically as it was.

The most tedious part of all our work was the making of the paths, and in making them we were at the same time making the plots. We dug them about nine inches deep, and it took us about two weeks to do it. Before commencing to dig them, we placed stakes at proper distances along the sides, and connected them from side to side with binder twine. We dug directly beneath the twine, and so managed to get our paths fairly straight, and our plots uniform in size. As soon as the paths were made, the pupils were each given a plot, and they then began to work for themselves.

Each plot was subdivided into five smaller plots. This was done by means of small stones. These stones, when whitened with lime or some other whitening, add very materially to the appearance of a garden. The three subdivisions on each side of the middle path were devoted to flowers, and were made a little smaller than the two outer ones, which were devoted to vegetables and grain.

As far as possible the pupils were given perfect freedom in choosing what they would sow. A great many of them managed to get a certain amount of seed at home, and, besides this, we purchased about three dollars worth, which we got for two cents a package. Each pupil paid for his or her own seed.

As soon as the pupils could get their plots ready, and secure their seed, they sowed it, and then came the most discouraging period in connection with our garden. For some reason or other, a great deal of the seed never came up, and a large part of what did come up got killed with a frost that came about the 24th of May.

When school closed on the 29th of June, our garden gave every evidence of turning out a miserable failure. However, during July there was a vigorous growth, and by the first of August, our garden was all and even more than we had ever expected. From a distance it appeared to be one solid mass of bloom, and the odor from the flowers could be detected for rods on either side. The vegetables and grain were also exceptionally good, and I may say that then for the first time, the people of the community began to realize that there was something beautiful, something interesting, and something instructive about a school garden. People came from different parts to see it, and I think they were favorably impressed with its appearance. For everyone there was something there to admire, and something there to learn.

We had six school plots. I had a large primer class, and instead of giving each of the little folks a whole plot, I gave each one of the small subdivisions. By so doing we were enabled to have the school plots. These plots were for all the pupils, and each pupil had to take his or her share in the work of planting and looking after them. We made two large school plots in the middle of the garden. Each of these was equal in size to two of the other plots. In one of these we planted Grimm alfalfa, and in the other the Ontario Variegated alfalfa. These are supposed to be two of the best and hardest strains of alfalfa, and it was interesting for us to note that, although the Grimm alfalfa is supposed to be the better of the two, the Ontario Variegated did much better for us. I think that every farmer should grow alfalfa, if at all possible, and it was part of my purpose in having it in the garden to introduce it in the neighborhood, because a school garden should be instructive, not only to the pupils but also to the parents.

In one of the small subdivisions of another school plot we tried an experiment with potato onions. The plot was about four feet square, and our purpose in having it was to find out just exactly how many pounds of onions we could secure from a plot of that size. When we weighed them we found we had nearly ten pounds. If these had sold at five or six cents a pound, the sixteen square feet of land would have brought us at least fifty cents. At this rate an acre would bring \$1,361.25.

In another of the school plots we planted geraniums. Practically every leaf on them was frozen about the 24th of May, and for some time there was nothing but the bare stalks. However, during July they also began to grow, and they bloomed from about the first of August until the first of October. We also had a school plot of gladiolus, and they were exceptionally good. A great many of the other flowers were in bloom when the snow came last fall. We were able to pick pansies on the first of December. We should have had rose bushes, shade trees and vines planted in the school plots, but we did not get them placed. When these are planted in the school garden, they can later be transplanted in the school grounds.

Thus far I have been describing the plots. I might now turn to a question that is frequently asked, "Does a school garden pay?" To this my answer is that it undoubtedly pays when once started, but it is indeed a difficult thing to start one, and few are the





**A Scarcity of Rennet Extract May Be Prevented.**

Cheese making is a very important industry in Canada. The manufactured product is valued at about \$22,000,000 a year. After supplying the home market, Canada exported, in 1914, about 145,000,000 pounds, which, at the prevailing price at that time, reached the value of nearly \$19,000,000. This industry has meant much to dairymen of this country. Cheese factories have been built wherever an adequate supply of milk could be secured. Consequently, the farmer had a profitable market right in his own community for all the milk he could supply. With the monthly milk checks coming in, the farmer was furnished with a working capital throughout the season, which could be used in purchasing stock or making needed improvements. Besides receiving a fair price for the milk there is returned to the farmer a by-product in the form of whey, which has a value. Pasteurized whey is claimed to give good results in feeding hogs, and is sometimes used for raising calves, but should be carefully fed. Whey is usually valued at about ten cents per hundred pounds.

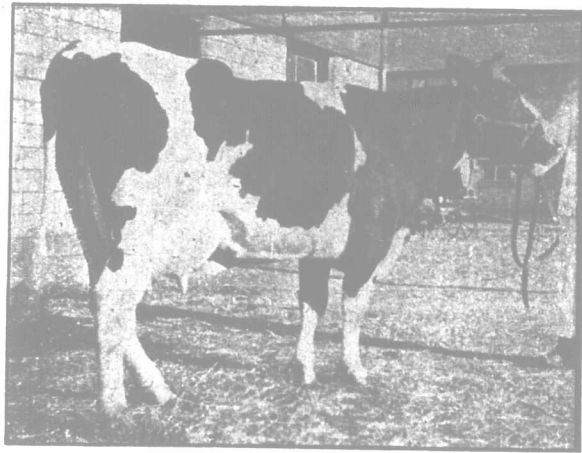
There may be an abundance of milk, the best of equipment in the factory and a ready market for cheese, but if there is no rennet extract available the cheese cannot be manufactured. This important industry hangs as it were on a single thread, which, if broken, would leave the industry stranded. Rennet extract is essential to the manufacturing of cheese as it is used to coagulate the solids of the milk into that substance known as curd, which is subsequently marketed as cheese. No other substance has been found to take its place. The main supply of rennet has been secured in Europe and the supply appeared unlimited, consequently, on this side of the water, the rennet extract was not manufactured in any great quantity. When the present war broke out, the note was sounded throughout this country that all cheese-makers should consider the danger of a famine in the rennet supply. The scarcity is impressed upon all cheese-makers when they find it necessary to pay more than double what they formerly did for the extract.

During the pioneer days of this country, cheese-makers secured their supply of extract from the rennet or fourth stomach of calves, which were procured from the patrons of the factory. However, the home-made article had its defects, and when the scientifically-produced extract of rennet was put on the market it quickly supplanted the other, and to our present cheese-makers the preparation of rennet is practically a lost art. With the European supply cut off, efforts are being made by manufacturers of the extract to secure their requirements from farmers, butchers, and abattoirs. J. A. Ruddick, Dairy Commissioner at Ottawa, in a circular Number 17, points out that there is no reason why the supply of rennet could not be secured locally, if farmers and butchers would save the stomachs of the calves which are slaughtered at the right age. It is believed that many butchers and farmers could work up a good business by collecting and preparing calves' stomachs for the manufacture of rennet. Charles Hansen's Laboratory, Little Falls, N. Y., a manufacturer of rennet extracts, gives directions for saving and preparing the calves' stomachs for this purpose, which are to the effect that only rennet from sucking or milk-fed calves is valuable. Stomachs from calves fed on grass or solid food are not good for this purpose. When the calf is killed, immediately cut out the rennet, leaving a portion of the third stomach attached to it, then carefully squeeze out the contents of the rennet (consisting of coagulated milk or other partially digested food), but do not turn the stomach inside out or wash it, as that would cause a loss of part of the ferment, then rinse off any dirt from the outside and trim off any adhering fat. In preparing these rennets for shipment to a laboratory, there are two methods which may be successfully followed. The one is blowing up the rennets, the other the fresh-salted method. The former is done by tying the opening at the large end, by applying the string at the narrow passage between the third stomach and the rennet, and insert in the opening of the long neck at the other end a small glass tube, and blow up the rennet as hard as possible like a foot ball, then tie with a string under the tube. Where many rennets are handled, it would be convenient to use air pressure for inflating them. As the long, narrow neck contains but little of the ferment, it may be cut off after drying. Hang the inflated rennets to dry in a draughty shed, or a warm, dry room. If a fan could be used to create a draught it will aid in drying the rennet quickly, and the process should not take more than a week. The rennet should never be hung in the open, exposed to the sun, or in a room that is more than ordinarily heated. They should be thoroughly dried and carefully protected from flies and other insects, while being prepared for shipment. When a sufficient number of thoroughly dried rennets have accumulated, let out the air, tie up the rennets in bundles of 25 or 50, and pack in cases or barrels. The fresh-salted method consists in first squeezing out the contents of the stomach, trimming off the fat, and splitting them open. Salt is thoroughly applied on both sides, and sufficient should be used so that after allowing them to drain, there will be plenty of dry salt left between the rennets. Leave in a cool place to drain over night, and pack for shipment in a tight tub or barrel. These stomachs, known as the rennet, may then be sold to manufacturers of extract, or be disposed of to the local cheese factories should it be necessary to revert temporarily to the old practice

of preparing the rennet at the factory. However, Mr. Ruddick recommends that the rennets be sold to the manufacturers of the extract, and as there are no manufacturers of this kind in Canada, he mentions the name of two laboratories in the United States, namely, Chr. Hansen's Laboratory, Little Falls, N. Y., and Marshall's Dairy Laboratory, Madison, Wis.

The directions given are for the saving of rennets and preparing them prior to shipment to a laboratory. Mr. Ruddick does not believe that a home-made extract could be used without injury to the quality of cheese. However, should a cheese-maker desire to prepare his own extract of rennet it is possible to do so. One good rennet or calf's stomach will be required for every 2,000 or 2,500 pounds of milk. The rennets should be cut into several pieces, and as many as will be required for a day's supply placed in a tin or earthenware vessel of five or ten gallons capacity. By having a number of vessels a fresh supply for every day's use would be available. About one gallon of pure sterilized water is used for each rennet and a few ounces of salt added to each gallon of water. Cover the vessel and keep in a cool place. Stir the contents frequently and give the soaking rennets a good rubbing once a day. The solution should be ready for use on the third day. Strain the solution through cheese-cloth before using, and add the whole of it to the milk without dilution. After using the home-made extract for a short time the cheese-maker will soon learn to gauge the proper strength, and govern it by the number of rennets used. Care should be taken to have containers, strainers, and other utensils coming in contact with the solution well washed and sterilized every time a fresh supply is made.

As the cheese industry depends on the availability of rennet extract, it appears that dairymen should encourage the saving of the rennets or calves' stomachs used in its manufacture. Butchers or others who slaughter a large number of calves for veal, might secure a revenue from an otherwise waste product, and besides receiving pay for their work, would aid in furnishing necessary material for the manufacture of the extract so essential in the making of cheese.



**Lakeview Dutchland Artis.**  
Canadian champion senior three-year-old butter cow in seven days giving 567.7 lbs. of milk, 27.725 lbs. of fat, equal to 34.66 lbs. of butter. Her 30-day record of 2302 lbs. of milk and 110.84 lbs. of butter is only equalled by one other Canadian cow.

**Reduce the Cost of Delivering Milk and Cream.**

In one cheese-factory district, perhaps there are others, the patrons prefer to draw their own supply of milk to the factory. Driving along the road in the vicinity of this factory between 6.30 and 9 a.m., it is customary to meet the farmers with their one or more cans of milk as the case may be, either going to or returning from the factory. The rig will usually hold several of the neighbors' milk cans, but no, each one must take that morning jaunt six days of the week throughout the factory season. True, from the standpoint of meeting people and exchanging ideas with the neighbors it is a good thing, but from an economical viewpoint, does it pay? The farmer living close to the factory does not lose much time in delivering his supply of milk, but it will take from two-and-a-half to three hours at the very least to draw milk four miles to the factory and return. Where the distance to haul is more than four miles the forenoon is practically gone before they can get back from the factory. Even if they should get back by 9 o'clock the forenoon's work on the farm is interfered with. Considering that it takes three hours for a man and one horse to deliver 300 pounds of milk, the cost would be about 30 cents per hundred pounds, or if only 100 pounds of milk is sold it would amount to about 90 cents per hundredweight, or nearly the selling price of the milk. These figures are based on a man's time being worth 20 cents per hour, and a horse at 10 cents per hour. According to the present scale of wages this is not considered too high, and possibly it is worth more during the rush season. Three hours per day off the farm would mean that practically two days a week less labor could be expended at the regular farm work. If by some means this time could be saved the work could be more thoroughly done on the farm, or in a season when labor is scarce the two days a week would permit of doing some work that

would otherwise be left undone, or in other words, much more work could be done when it should be.

If ten dairymen on one concession supplied a factory with 3,000 pounds of milk, it would cost, according to the above reckoning, about \$9 per day, if each man delivered his own 300 pounds of milk, or the portion thereof. Could not a little co-operation on the part of these ten dairymen save them considerable time which might be used to advantage in preparing for and harvesting the season's crop? If three or four dairymen living near each other took turns drawing the milk of the group, it would result in a saving of time and indirectly a saving of hard cash. The milk would reach the factory and the whey be returned as satisfactorily as if each man made the daily trip. A better and a more economical method is for dairymen living on one concession or cross road to arrange with one man living farthest from the factory to draw all the milk on a route furnishing about a ton-and-a-half of milk. A man would receive fairly good wages for himself and team if he was paid 8 or 10 cents per hundred pounds of milk. On most concessions there is at least one man so situated that he can do this work, and it would mean a saving of 20 cents or more per hundredweight of milk to each patron on the line. In many districts this method is followed, but there are some places where a little co-operation on the part of the dairymen would result in a saving of many dollars during the year. It would appear that most dairymen could profitably co-operate in delivering their supply of milk to the factory, or in hauling cream to the creamery or shipping station. Reducing the cost of marketing increases the net returns from the milk.

**HORTICULTURE.**

**Orchard Aphids.**

In recent years aphids or plant lice have become a serious pest in the orchard. They are "on the job" early in the spring and if not attended to will cause no small amount of damage. The following article is taken from the address of W. H. Brittain, Provincial Entomologist for Nova Scotia, before the Fruit Growers' Association of that province. Aphids are discussed very interestingly in this article:

Among the insect pests of crops, various species of aphids or plant lice (Aphididae) take a prominent place. All our aphids are small species, none being more than one-quarter of an inch long and most of them much smaller. They are more or less pear-shaped in form, have relatively long legs and are provided with a sucking beak of varying length. Aphids have many wonderful habits and the life history of many species is very complicated. The eggs hatch into female forms known as stem mothers, that reproduce by giving birth to living young, without fertilization by the males. From these spring several summer generations which reproduce in the same way. In the fall, true male and female forms are produced and the female deposits her eggs, which carry the species over the winter. Many species do not spend their entire lives on one plant, but have what is known as a secondary or alternate host to which they migrate and spend part of their lives.

Three species of aphids injure the apple in Nova Scotia, viz.: The rosy apple aphid, the green apple aphid and the woolly apple aphid.

**The Rosy Apple Aphid.**

This aphid gets its name from the fact that the wingless forms have a rosy or pinkish tinge. The stem mothers that hatch from the eggs vary greatly in color, being usually of a somewhat bluish shade tinged with green. The hinder part of the body is tinged with pink. The young of these forms are pinkish and like the stem mothers are covered with a whitish powder.

**LIFE HISTORY:**—The eggs are small, black, oval and shiny like those of the green aphid and are laid upon the twigs or even the trunk of the tree. They are not so noticeable as those of the green aphid, being more scattered and often concealed under a bud scale or elsewhere. They hatch early in spring as the buds are unfolding and the stem mothers on reaching maturity begin to produce young with great rapidity. Five stem mothers reared in the laboratory produced 236,187, 110,247,78 young respectively, or an average of 177, while 37 individuals of the second generations produced an average of 106.51 young each. The third generation females develop into black or dark brown winged females that fly to plantain and there deposit young. From 2 to 5 generations are spent on the plantains in Nova Scotia, the last generation developing into dark-colored winged females that fly back to the apple and give birth to true females or into true winged males that return to the apple and there mate with the females. The rosy aphid has a maximum of nine and a minimum of six generations in this province. The number of young produced by the various forms, varies greatly, chiefly according to the weather conditions, and observation seems to indicate that this species flourishes under conditions that often prove disastrous to its relative the green aphid, viz.: long continued wet weather such as prevailed during the past season.

**INJURIES:**—The chief seat of injury of the rosy aphid is to the leaves about the blossom clusters. The most serious effect of this is to dwarf the apples borne on these clusters. The dwarfing may only be slight or the apples may not grow any larger than acorns. In cases of bad infestation, large bunches of these small dwarfed apples, so well known by farmers who have

had any experience with this pest, will be found hanging on the tree.

A curious effect of the aphid work about the fruit cluster is the retention of many apples that would have dropped to the ground had they not been so attacked.

The Green Apple Aphis.

The green apple aphis is a soft-bodied, light green or yellowish insect, somewhat pear-shaped in form when mature.

LIFE HISTORY.—The winter is passed in the egg state. The small, oval, black, shiny eggs are frequently present in abundance upon the twigs.

INJURIES.—The injury of this insect may involve leaves, twigs and fruit, and as the insect continues breeding on the apple throughout the entire season the damage done may be considerable.

Injury to fruit is by no means uncommon in Nova Scotia, and in years of severe outbursts the yield may be considerably reduced in this way.

Control of Green and Rosy Aphis.

NATURAL CONTROL.—Weather conditions doubtless play an important part in the natural control of these pests.

CONTROL BY SPRAYING.—Certain investigators have reported excellent results from dormant sprays applied to the egg.

Lime-sulphur solution 1 to 10, lime-sulphur solution and lye, sulphur resin solution and blackleaf 40, 1 to 500 were used in the dormant sprays.

The control of the pest by dormant sprays was accordingly abandoned and various summer sprays were experimented with at several different dates.

With the green aphis this spray may be deferred if necessary until the spray just before the blossoms open, provided the trees are not too large, are well pruned and a heavy drenching spray is given.

The Woolly Apple Aphis

This pest is well known everywhere the apple is grown. The adult females appear as bluish white, cottony patches, which on close examination are seen to be made up of a large number of small, reddish-

brown aphids, covered with a white waxy secretion. They are particularly abundant upon wounds on the trunk or on a place where a limb has been removed.

INJURIES.—In more southern countries where damage to the roots is frequent, this insect is a much worse pest than in Nova Scotia, where injury to roots is seldom found.

CONTROL.—Thoroughly drench the insects with a 15 per cent solution of kerosene emulsion. Where the aphids are not too numerous they may be readily destroyed by simply painting affected parts with kerosene.

Facts About Garden Seed.

People often purchase their garden seed in a haphazard manner. They should study out the best varieties according to their tastes and conditions, and have the stock ready as soon as they are prepared to go on with the work.

Weights of Seeds.

Table with 3 columns: Kinds of seed, Ounces in 1 quart, No. of seeds in 1 ounce. Lists various vegetables like Asparagus, Bean, Beet, etc.

The Construction and Use of Cold Frames.

In the issue of February 24 an illustration of, and some notes regarding a hot-bed were published. The hot-bed usually supplies artificial or bottom heat, in the majority of cases through the fermentation of manure, which forces the young plants rapidly ahead.

the frame as a cover, but matting, bags, or canvas will do.

The size of the plants to be hardened off in a cold frame will largely govern its dimensions. For the general run of seedlings, however, it should be set on top of the ground with a plank 12 inches wide at the back or north side, and 6 inches wide at the south.

The soil in the cold frame should be deep and contain a very large percentage of organic matter. Leaf-mold from the woods is excellent, but when near town, or even in the country, it is now difficult to obtain.

It would be wise to make the dimensions of the cold frame to correspond with those of any storm windows that might be about the place.

Young seedlings are often purchased still in the flats in which they were produced. When coming direct from the green-house, they would benefit by a short stay in the cold frame, in order to become hardened.

Pruning Red Raspberries.

When pruning raspberry plants the one principle to remember is, that the fruit is borne on canes one year old, and older canes should not be allowed to stand.

If nothing has been done to the plantation prior to the present season of the year, pruning should be proceeded with at once. It is much nicer working in the patch while the ground is still frozen and before growth starts.

During the growing season keep down the new growth between the rows. The new shoots in the row will be as high or higher than the old canes by harvest time.

First, the danger of freezing back where the canes are cut; second, injury to and of the loss of the tender laterals through freezing; and third, the possibility of small and poor quality berries on account of too many laterals.

Regretted Stopping.

Please enter my name again for subscription to your valuable paper. I had taken same for some years, but was persuaded to take another on trial, but must say I regret stopping yours, as I consider it the very best bar none.

How to No

EDITOR "T" While poultry, just returned from France, and required several weeks of rest, get nearly commanded hospital use, go that the sick and well he said, the supplying of off by this largely for this demand Canadian eggs prices are for some product so other count time we have home consu to our large Is this not have condit this product a temptation adian eggs Should not eggs should Is it not of Even more s tents of an reputation i maintained spection. Brant Co.

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POULTRY.

How to be Loyal to the Empire in a Necessary Food Product.

EDITOR "THE FARMER'S ADVOCATE": While out on Farmer's Institute work talking poultry, etc., I chanced to meet a doctor who had just returned from the hospitals in England and France, and he informed me that the hospitals there required very large quantities of eggs for feeding the sick and wounded soldiers, and that they could not get nearly enough, although the government was commandeering all the available supply suitable for hospital use.

Brant Co., Ont. J. W. CLARK.

FARM BULLETIN.

East Elgin Holstein Breeders Hold Their Second Annual Sale.

Holstein breeders who failed to attend the East Elgin Holstein Breeders' sale at Aylmer, missed an opportunity of securing choice animals at moderate prices. The consignors offered choice stock, many of the cows have been officially tested, and the young stock traced back to noted ancestors.

- Consigned by J. M. Van Patter & Sons. Tensen Johanna Mercedes, F. Leeson, Aylmer \$140 Woodland De Kol Princess, E. H. Lindsay, Aylmer 195 Woodland Tensen Johanna, R. Willis, Lambeth 195 Colantha Schuiling Mercedes, J. A. Leaver, Simcoe 185 Aagie Sarcastic 2nd, E. H. Lindsay 170 Mercedes Calamity, J. Smith, Aylmer 165 Hengerveld Mercedes, J. E. Sweet 100 Consigned by J. H. Chalk. Duchess De Kol Madolyn, H. Kent, Aylmer 100 Flora Mercena Re Becky, Ross McConnell, Aylmer 100 Tolsti Mercedes, F. E. Martin, Springfield 125 Lady Iola, F. Proing, Aylmer 180 Celia De Kol, E. Whiteraft, Copenhagen 160 Madolyn Lady De Kol, F. Sansburn, Aylmer 100 Lassie Ormsby, H. Miller, Crampton 120 Consigned by T. Martindale & Son. Johanna Abbekerk Posch 2nd, E. H. Lindsay \$145 Johanna Artallissa Mercena, H. Miller 130 Artallissa Mercena Schuiling, J. H. Skinner, Aylmer 150 Johanna Albino Wayne, F. E. Martin 135 Consigned by Jas. Nevill & Sons. Gypsie Queen R-11, Wm. Cleaver, Aylmer \$110 Dina Houtje Netherland, J. E. Lindsay 100 Consigned by Jos. Newell & Son. Pauline Pietertje Mable, M. Pepper, Aylmer \$195 Grace Rooker, B. Thompson, Aylmer 200 Consigned by H. V. Mann & Son. Pauline Ormsby, R. McConnell 120

Henry Wallace Passes.

Henry Wallace, familiarly known in the United States as "Uncle Henry," has passed to the great beyond. Minister, farmer, agricultural editor—he knew Iowa like a book—knew the needs of the farmer, and was not afraid to advocate anything to advance the interests of "Good Farming, Clear Thinking, Right Living." The agriculture of Iowa and of the U. S. A. and Canada has lost a friend.

Seventy-four Holsteins Sold by Auction at Woodstock.

The fifth consignment sale of the Oxford Breeders' Club was attended in force by Holstein Breeders from far and near. The attendance was considerably greater than at any previous sale. Seventy-four head of choice animals were consigned by well known breeders of the Black and Whites in Oxford County, and were sold at Dr. Rudd's sale stables, Woodstock, where a sale ring and seats were arranged for the occasion. The animals were well fitted and showed to good advantage. Many of the mature cows had qualified in the R. O. P. and R. O. M. tests, and were descended from high-producing ancestors. The young stock were choice individuals and with the backing they have should give a good account of themselves in the future.

- Consigned by Fred Rowe, Currie's. Mercena Black Beauty, Dr. C. A. Cline, London \$190 Bright Girl, Elias Ruby, Tavistock 210 Prince Abbekerk Mercena, Walker & Sons, Walkerville 450 Princess Canary Mercena, Dr. C. A. Cline 265 Consigned by Jas. G. Currie & Son, Ingersoll. Princess Pride De Kol, W. A. Montgomery, Woodstock 255 Vida Princess 2nd, De Kol 3rd, Jas. Rettie, Burgessville 255 Consigned by Walburn Rivers, Ingersoll. Daisy De Kol Wayne, R. Thompson, Carlingford 150 Prince Aggie Hartog, I. Mogk, Tavistock 100 Sir Aaggie Hartog, Jas. Ogilvy, Stratford 135 King Wayne Hartog, W. Wilson, Ingersoll 170 Consigned by W. E. Thompson, Woodstock. Sir Mechthilde Beauty Posch, Neil McGugan, Shedden 135 Ena Posch Segis, D. G. McLellan, Atwood 125 Netherland De Kol Xanthe, W. A. Montgomery 160 Netherland Statesman, E. H. Featherston, Burlington 100 Consigned by T. J. Lammiman & Son. Segis Princess De Kol, H. Bollert, Tavistock 115 Mavourney Segis, J. P. Ficht, Woodstock 160 Queen Mary Segis, R. Thompson 120 Winnie Calamity Posch 3rd., D. G. McLellan 150 Betsy Segis Mercena, Geo. Mercer, Thamesford 160 King Calamity Segis, M. R. Evans, St. Marys 115 Winnie Fayne Posch, S. J. Monteith, Stratford 155 Fayne Segis Mercena, J. Leuszler, Bright 120 Consigned by McGeo Bros., Beachville. Axie Calamity Posch, Wm. Hodgins, Woodstock 145 Consigned by M. McDowell, Oxford Centre. Bonheur Model, Geo. McCombs, Burgessville 120 Pauline Fayne Segis, D. G. McLellan 100 Pontiac Lady Colanthis, J. P. Griffin, Freeman 170 Pontiac King Walker, J. J. Waechter, Mildmay 105 Consigned by H. C. Holtby, Maple Soil Stock Farm, Belmont. Lady Manilla, Geo. C. McIntosh, Woodstock 115 Edgemont Princess, J. A. Duncan, Waterdown 135 Belmont Star, C. Duff Nelles, Boston 105 Polly Pauline Veeman, J. P. Ficht 160 Salla Princess Veeman De Kol, J. Canfield, Woodstock 110 Fairmount Pledge Butter Girl, Geo. C. McIntosh 105 Consigned by Cohoe Bros., Burgessville. De Kol Jewel 7th., E. H. Featherstone, Burlington 125 Dinora 2nd., Geo. McIntosh 160 Calamity Jewel De Kol, Robt. McIntosh, St. Marys 115 Consigned by Jacob Leuszler & Son. Mary Omsby Creamelle, W. Wilson 170 Pussie Hengerveld Gretqui, R. Dunn, Owen Sound 145 Consigned by John Kaufman. Princess Grace Fayne, Robt. Thompson 255 Consigned by A. Leuszler, Tavistock. Canadian Schuiling De Kol, J. E. Bedgood, Thamesford 105 Consigned by F. E. Pettit, Burgessville. Candelmas Queen, A. Cowan, Norwich 180 Daisey De Kol Netherland, R. Thompson 145 Grace Fayne Ormsby, E. Siple, St. Thomas 180 Lady Roberts Favorit, W. F. Bradish, Glanworth 145 Consigned by Geo. T. Prouse, Ostrander. Minnie Clyde Artis, J. E. Bedgood 120 Lady Lillian Bess, J. A. Makins, Stratford 130 Calamity Mercedes Pietertje, W. E. Dunn 105 Canary Colantha Queen, H. H. Bailey, Paris 345 Consigned by Geo. Oliver. De Kol Calamity Beauty, M. Facey, Bright 150 Sir Belle Calamity, B. Higg, Woodstock 105

- Consigned by Alex Shaw, Lakeside. Tidy Pride De Kol, Robt. Dunn 155 Viola Wayne, Geo. Mahon, Woodstock 180 Consigned by A. T. Walker. Pauline Beauty Favorit, Geo. R. McCombs 130 Calamity Brook Francy, G. B. Jenvey, Ingersoll 180 Cubana De Kol Ormsby, J. A. Duncan, Waterdown 160 Pauline De Kol Countess, E. Siple 175 Consigned by Elgin Wood. Carmarie Pauline De Kol, Jas. Ogilvy, Stratford 135 Jessie Perline Beauty, J. E. Bedgood 105 Mable Pauline De Kol, J. P. Griffin 135 Lady Lena Butter Girl, B. Leuszler 130 Cubana Pauline De Kol 3rd., H. Smith, Bright 120 Consigned by Noah S. Bender, Tavistock. Home Farm Favorit De Witt, F. A. Smith, Thamesford 175 Veeman Lilly Hartog, C. Bollert 175 Consigned by W. B. Poole, Ingersoll. Josie Abbekerk De Kol, Neil McGugan 130 Baby Irene Hengerveld, W. Wilson 150 Queen Ormsby Hengerveld, W. Wilson 110 Ormsby Daisy, Robt. McIntosh 130 Princess Ormsby Posch, Robt. McIntosh 150

On the Lack of System.

Under the heading "Eny Meeny Miny Mo!" the current issue of Industrial Canada tells the Minister of Militia a few things as follows: "Another month has passed, and still there has been no announcement from Ottawa that would indicate the slightest effort on the Government's part to harmonize the conflict between its plans for production on the one hand, and recruiting on the other. "The Department of Agriculture keeps urging the farmers of Canada to produce, produce, and to keep on producing. The Minister of Finance implores manufacturers to keep up their production, partly because he wants to get a slice of their profits, but in a greater measure because he recognizes that only by production can we as a nation meet our financial obligations. The Chairman of the Imperial Munitions Board keeps clamoring for deliveries, and threatens delinquents with cancellation of their contracts, unless they speed up. And all the while the Minister of Militia goes serenely on his way taking indispensable men from the farm, from the workshop and from the munitions factory, regardless of the havoc he creates with our national machinery for production. "If the Government's inaction were due to failure to appreciate the seriousness of the situation, then they would be branded as unfit for the responsibilities that have been entrusted to them. But we do not believe anything of the kind. They know, they must know the straits to which manufacturers are already being reduced in coping with this problem of production. Unless they are devoid of imagination they must also realize that things will grow far worse before they begin to get better, because thus far the Minister of Militia has secured only half the men he has set out to secure. They also have been shown evidence pointing to the probability of a drop this year of \$300,000,000 in Canada's agricultural production, due to the inroads which recruiting officers have made on farm labor. They cannot contemplate that with very much satisfaction. But still they hesitate to apply the remedy which they know to be the proper one, and which sooner or later they have got to come to. Why? "If it's votes they're afraid of it would seem pertinent to remark that men who are so easily scared from following the path of plain duty are a mighty poor outfit to direct Canada's end of the campaign to hunt the Huns."

Who Pays the Taxes?

The following figures relative to taxation of railroads in this province recently appeared in the Forest Free Press. They are worth reading, studying and saving for future reference: Ontario has 9,500 miles of railway, capitalized at \$570,000,000, or \$60,000 per mile. The total taxes paid in 1914 were \$1,017,000, or less than two mills on the dollar. Ontario's agricultural wealth, (lands, buildings, stock and implements) is \$1,341,000,000. The assessed value of this property is \$730,000,000, and the taxes paid in 1914 were over \$8,000,000, a rate of six mills on the capitalized value, and twelve mills on the assessed value. Since then the special war tax has been added. A comparison of the railway taxes paid in Ontario and in the neighboring state of Michigan is very instructive, especially as several of our larger railway systems operate in both, much of their traffic being continuous through both. Ontario has 9,500 miles of railway; Michigan 8,000. In 1914 the Ontario railways paid in taxes \$1,017,000, or \$107 per mile; the Michigan railways paid in taxes \$1,400,000 or \$550 per mile. The Grand Trunk system has in Ontario 3,080 miles of railway, and in Michigan 803 miles. Taxes paid in Ontario \$330,000 or \$107 per mile; taxes paid in Michigan \$570,000, or \$712 per mile. The Michigan Central system has in Ontario 615 miles and in Michigan 1,940 miles. Taxes paid in Ontario \$62,000, or \$100 per mile; taxes paid in Michigan \$1,152,000, or \$1,100 per mile. The St. Clair Tunnel, one-half in Ontario and

one-half in Michigan, pays about \$700 in taxes in Ontario, and \$28,000 in Michigan.

The Grand Trunk system in Michigan pays in taxes in that State more than half as much as all the railways in Ontario pay.

The Michigan Central System in Michigan pays in taxes in that State more than all the railways in Ontario pay.

The Michigan end of the St. Clair Tunnel is assessed at \$1,300,000, more than the whole township of Sarnia, which is assessed at \$1,284,000.

Parlor and sleeping car companies pay \$3,300 in Ontario, and \$12,500 in Michigan.

Car loaning companies pay nothing in Ontario, and \$27,000 in Michigan.

Both passenger and local freight rates are far higher in Ontario than in Michigan.

In Ontario the railways have been given \$23,000,000 in cash subsidies, Provincial and Municipal; \$8,000,000 in bond guarantees, and 625,000 acres of land. In Michigan practically no public aid has been given.

As the agricultural interests of the country bear the great burden of the custom taxation the difference between the rates of taxation on railway and farm property is even more unjust than the above figures would indicate.

Here is a grand opportunity for Hon. Mr. McGarry to add immensely to the revenues of the Province, and also do simple justice to the agricultural interests, from which so much is expected in our great Empire struggle.

### It's Time for Strong Drink to Go.

EDITOR "THE FARMER'S ADVOCATE":

I dinna ken will ye be lettin' me say a word on the question o' prohibition. I ken weel it's a subject that twa honest men may disagree on, but the maist o' us are sae muckle interested in it juist noo that a word or twa on the mather will maybe no' be taken amiss. There are a few subjects that it's no' always sae taе bring up in mixed company such as party politics an' family doctors an' sae on, an' prohibition is anither that some people willna' mention wi'oot lookin' around the room tae see wha is present. But it will dae na harm tae tak' a look at the question, gin we examine it frae baith sides, an' find out juist what's tae be said for ane as well as the ither. A number o' years back I mind o' readin' what ane o' oor college presidents said in favor o' permittin' the sale o' whiskey tae continue in this country. It gie me an unco' surprise at the time, for I hadna' an idea then that ony decent mon wad waste his time tryin' tae defend a business that did sae muckle harm as whiskey sellin' did, tae the people o' this an' ither countries. But on gin the mather a wee bit mair chocht I says tae masel' "noo, gin ye tak' awa' ilka temptation frae off the face o' the airth what like a critter is mon gaen tae become." Gin he has naething tae fight, na temptation tae resist, can he become a mon at a? Or will he develop intae something like what we hae noticed in the case o' the bairns that there mithers wouldna' let oot o' their sight when they were young, an' wha had their ain private teachers sae they wouldna' hae tae associate wi' the ither boys o' the toon, an' such like foolishness. Ye ken that they aye grow up wi'oot ony backbone, and the meenute they get awa' frae their mithers an' oot intae the world they tak' a tumble an' like as not gang clean tae smash. They never had ony chance tae develop moral muscle in their early days, for when they wanted anything they got it, an' hardships an' so-called dangers weren't allowed tae come near them. Gin ye want a tree tae tak' guid root in the soil an' grow up strong an' hardy ye maun plant it oot in the open where the winds will get a guid sweep at it, an' then gin it has ony life an' vitality in it it will develop intae something o' value that will stand for maybe a hundred years or mair. But tak' the young sapling that starts life in the thick bush, surrounded an' protected by ither trees. Juist notice hoo quick it will dee when these big trees are cut awa', or gin it has reached ony size, see hoo soon it gaes doon wi' the wind. There's na question aboot it, mon or tree must get their share o' the hard knocks that are goin' in this world gin they are ever goin' tae develop ony strength. An' it's better tae begin gettin' this strength early in life, for it's easier tae recover frae oor falls than later on. When a mon takes his first tumble aifter he has grown up it's mair nor likely tae be a bad one. Sae that's the case for the whiskey-sellin' side o' the question. Turn yer boy oot tae meet temptation. Gin he stands it has helped tae make a mon o' him; gin he falls, he falls, an' that's the end o' it. In a way there's somethin' tae it. It's a great thing tae see a young chap pit up a guid fight against what he kens is wrang, an' beat it. It's the whole o' life an' what was intended for ilka one o' us. An' when there's naething left tae fight we may as well get aff the airth or gang tae sleep. Oor wark will be done. But there's anither side of the case tae be considered in connection wi' this liquor business. What aboot the mon that has taken his tumble an' fallen sae far that he will never get up wi'oot help. Mony's the mon had no' muckle o' a chance in the first place, wi' maybe an inherited taste for the stuff, together wi' a lack o' education as tae the danger o' takin' the first glass, an' sae on. His case is unco' like that o' a drownin' mon. When he's pretty far gone it doona' tak' much tae keep him under the water. In fact, gin ye juist leave him alone he's a goner, like as not. But juist pull him up till he gets his breath for a meenute an' he'll mak' a guid fight for his life. Sae it is wi' mony a chap that has got doon wi' the drink. Wi' no help or encouragement he's

done for. But pit him where he canna' get liquor for a while an' he begins tae become something o' a mon again, an' the langer he is wi'oot it the mair he regains his self respect, an' in the end he is goin' tae become a guid citizen again, an' o' some use tae society. Not mony o' us but what hae seen this happen afore noo. It doona' tak' muckle tae get a mon started on the richt track sometimes. The up an' doon roads are no' muckle distance apart at the start, though they're a lang way frae ane anither at the end. Sae there's a possibility for the reformation o' ony mon, I'm thinkin', gin we juist gie him a better chance.

There's anither thing too, tae be taken intae consideration before we mak' up oor minds tae not interfere wi' personal liberty an' the richts o' men tae sell an' drink whiskey an' ither stimulants. An' that is oor duty towards the wives an' children o' some o' these men wha hae lost control o' their appetites, an' mony a time o' their tempers as weel.

When a husband an' feyther wha is usually kind an' guid-natured enough, comes hame the worse o' liquor an' beats his wife an' kicks his children oot-doors, it's time for outsiders tae tak' a hand in his affairs an' see th't everybody gets fair play. This is supposed tae be a civilized country an' it's up tae us as self-respectin' citizens tae keep oor name an' oor country's name guid, an' we canna' dae that gin we dinna afford protection tae those wha canna protect themselves. Gin it's for naething but the securing o' their richts tae the women an' children o' this land, I'm thinkin' we'll hae tae vote for prohibition. Maist o' us as men can stand tae see anither chap gettin' a hammerin', under certain circumstances, but wha in his sober senses can stand by an' see a wumman an' her wee bairns abused? The warst o' it is that it's gaen' on ilka day an' we seem tae think that it's nae o' oor business.

I hae juist been hearin' aboot somethin' that happened the ither day over in the next county that is a guid illustration o' what the family o' the drinkin' man are up against very often. It seems that a certain chap that is no' in the habit o' throwin' his glass o' liquor over his shoulder got a wee bit mair than was guid for him one nicht lately, an' when he started for hame he thoct he kened mair than his horses an' he made them tak' him naebody kens where, but it wisna' hame, an' the auld chap spent the nicht in his sleigh. It happened tae be an' unco' cauld nicht too, an' when they found him in the mornin' baith his feet were frozen, an' naething wad dae the doctors but they had tae tak' ane o' them aff. Sae noo he's a cripple for life, an' the job o' lookin' aifter the family o' five or six children will fall on the mither. The warst o' it is she'll hae tae look aifter the auld mon as weel. She'll hae a happy time o' it, I can tell ye that. An' I dinna see ony likelihood o' the children growin' up tae be better men an' women because o' their feythers example either. Still, they micht. Ye canna' tell. Only it's a high price tae be payin' for examples. In fact, takin' it a' in a', an' sayin' the best ye can for it 'Im beginnin' tae think the whiskey business has cost us mair than it has been worth to us, an' gin they gie us the opportunity tae vote on the question sometime before lang, I'm thinkin' I'll gie ma vote for no whiskey an' tak' a chance on losin' some "examples" an' "character-developing opportunities" an' such like things as we hae been considerin'. Ye'll maybe think that prohibition will go agin the grain o' a Scotsman's nature, but ye're mistaken gin ye hae the idea that a Scotchman willna' cut oot what he finds is daein' him na guid, an' may be daein' his country harm. While we hae this little war on oor hands we dinna want tae be bothered wi' ony handi-caps an' extra expenses. Some tell us that the drink habit is mair damagin' tae a nation than war, sae ane o' them at a time ought tae dae us a 'the damage necessary.

SANDY FRASER.

### Who Will Own Ontario's Radials?

The daily press in the Province of Ontario has from time to time mentioned the progress made at Ottawa in regard to an agreement between the Hydro-Electric Commission in Ontario, the Dominion Government and Mackenzie & Mann interests concerning the future of radial railways in Ontario. We understand that if the parties last mentioned get their way the fulfilment of the Hydro-Electric railway scheme, championed by Sir Adam Beck, and looked forward to with eager confidence by the people of this Province will never be a reality, but in its place will be evolved a scheme for a network of electric roads to be built and operated by the Mackenzie & Mann interests. Surely Canada has had enough of the methods of these promoters, and surely the people of Ontario should be considered. It has been rumored that Mackenzie & Mann are likely to win out at Ottawa and that Hydro will be turned down. The railroad magnates are clever lobbyists, as we told our readers not long ago, and if the matter comes to a decision it would be interesting to know how those members who took the free trip west record their votes and influence. It is a good time to watch a few of the home affairs as well as those transpiring abroad.

### Good Use for Alcohol.

One of the problems confronting Russia after the prohibition of the traffic was what to do with the 140,000,000 gallons of vodka left on hand and avoid the plan of running it into the gutter. Portions of it have been diverted into various useful manufactures, but the most important announcement of all is that a famous Moscow chemist has perfected a process whereby

in combination with certain vegetable oils, synthetic rubber as high in quality as the natural product is produced.

### P. E. Island Notes.

EDITOR "THE FARMER'S ADVOCATE":

This is one of the mildest winters on record here. The mercury has seldom got below the cipher. Stock are wintering well with plenty of feed in sight to carry them through to grass. Prices for fat stock, cattle, sheep and hogs, have touched the highest figure ever known here. This is certainly the stockman's growing time. Winter dairying is being somewhat neglected on account of the great demand for beef. Our agricultural Department have adopted a different plan in their Short Courses in agriculture this winter. Instead of holding the Courses in the city they have held them in a number of centres through the Province. The result has been that very many more of our farmers have been able to attend, and the interest in these schools for the people has been greatly increased. The classes in each instance last about a week, and lectures by our agricultural staff are delivered on all subjects in which farmers are interested.

The "Seed Shows" are mostly over for the year. The attendance was not so large as on some previous years. Some of our best seed growers put up excellent exhibits, which were a credit to themselves and to the province. These growers are doing much to educate farmers to the necessity of sowing only the best seed to insure the heavier yields which give profitable returns. Far more attention is being paid by farmers to securing the best quality of seed grain of the varieties that have proved their adaptability to our soil and climate. This, together with the use of formalin, which is now becoming general for the prevention of smut, is adding greatly to the yield of our grain fields.

This is "mud lifting" time here, and thousands of tons of valuable fertilizer is being secured from the old oyster beds in the bays and rivers of the Island. Besides being secured by farmers who are located near to the deposits, it is being carried on flat cars on the railroads all over the province. The discovery of this valuable fertilizer here about 50 years ago more than doubled the production on any land on which it has been used. It is a very cheap means of supplying the land with lime, and is much needed for that purpose on our soil, and the large percentage of organic matter in it from the shell fish, of which it is composed, goes a long way toward making it a well-balanced fertilizer.

A matter that is demanding attention here just now is underdrainage. The exceedingly wet season of 1915 has left farms on large sections of the western part of the province with very little crop. The matter of tile draining has come to be considered a necessity in these sections, and the government has decided to help the farmers in the matter. Right in some sections where tile draining is most needed, deposits of both clay and sand have been found. The clay has been examined by experts and found to be the very best quality for the making of tiles and brick. An industry in making these, is likely to be started in the immediate future. This will be a great help to farmers in draining their land, as instead of importing the material ready made it can be manufactured on the spot. The greatly increased production on the branch "Experimental Farm" here has been a strong object lesson on necessity of underdrainage, even on some of our higher lands.

P. E. Island farmers are going to feel the pinch in the matter of farm help this coming season. In a good many instances production will be lessened by the withdrawal of so many of our young men from the farms to fight for our empire and save us from German domination, and "Kultur," which would be utterly unbearable to those who have lived under British rule and enjoyed all that goes with British institutions.

P. E. I.

W. S.

### Holsteins Sold for a Good Figure at Elias Ruby's Sale.

Sixteen splendid individuals of the Holstein breed were sold by auction at the farm of Elias Ruby, Tavistock, on March 9. A number of buyers were present from a distance and the price received for the animals was considered fairly good. Four mature cows averaged \$265 and six heifers averaged \$185. Twelve of the sixteen cattle sold were shipped to various parts of the Province, only four head were purchased by men in the neighborhood of Tavistock. The young stock sired by a bull from a high-producing dam and out of cows that have qualified in the R. O. M. test should give a good account of themselves.

Maryland is barring from the state highways all motor trucks over eight tons capacity and increasing the license fees to the following scale:—On trucks not more than one ton capacity \$15 per year; more than one and less than two \$20; between two and three tons \$25; between three and four \$30; four to five tons \$35; five to six \$40; six to seven \$45 and for seven to eight tons \$50.

The output of Canadian motor cars will from present indications in the trade, show a very large increase in 1916 over the past year varying from 75 to 100 per cent.

# Toronto, Montreal, Buffalo and Other Leading Markets.

## Toronto.

Receipts at the Union Stock Yards, West Toronto, from Sat., March 18, to Mon., March 20, numbered 209 cars, 2,450 cattle, 4,633 hogs, 77 sheep, 76 calves and 947 horses. Cattle steady at quotations mentioned in the report of last week's transactions. Nine choice steers, 1,500 lbs. each, sold at \$8.75. Calves, sheep and lambs all unchanged. Hogs, \$10.65 off cars, and \$10.25, fed and watered.

The total receipts of live stock at the City and Union Stock Yards for the past week were:

	City	Union	Total
Cars.....	45	533	578
Cattle.....	555	4,464	5,019
Hogs.....	915	16,179	17,094
Sheep.....	135	193	328
Calves.....	121	788	909
Horses.....	101	2,485	2,586

The total receipts at the two markets for the corresponding week of 1915 were:

	City	Union	Total
Cars.....	44	324	368
Cattle.....	367	4,983	5,350
Hogs.....	950	7,229	8,179
Sheep.....	289	345	634
Calves.....	79	586	665
Horses.....	201	65	266

The combined receipts at the two markets for the past week, show an increase of 210 cars, 8,915 hogs, 244 calves, 2,320 horses; and a decrease of 331 cattle, and 306 sheep, compared with the corresponding week of 1915.

Receipts of live stock for the past week were moderate for cattle, liberal in hogs, but tight for sheep, lambs and calves. Trade was active in every department with prices firm and higher in every class, excepting calves, sheep and lambs, which seem to have reached the limit that the consumers are prepared to go.

Butchers' Cattle.—On the first day of the week there was a liberal supply of cattle; the quality of which was the best seen here since Christmas. There were fully 20 car loads that sold at \$8 to \$8.25; and another 20 car loads more that sold for \$7.75 to \$8. On Tuesday a light run sold at firm prices, and on Wednesday a run of 800 cattle sold at an advance of 15 cents per cwt. over Monday's values, or a full gain of 25 cents per cwt. for the week. The highest price paid for a straight load of choice cattle was \$8.50. That price was paid for a few odd cattle on the previous week, but not for loads.

Few stockers and feeders were offered, and values were higher in sympathy with the fat cattle market. The receipts of milkers and springers were moderate and prices for them were steady, the highest price for an extra quality cow being \$110.

Veal calves were scarce considering the demand, and generally of common and medium quality. Very few choice calves are being offered, not more than three or four during the week, and they reached the high mark of \$12 per cwt.

Sheep and lambs were scarce, and demands were not half filled. Prices for these were unchanged. The first real choice, spring lamb of the season, which was of the Shropshire breed, sold at \$12.

Hogs which were scarce for the past two weeks came forward in large numbers, but notwithstanding that fact, the demand was so great that prices advanced to \$11 per cwt., weighed off cars at the packing houses, and \$10.60, fed and watered at the market.

Butchers' Cattle.—Choice, heavy steers at \$8 to \$8.25; choice butchers' cattle, \$7.75 to \$8; good, \$7.40 to \$7.65; medium, \$6.90 to \$7.20; common, \$6.60 to \$6.90; choice cows, \$6.75 to \$7.25; good cows, \$6.25 to \$6.50; medium cows, \$5.75 to \$6; common cows, \$5.25 to \$5.50; canners, and cutters, \$4 to \$4.75; choice bulls, \$7 to \$7.25; good bulls, \$6.50 to \$6.75; common and medium bulls, \$5.25 to \$6.25.

Stockers and Feeders.—Choice feeders, 800 to 1,000 lbs., at \$6.85 to \$7.25; good feeders, 800 to 900 lbs., \$6.50 to \$6.75; stockers, 700 to 800 lbs., at \$6 to \$6.25; yearlings, 600 to 650 lbs., at \$6.25 to \$6.50.

Milkers and Springers.—Choice milkers and springers at \$90 to \$110; good

cows at \$70 to \$85; common cows at \$45 to \$65.

Veal Calves.—Choice at \$11 to \$12; good at \$10 to \$10.50; common and light at \$7.50 to \$9.50; heavy, fat calves at \$7 to \$8.50.

Sheep and Lambs.—Light sheep, \$8.50 to \$9.50; heavy and common sheep, \$6.50 to \$7.50; lambs, \$11 to \$13.75; cull lambs, \$9 to \$9.50; spring lambs, \$8 to \$12 each.

Hogs.—Selects, fed and watered, \$10.60; 50c. is being deducted for heavy, fat hogs, and thin, light hogs; \$2.50 off for sows, and \$4 off for stags, from prices paid for selects.

### Breadstuffs.

Wheat.—Ontario, No. 2 winter, per car lot, \$1 to \$1.02; No. 1 commercial, 98c. to \$1; No. 2 commercial, 96c. to 98c.; No. 3 commercial, 93c. to 95c.; according to freights outside; feed wheat, 85c. to 88c., according to sample. Manitoba, No. 1 northern, \$1.09, in store, Fort William; No. 2 northern, \$1.06½ in store, Fort William; No. 3 northern, \$1.04½ in store, Fort William.

Oats.—Ontario, No. 3 white, 42c. to 43c., according to freights outside; commercial oats, 41c. to 42c. No. 2 Canada Western, 42c., in store, Fort William; No. 3 Canada Western, 41c., in store, Fort William; extra No. 1 feed, 41c., in store, Fort William; No. 1 feed, 40c., in store, Fort William.

Rye.—No. 1 commercial, 85c. to 86c., according to freights outside; rejected, 82c. to 84c., according to sample.

Buckwheat.—Nominal, 68c. to 69c., according to freights outside.

Barley.—Ontario, malting 60c. to 62c. according to freights outside; feed barley, 57c. to 60c., according to freights outside.

American Corn.—No. 3 yellow, 80c., track, Toronto.

Canadian Corn.—Feed, 68c. to 70c., track, Toronto.

Peas.—No. 2, \$1.60, sample peas, according to sample, \$1 to \$1.30.

Flour.—Ontario, winter, \$4.15 to \$4.30, according to sample, track, Toronto; bulk seaboard, \$4.15 to \$4.25, prompt shipment. Manitoba flour—Prices at Toronto were: First patents, \$6.50; second patents, \$6, in jute; strong bakers', \$5.80, in jute; in cotton, 10c. more.

### Hay and Millfeed.

Hay.—Baled, car lots, track, Toronto, No. 1, \$17 to \$18; No. 2, \$14 to \$15, per ton, track, Toronto.

Straw.—Baled, car lots, \$6.50 to \$7, track, Toronto.

Bran.—\$24 per ton, Montreal freight; shorts, \$25, Montreal freights; middlings, \$26, Montreal freights; good feed flour, per bag, \$1.60 to \$1.70, Montreal freights.

### Country Produce.

Butter.—Prices remained about stationary on the wholesales during the past week. Creamery, fresh-made pound squares, 35c. to 36c.; creamery, cut 33c. to 34c.; creamery solids, 31c. to 33c.; separator dairy, 28c. to 30c.

Eggs.—New-laid eggs declined slightly, selling at 27c. to 29c. per dozen. The cold storage variety are now off the market.

Cheese.—18c. to 19½c.

Honey.—Extracted, 12½c. to 13c. per pound; combs, per dozen sections, \$2.40 to \$3.

Beans.—Primes, \$4.25 to \$4.50; hand-picked, \$4.50 to \$4.75 per bushel.

Poultry (live weight).—Chickens, 14c. to 17c. per lb.; fowl, heavy, 16c. per lb.; fowl, light, 14c. per lb.; ducks, 18c. per lb.; geese, 12c. per lb.; turkeys, young, 20c. per lb.; old, 18c. per lb.

Potatoes.—Potatoes were very slow on the wholesales during the past week, but remained about stationary; the New Brunswick Delawares being \$1.80 to \$1.90 per bag, car lot, and Ontarios \$1.75 per car lot.

### Hides and Skins.

City hides, flat 18c.; country hides, cured, 16c. to 17c.; country hides, part cured, 15c. to 16c.; country hides, green, 14c. to 15c.; calf skins, per lb., 18c.; kip skins, per lb., 16c.; sheep skins, city, \$2 to \$3; sheep skins, country, \$1.50 to \$2; lamb skins and pelts, \$1.20 to \$1.25; horse hair, per lb., 37c. to 40c.; horse hides, No. 1, \$4 to \$5; No. 2, \$3 to \$4. Wool, washed, 40c. to 44c. per

lb.; wool, rejections, \$33c. to 35c. per lb.; wool, unwashed, 28c. to 32c., per lb. Tallow, No. 1, 6½c. to 7½c.; solids, 6c. to 7c.

### Wholesale Fruits and Vegetables.

Potatoes were slightly easier on the wholesales during the past week; the New Brunswick Delawares selling at \$1.90 to \$2 per bag.

Old carrots are quite firm at \$1 per bag, while new ones sell at 75c. to \$1.10 per dozen bunches, according to size.

Cabbage is also quite firm at \$1.50, \$1.75 and \$2 per barrel.

Florida tomatoes are coming in quite freely, the cold weather retarding their sale, and causing them to decline; now selling at \$3 to \$3.50 per six basket crate; a few extra fancy bringing \$3.75 and \$4.

There are not any No. 1 Spys on the market at the present time; No. 3's selling at \$4 to \$5 per barrel.

California cauliflower is a good sale at \$4 per case. Celery going at \$6.50, while Florida celery brings \$2.75 per case.

There are not enough Florida strawberries to supply the demand, therefore, they are a quick sale at 40c. and 45c. per box.

Navel oranges have advanced about one dollar per case during the past week, and now sell at \$3.25 to \$4 per case.

## Montreal.

The market for cattle continued to display a firm tone in spite of the fact that the Lenten period is now here and consumption is consequently considerably lower. Supplies were smaller owing, in large part, to the condition of the roads throughout the country and to recent heavy snow storms. There was no difficulty in disposing of all the offerings, and prices for choice steers ranged from 8c. to 8½c. per lb., fine being 7½c. to 8c., and good 6¾c. to 7½c. Common steers sold from 5½c. to 6½c. Butchers' cows brought somewhat higher prices, being quoted at 5½c. to 7c. lb., while bulls were also stronger, ranging from 5½c. to 7½c. Demand for sheep and lambs continued steady, and as supplies were light prices held firm. Lambs sold from 11½c. to 12c. per lb., and sheep from 7½c. to 8½c. per lb. Calves continued in good demand and supplies are increasing. Milk-fed calves sold at 8c. to 10c. per lb., and other grades at 4½c. to 5½c. The price of hogs advanced fully ½c. during the week, and sales were made at 11½c. to 11¾c. per lb., weighed off cars.

Horses.—Dealers report a fair enquiry from farming sections, and quite a few horses have been sold for early farming operations as well as to cartage companies, which are beginning to make preparations for the spring. Prices were unchanged, as follows: heavy draft horses, weighing 1,500 to 1,700 lbs., \$200 to \$250 each; light draft horses, weighing 1,400 lbs. to 1,500 lbs., \$150 to \$200 each; small horses, \$100 to \$125 each, and culls \$50 to \$75 each. Fine saddle and carriage horses were steady at \$200 and \$250 each.

Dressed Hogs.—Following upon the advance in the price of hogs, the market for dressed hogs showed exceptional strength, and quotations advanced to what is probably a new high record, at 15½c. to 15¾c. per lb., for abattoir fresh-killed hogs.

Poultry.—The poultry market is not attracting a great deal of attention, prices of everything being so high. Choice turkeys were 27c. to 28c. per lb., and ordinary, 25c. Chickens sold at 22c. to 24c. per lb., and fowl at 18c. to 19c., while geese ranged from 17c. to 18c., and ducks from 19c. to 20c.

Potatoes.—There was no change in this market, green mountains and Quebec stock each sold at \$1.75 to \$1.80 per bag of 90 lbs., ex-track, and at 15c. to 20c. more, ex-store.

Maple Syrup and Honey.—Maple syrup was quoted at 95c. for 8-lb. tins, \$1.10 each for 10-lb. tins, \$1.40 for 13-lb. tins, while maple sugar was 13c. per lb. Honey was unchanged at 15½c. to 16c. for white clover comb, and 12½c. to 13c. for white extracted. Brown clover comb was 12c. to 13c., and brown ex-

tracted 10½c. to 11½c. Buckwheat honey was 9c. to 10c.

Eggs.—Quite a few eggs were offered here from the U. S. Recent storms and cold weather held back Canadian production, but prices were lower at 30c. per dozen for fresh laid. Selects were quoted at 25c. to 26c., and No. 1 candled at 22c. to 24c.

Butter.—The consumption of butter is fairly heavy and prices were steady at 33c. to 34c. for choicest, with fine creamery available at 32c. to 32¾c., seconds at 31½c. to 32c. Dairies were 25c. to 27c.

Cheese.—There was practically no change in this market. Finest Westerns were quoted at 18½c. to 19c. per lb., while finest Easterns were 18½c. to 18¾c. Fine cheese was quoted at 17¾c. to 18c., and undergrades at ½c. below.

Grain.—During last week, the market for oats showed firmer tone and prices were slightly higher. No. 2 Canadian Western oats changed hands at 50½c. to 51c. per bushel. No. 3 were 48½c. to 49c., and extra No. 1 feed were also 48½c. to 49c. No. 1 feed sold at 47½c. to 48c., and No. 2 feed at 46½c. to 47c. Ontario and Quebec No. 2 white oats were quoted at 47½c. to 48c., and No. 3 at 46½c. to 47c., and No. 4 at 45½c. to 46c. per bushel, ex-store.

Flour.—The market was unchanged at the previous week's decline. Manitoba spring wheat patents were \$6.60 for firsts, per barrel, in bags; \$6.10 for seconds, and \$5.90 for strong bakers. Trade in winter wheat flour went on at \$6.30 for patents, and \$5.70 to \$5.80 for straight rollers per barrel, in wood, while the latter sold at \$2.70 per bag.

Hay.—There was no change in the market for hay. No. 1 hay was quoted at \$21 per ton, ex-track; No. 2 extra good, at \$20.50; No. 2, at \$20. and No. 3 at \$18.50.

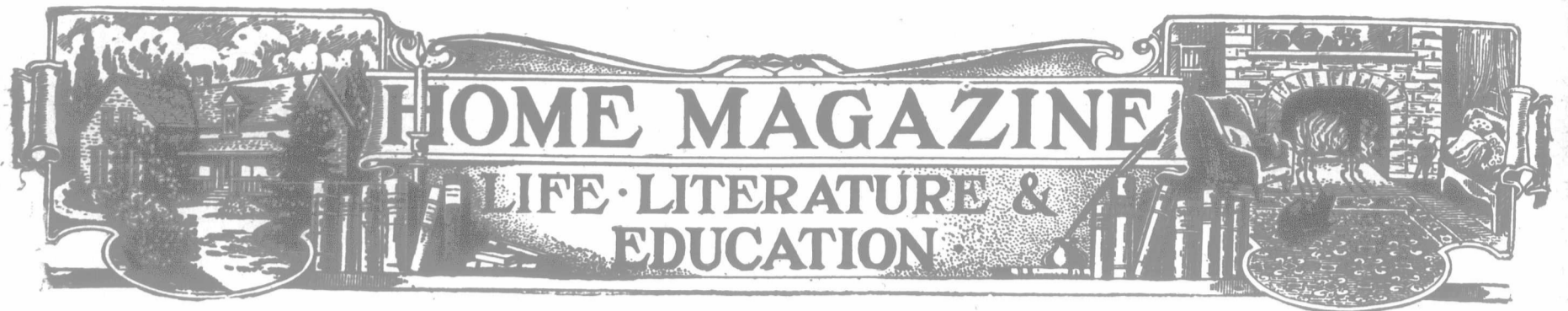
Hides.—The market was unchanged last week. Calf skins were 21c. per lb. for No. 1, and 19c. for No. 2; sheep skins were \$2.45 each; beef hides were 21c., 20c. and 19c. per lb. for Nos. 1, 2 and 3. Horse hides were up—\$2.50 to \$3.50 each. Rough tallow was 1½c. to 2½c., and rendered was 7c. to 7½c. per lb.

## Buffalo.

Cattle.—Another very high market at Buffalo last week, shipping steers that were not strictly prime, and large percentage killers reaching \$9.10 to \$9.25, nothing in the shipping steer line falling below \$8.40, and these were only medium. In the handy butchering steer line best sold from \$8.50 to \$8.85, with yearlings ranging up to \$9 to \$9.25. The advance last week over the week preceding—when a higher trade prevailed—was a full quarter, and the 105 loads on Monday were licked up in short order. All classes of fat cows and heifers sold at higher prices, with canners about steady to a dime higher. Best heavy, thick, fat cows sold up to \$7 to \$7.25; best heifers from \$8 to \$8.50, and very little in the good butchering cow line sold below \$6.25 and \$6.75, with the good kinds of butchering heifers \$7.50 to \$7.75. Most of the stocker and feeder stuff was taken on killing account, and these showed a higher level. Bulls sold a quarter higher, big kinds running from \$7 to \$7.50. Milchers and springers showed an improved demand over previous weeks. At the close of the market on Monday the demand was far short of the supply. Feeling is very bullish for all classes of cattle, and general opinion is that they will continue to bring good, strong prices right along. Reports from the country are to the effect that the supply of good steers is short, and that those that are available are in strong hands and do not have to come to market, and the opinion is that there will be no inclination to rush these steers to market, even if there are times when runs are larger than needs and prices are lowered somewhat. Receipts last week were 3,750 head, as against 4,200 for the previous week, and 5,075 head for the corresponding week last year. Quotations:

Shipping Steers.—Choice to prime natives, \$9 to \$9.50; fair to good, \$8.65 to \$8.85; plain, \$8.25 to \$8.40; very coarse and common, \$7.65 to \$7.90;

Continued on page 526.



### When There is Peace.

When there is peace, this land no more  
Will be the land we knew of yore.  
Thus do the facile seers foretell  
The truth that none can buy or sell  
And e'en the wisest must ignore.

When we have bled at every pore,  
Shall we still strive for gear and store!  
Will it be heaven, will it be hell,  
When there is peace?

This let us pray for—this implore—  
That, all base dreams thrust out at  
door,

We may in nobler aims excel,  
And, like men waking from a spell,  
Crow stronger, worthier than before,  
When there is peace.

—AUSTIN DOBSON, in The Spectator.

## Among the Books

### The Country Home.

(Concluded)

["The Country Home," by E. P. Powell,  
McClure, Phillips & Co., New York.]

#### Shrubby.

Who could resist the appeal which Mr.  
Powell makes for shrubbery about the  
country home?

"While I write I look over the valley,  
and see plains of sumac—slopes of half  
an acre each that blaze with it. Then  
all up and down the sides of the creek  
runs a shrubbery of elder bushes,  
twisted and twined with bittersweet,  
and grape vines full of huge clusters  
of purple berries. All above these  
hang willow limbs, which are also  
fringed with great masses of the yellow  
berries of the bittersweet, and clusters  
of white clematis seeds. A little  
while ago a group of red-fruited wild  
cherries stood out in rich relief on  
a knoll in the valley; but now the  
birds have eaten the cherries, and  
are chattering and feasting to-day in  
a half-dozen mountain-ash trees that  
fill a hollow near the mill. Our home  
world is wonderfully supplied with  
blossoming shrubs; and I never dis-  
covered half of them until I began to  
make a collection."

So much for "Wild Nature." The  
following among our native shrubs are  
recommended for transplanting to the  
home grounds: The dogwoods, wild  
plums and cherries, elder, cranberry,  
and filberts, with some others not al-  
together indigenous to Canada,—bar-  
berries, Tartarian honeysuckle, Judas  
tree (redbud), lilacs (including the Per-  
sian varieties), syringa, hydrangea, and  
altheas, forsythia, weigelia and spireas.

"It is not difficult to arrange our  
shrubbery so as to modify the dullness  
of winter as well as the warmth of  
summer. I recommend you to plant  
very freely of the barberries and the  
high-bush cranberry. These, with  
warm, red berries covering them all  
winter, make January comfortable at  
least to the eye. In March and April  
they draw the cedar birds and the pine  
groshawks—beautiful birds that are  
very companionable. The high-  
bush cranberry has a tendency to top-  
heaviness and splitting down. Your  
best way will be to surround the limbs  
with a heavy wire, placing a piece  
of old rubber between wire and limb.  
In the arrangement of shrubs, as of  
trees, beware of the conventional.  
Rows are always to be avoided ex-  
cept for windbreaks, and for bordering  
straight drives. In general simply try  
to follow nature's methods."

### The Flower Garden.

In dealing with the flower garden Mr.  
Powell keeps in mind the "busyness"  
of the farm gardener, and selects flowers  
that bloom longest and are most easily  
grown—a large enough list, surely, for  
the most ambitious to choose from.  
By the use of a digging-fork, hand-weeder  
and trowel, the difficulty of the work may  
be greatly lessened. Most of the annuals,  
he considers, take more time and room  
than they are worth, yet he includes  
some of them in a list of favorites that  
he "cannot get along without": the  
old-fashioned nasturtium, a flower that  
"never says enough"; sweet peas, which  
he has on "trellises eight feet high";  
asters; sweet alyssum; petunias; snap-  
dragons; perennial phloxes—"one of  
the grandest of all our flowers for country  
homes"; tulips; roses, with the  
satisfactory hybrid-perpetual species;  
hollyhock; lilies—Madonna, Tiger and  
Lancifolium; gladiolus; pansies; salvia;  
cosmos; dahlia; day lily, and Christmas  
rose.

"The tulip is my special delight,"  
he says, "nor can I ever have too many  
of them. Let me tell you a secret.  
When you have a bed of strawberries,  
push tulips down four inches deep in  
all the rows, and six inches apart. Here  
they will blossom early in the spring  
before the strawberries blossom, and  
they will get out of the way, all but a  
dry stalk, before you pick your berries  
in June. In this way you will have  
the most magnificent floral display,  
without decreasing in the slightest  
degree your crop of fruit."

### The Vegetable Garden.

The author of "The Country Home"  
finds the vegetable garden quite as  
interesting as the flower garden. "There  
is poetry in potatoes," he says, "and

"Potatoes like apples, soon absorb bad  
odors, and you will learn that your  
potato cellar must be clean and sweet as  
your dining-room."—"A tomato trellis,  
half Golden Queen and half Trophy or  
Perfection, is a beautiful sight." This  
everyone will concede, but not everyone  
knows that "the beauty goes hand in  
hand with comfort and pleasure when  
these are sliced with granulated sugar  
in Jersey cream."

Compost heaps, easily made of all  
sorts of decaying matter, wood ashes,  
manure and leaves, are the secret for  
good squashes, lettuce, radishes, spinach,  
parsley, melons and cucumbers. A good  
asparagus bed is a fine adjunct to the  
garden, as is also a salsify, or vegetable  
oyster bed. For greens the fields may  
be drawn upon nearly all summer, be-  
ginning with dandelions in the early  
spring. Canadians have been slow to  
recognize the merits of this plant, deli-  
cious if grown very quickly and used  
while still tender. Mr. Powell quotes the  
words of an enthusiastic doctor, "God  
never made a dandelion too many."  
A little later in the season other "weeds"  
arrive to keep up the supply,—pigweed  
lamb's quarters, and the young sprouts  
of milkweed; even "purslane" anathema  
to most gardeners. "This weed," we  
are told, "is growing in favor as a suc-  
culent and delicious food." Swiss  
chard, is seldom grown, but Mr. Powell  
recommends it as "one of the most  
easily cultivated and most prolific of the  
vegetables to be used for salads or greens.  
It lives through the winter without  
covering." Rhubarb grows best  
in a thoroughly worked-up soil that will  
catch the barn drainage, as will also  
parsley and spinach. Beets, carrots,  
peas, spinach, radish and early turnips  
should be planted just as soon as the  
ground is workable. One cannot  
more than touch upon all the useful  
things included by Mr. Powell in his

have climbed to higher things and to  
higher life."

### Insects, Animals and Birds.

The chapter upon entomology is  
headed suggestively "Our Rivals—the  
insects," rivals truly, since these little  
foes "spoil for the farmers of the United  
States \$300,000,000 worth every year."  
The statistics for Canada are not given.  
Spray pumps and poisons (Bordeaux,  
arsenites, white hellebore and pyrethrum.)  
with adequate bird-protection are our  
means of fighting the inroads, but we  
must know how to fight, and information  
is given here and in innumerable Govern-  
ment pamphlets, as well as in other books  
and all magazines devoted to agriculture.

A delightful chapter deals with ani-  
mals about the farm and the real pleasure  
and self-development that come from  
a love for them. Even from a pecuniary  
point of view, "mark you, to a certainty  
every time kindness will pay." And again  
"We are learning that success  
in horticulture and agriculture depends  
on a good understanding of the birds."  
To prevent the latter from eating garden  
fruit, planting wild cherries etc about  
the orchard confines is recommended:  
birds invariably prefer most of the wild  
fruits, also mulberries, to the cultivated  
species. Nevertheless, Mr. Powell made  
security certain by covering his cherry  
trees with mosquito netting, kept for  
the purpose.

Bees should be kept, not only for honey,  
but also for their good services in polleniz-  
ing fruit blossoms.

Mr. Powell closes with a delightful  
chapter on "Nooks and Corners," but  
we shall close this synopsis with a letter  
quoted by him, a letter that brings out  
what he has tried to show all through his  
book, that farming should be more than  
farming, living on the land a growth for  
personality rather than a mere accumula-  
tion of things.

The letter was written to Mr. Powell  
by a Kansas girl.

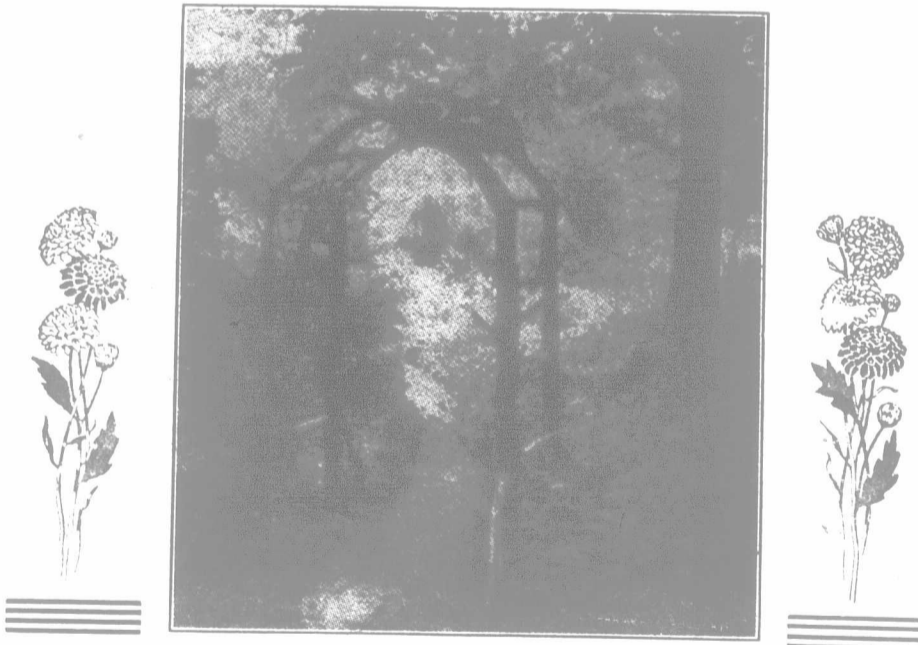
Dear Sir:—I am somewhere between  
twenty and thirty—no matter about  
exact dates; but I am at home with  
father and mother. The latter loves  
flowers, and so do I. She has hungered for  
them all her married life, but what  
she gets, she gets herself, and plants  
with my help. Now I want to induce  
father to see that he is living a too  
narrow life. He thinks, and says, that  
he has no time for the ornamental.  
He is not rich, but he is well-to-do,  
and he can afford to spend on re-  
finements. Don't think our place  
is slovenly, for it is not. We have a  
decent orchard, and some good trees  
along the roadside, and mother and I  
have a few fine flowering plants; what  
I mean is that the whole place shows,  
at a glance, that it is run for the  
stomach, and not for the brain or  
character. I do not believe this is  
necessary. I have a notion that a  
right sort of country place ought to  
show that those who own it are think-  
ing of something besides crops to eat  
and sell. I am going to  
apologize to you, a stranger, by sending  
you some seeds of a thornless gled-  
itschia."

—"And that," says Mr. Powell,  
"is how I first got one of the handsomest  
trees on my lawn."

### A Book by A. J. Balfour.

(BY ALPHA)

"Theism and Humanism" has been  
conceded a foremost place among the  
books published during the past year.  
It contains the Gifford Lectures deliv-  
ered by the Rt. Hon. Arthur Jas.  
Balfour, at the University of Glasgow.  
This famous lecture—foundation, de-



A Home-made Rustic Arch for Clematis, Climbing Roses, etc.

lots of sentiment in Brussels sprouts and  
carrots." But, to be a delight, the  
vegetable garden, spacious as it is, must  
be worked with horse-power. "The  
horse does the work of ten men and does  
it better. The farmer does not grow  
stoop-shouldered, and Markham's 'man  
with the Hoe' becomes a slander."

"The three essentials of a country  
garden are, in succession," he considers,  
"sweet corn, string beans, with shell  
beans—and green peas. This is the  
trinity of table luxury."

To potatoes he assigns a high place,  
and notes a point too often overlooked:

list for gardens, hence it may be well to  
close this portion with a direct quot-  
ation:

"Garden work is suitable for the  
whole family; for the old folk and the  
women, as well as for the boys and  
girls. It is the natural out-of-doors  
family room. It has something to  
interest everyone of the household.  
It is full of beauty and of sweet odors;  
for peas, beans, and even the onions  
have exquisitely beautiful and delicate  
flowers. The symbol of the garden is  
the hoe—one of the tools by which we

signed to promote an understanding of "natural" religion and God, was established by means of a fund provided under the will of Lord Adam Gifford; and the eminent British statesman now First Lord of the Admiralty in the Asquith coalition government, who was selected to give the lectures of 1914, ranks easily among the most distinguished dialecticians since the days of Gladstone, whom he surpasses in modernness of view, and, probably, in literary culture and finish of expression. The lectures were delivered orally from notes. Almost every page discloses Mr. Balfour's intimate acquaintance with modern scientific knowledge and religious thought. Briefly, it is a profoundly and judicially balanced consideration of the naturalistic or rationalistic and the theistic interpretation of life. With "Humanism" which concerns itself with man in relation to the world rather than abstract thought or supernatural theology, the book hardly deals. The constructive conclusion, which assigns God his rightful place at the centre of all things, will be re-assuring to perplexed minds fearful that the Divine Being had been "read out" of the universe by science. Mr. Balfour shows that the Naturalistic interpretation of life really fails in doing justice to the permanent value of human effort, while theism gives it an adequate setting. Some comment is made upon "the great omission" in the Naturalistic world-story of any account of the transition from the not-living to the living, and the constant shifting of the ground taken by physicists. The author holds that the source of morality must be moral and of knowledge rational leaving the agnostic cornered up as an empiricist. In these lectures we are happily not side-tracked into attempted explanations of inspiration or the mode in which divine guidance works on matter or on spirit, "mysteries as hard of solution" as those which surround "the action of mind on matter or mind on mind" but which are difficulties of theory rather than of practice to the average individual.

These lectures in short, are a remarkable expression of the modern re-adjustment of thought to the conception that God, instead of being displaced, is disclosed as Himself, "the condition of scientific knowledge". With these beautiful words they conclude:—"It is only in a theistic setting that beauty can retain its deepest meaning and love its brightest lustre; so these great truths of aesthetics and ethics are but half truths, isolated and imperfect unless we add to them yet a third. We must hold that reason and the works of reason have their source in God; that from Him they draw their inspirations; and that if they repudiate their origin, by this very act they proclaim their own insufficiency."

### An Old Garden.

I know a quaint old garden, fair to see,  
Where midst blue larkspur and sweet-pea  
The heavy-laden bee doth roam  
Among the scarlet poppies bright  
And in the foxglove's cups of light  
He makes his home.

The rambling roses twist and climb  
O'er olden arbours bent with time,  
The ivy with its dark green leaves  
Covers the ancient walls and waves  
A background for the crimson rose  
Which over all the strong sweet scent  
A restful perfume throws.

Over that garden all day long  
The speckled thrush pours forth his  
song,  
The blackbird sings,  
And a caged dove, the summer days,  
Coos forth his mournful plaint and says  
"O that I had my wings."  
EVELYN M. HOLDER

### Artistic Homes at Moderate Cost.

The artistic effect of a home does not depend greatly on money expenditure; it is good taste in the expenditure of even a little that makes the difference. Those who have decorating to do this year are advised to ask their hardware dealer for permission to see the new Alabastine book, in which some splendid color-schemes are shown. The book may be obtained from "The Alabastine Co., Limited, Paris, Ont." for 15 cents.



## Our New Serial Story

### "The Road of Living Men"

BY  
*Wise Lemington Campbell*  
Author of "Down Among Men," "Fate Knocks at the Door," "Routledge Rides Alone," "Midstream," etc.  
Serial rights secured.

### III.

On the wing—that was all the life I knew. Alone, I left travel-lines. Dangerously rich, good at several things, excellent in none, of fitful energy and no particular ambition save to do something new, I now regard my attitude of those days toward life, as one of destructive idleness—a restless stir from place to place, and no essential producing interest among men anywhere. Money did not attract me, and I lacked any passionate artistic urging. I assumed myself to belong to a separate culture from men—not a better culture, but different. This is a sense which can only come honestly from years of hard-earned individuality, gained by rising through men. I had observed life from an eminence apart—a chalky eminence erected of another's money and guardianship.

There were three years of Tibet. The idea of dealing first-hand with a country and becoming authoritative, endured for this period; but after the fascinations of that cold lofty land, there seemed no use to be made of my knowledge; and my many notes are as yet without binding. One thing came to pass in my mind, however, and I have found it basic: Study of any race, however humble, whose object of worship is not matter, ripens and deepens the understanding of a stranger. My impressions of Tibetan religious life stand to-day as more significant than, for instance, the rousing din of European progress.

At twenty-five I sat down in Hong Kong to study the passing show and meditate upon the big continent behind, the heart and capitol of which in my consciousness was the Lama's Tableland. Hong Kong is a house of all nations. My notes of Tibet were still synthesizing, and it occurred to me to do a book of sketches, cosmopolitan portraits. Again

my training proved limp when the actual work assumed bulk. I lacked the sense of personal need, and the corresponding delight in attainment which drives through a task, making prolonged effort possible. Far more interesting, it was, to listen to men without knowing them, to study their ways and sayings, their garments, hands and foreheads—than to sit down and write what I had heard and thought. Many a time I sat alone throughout a long evening, at a certain little disk of teak in the *International*. The table was on one of the balconies, within hearing range of the buffet, and in view of the vast field of green baize in the billiard-room. At far intervals I would drink a light Rhenish wine with much water, and listen to the play of brilliance and vulgarity, elate and quickened with concepts that lost their lustre when I began to set them down. I did not seem able to reproduce in spirit the cosmopolitan atmosphere which was the charm of it all. I could say it was there, but could not make the pages pulsate with it: and so that book is another basket of unconnectible scraps, like Teufelsdröckh's note-bags.

Of insistent and perennial interest to me are the relations of men and women; and here my sense of separateness from the men of the world came with restless burning. Something of the agony of an undesired woman, it must have been, that went over me like a fire at the sight of certain mated pairs. And always with a shock, I discovered, if their passing was close—the seeming commonness they made of it.

A Chinese coolie grumbling behind his woman in the yellow dusk hour; she of stock so common as not to know the shelter and conserving of the feminine so pervasive in China; just a pair like this grumbling in the dusky twilight along

the yellow river—and yet all the mystery of the world was in the picture to me. A titled Englishman standing with his bride against the steamer-rail in the harbor at Hong Kong; the man complaining that breakfast had been cold, tea and chopsexecrable. . . I caught the girl's eye. And this was her romance, the end of dreams. She was lovely, and her thought that moment drove like an arrow into my brain. I see the two pairs together, strangely blended in dust and twilight—grumbling.

Of Mary Romany I could always write and dream. The maid of Oporto was integrated into my character—a part of all thinking, a station of all hopes, and through which, hopes passed with her glow upon them, into the formative future. I saw the great dark eyes, as we had walked together, swum, sailed and talked together, straining in horror over the cliff—every movement of the slender animate girl; the words she had spoken and the kiss upon my cheek—all these were fixed in the life of me and replenished from each day's strength.

In Hong Kong on a certain afternoon, I was lounging on one of the higher terraced roads of the city. A white road on a burning but humid day; a foliage declivity to the terrace below; and rising on the right—the villas, arbors, and gardens of another and fairer terrace. A yellow silk parasol below was a concentration of the brilliant light. The face was concealed; I could not have known the figure after ten changing years; yet there was a sudden and animate consciousness of Mary Romany coming to keep a tryst with me. I had thought about the woman almost enough to materialize an illusion.

Old in the world's ways, I had sometimes felt; yet I was new as Adam in the presence of her. Something deeper than brain tried to grasp the spirit of her, but failed. I was far from ready for that. Dismay and joy mingled in her eyes. Everything about her was a new and surpassing mystery wrought of the years. She was not as I had expected in any feature—lovelier past a doubt. Frail, she was, not very tall; and there was back of her dark eyes a starlight, or the glow of a beacon on a far lonely hill. My words do not describe the exact look, but only suggest the *spirit* of that high and solitary shining, the meaning to me, too deep to define. There was a wildness in that remote burning, as if it had risen and fallen, but never expired, in some sunless wilderness; as if her mind brought forth its fruits among the crags, alone with the wind and the rain and the universe of night.

She searched my face for a breathless second—then turned away her eyes. I was imbued with the presence of her, the frailness that placed her apart in my thoughts among the perfections; the indefinable freshness and texture always identified with fruit-blossoms; and over all was the swift replenishment of her ancient, mysterious attraction. All the elements of my life seemed to stretch out and breathe, each need finding in her, vitality in volumes. I perceive in the writing about her, the old youthful emotionalism of that moment. My mind seized and held that first fearless intent look of hers, after recognition had dawned, and the smile that lost its purport as she searched among the inner dimensions of my being—then turned away. It returns now, her shaded thrilling face, her hand outstretched in the splendid light.

Already I was depressed by an inexplicable foreboding that our time together was but a matter of moments. It stopped my words. I was incapable of reflection, clumsy-headed as a boy. The commanding desire to take her to some place unknown to distractions, some place of illimitable leisure, perished among its own pangs. . . we had halted at the railing which edged the terrace, and the descent reminded her of the cliffs of Oporto.

"Please don't dive over now, will you—to show that you are not afraid."

A man doesn't remember that never was woman disappointed, nor romance spoiled, because his emotions suddenly whirl-pooled in her presence. It is one of the sorry exposures of self-consciousness that he feels himself lost and desperate when words fail. I was bereft of all that had happened since Oporto. I stood looking at her raptly, my usual faculties and features undone.

"I have played much with boys—since we left you at Oporto," I managed to say.

"But tell me, what have you been

Continued on page 524.



Any Home May Have a Border Such as This.

Note the value of white flowers, beautiful by night as well as by day.

## Hope's Quiet Hour.

### Inward Cleansing.

Woe unto you, Scribes and Pharisees, hypocrites! for ye make clean the outside of the cup and of the platter, but within they are full of extortion and excess. Thou blind Pharisee, cleanse first that which is within the cup and platter, that the outside of them may be clean also.—S. Matt. xxiii. 25, 26.

The Good Physician would not leave sick souls in a state of comfortable self-delusion. The Scribes and Pharisees were very strict in all the outward ceremonies of their religion, and looked down from their pinnacle of religiousness on the careless and worldly publicans and sinners. The stern words of our text were spoken in love, to warn them of their danger. The drugged conscience must be sharply aroused, and gentle words are not always the kindest. One who lulls the pain of a cancer by outward applications, when the only cure is the painful mercy of the knife, is more murderous than kind. If that is true in bodily disease it is just as true in spiritual disease. Our Lord loved those self-righteous men, therefore he tore off the outward cloke of religiousness and pointed to the festering sore which was destroying their souls. Perhaps its naked ugliness might drive them in penitence to the only Healer.

The land was full of sepulchres, which were whitewashed once a year so that they might appear pure and clean, but within—out of sight—were dead men's bones and decaying flesh. "Even so," He said, "ye also outwardly appear righteous unto men, but within ye are full of hypocrisy and iniquity."

Instead of condemning the hypocrites of other days or looking round for modern "Pharisees" to condemn, let us look to ourselves—lest we also may be deceiving ourselves by outward profession which does not grow out of inward reality.

There is a story, called "Prisoners," which describes a selfish woman who saved her own life from the blame of men by a criminal silence. An innocent man was condemned to years of imprisonment because she shrank from an avowal which would have made things unpleasant for herself. She prayed frantically for the release of the man who loved her, but she shrank in cowardly fear from telling the compromising truth about herself which would clear his name. She loved reputation more than character—a dangerous thing to do. She desired to seem better than she was, instead of longing to be better than men thought her.

Restless and miserable, she tried every remedy which would soothe her disturbed conscience, except the one real cure of frank confession and inward cleansing. She dashed into a career of "good works," not from love of God or man, but solely from self-love. She found that the gnawing pain of conscience could be temporarily deadened by taking a superficial interest in the troubles of others. As the author says: "The remedy is cheap and efficacious, and it is a patent. Like Elliman applied to a rheumatic shoulder it really does do good—I mean to the owner of the shoulder. And you can stop rubbing the moment you are relieved."

She was busy doing things for the poor "that were not required of her, in order to shut her eyes to the one thing needful—a great act of reparation."

The Scribes were very particular to pay tithes of all their possessions, to keep the ceremonial law and the traditions of the elders with exact care, to fast and pray regularly. They really thought they were serving God, yet He looked through these outward appearances of religion and could not find any love of God or man in their hearts. They were allowing selfishness to eat their hearts away, while they decorated the outside of life with a view to the good opinion of careless observers.

Our Lord's eyes—eyes like a flame of fire—argued on us today: "His kind but searching glance can scan the very wounds that shame would hide." He knows how many of us are trying to cover up some festering sin—some sin which ought to be opened up by frank confession. He knows how often our "good works" are only an outward show, springing from the desire to win the approval of the world, or intended to

soothe and quiet the stern monitor within. We may succeed—for a time—in deceiving ourselves and the world, but we can never for one moment deceive the Good Physician. He loves us too well to leave us self-deceived. If nothing else will drive us to seek a real cure of the sin, He may tear off the fine robe of religious profession which we prize so highly and show us plainly how great is our need of a Saviour and a Healer.

It is foolish and dangerous to cover a sin out of sight under the folds of a virtue, to say comfortably, "Well, I am quick-tempered but at least I am truthful." Selfishness can hide its ugly head under

our hearts. It is the inward cleansing that really matters, appearances can safely be left to care for themselves. Don't let us ask anxiously: "Will people think I am selfish if I don't give as largely or work as energetically as my neighbors?" Let us rather ask God to show us what He wants us to give and to do for Him. It is quality even more than quantity He seeks. Our gold is tarnished dross in His sight if given from an unworthy motive. The two mites of the poor widow were changed to gold as she placed them in His hand.

"Little is much when God is in it; Man's busiest day's not worth God's minute; Much is little everywhere If God the labour does not share."

Let us thank God that He has not only the will but the power to cleanse us from all sin, that He has opened a Fountain for sin and for uncleanness. How dreadful it would be if the disease of sin were incurable. Our Lord came down to save His people from their sins. He does not cover sin under a white robe, but first washes the stained soul and then clothes it in the white linen which is the righteousness of saints. We don't want Him to condone our sin but to free us from it. We could never be really happy, even in heaven, if our sins were only covered out of sight. We want our souls to be beautiful, as pearls of great price, held closely in the Hand of God. He can produce beauty anywhere.

"Out of the soul,—  
The lily;  
Out of the ooze,—  
The pearl!  
Up from the mortal  
Soars the immortal;  
After hell's battle  
White flags unfurl!  
Therefore, my soul, be true  
And undaunted;  
Never by ghosts of old fears  
Be thou haunted!"

DORA FARNCOMB.



General Townshend.

Commander of the troops holding Kut-el-Amara.

a fair disguise. Fay—in the story mentioned above—sent many boxes of flowers to the suffering people in hospitals yet she was so anxious to save herself unpleasantness that she tortured a man in prison. She could give, and give freely as long as her own comfort was not interfered with.

Selfishness is a sin we all have to fight against. If it is allowed to grow unchecked in our hearts it may lead us to sacrifice another life in order to save us from trouble, it may lead us to lie or preserve a deceitful silence, it may lead us to prefer our own prosperity to the safety and happiness of millions. Junia told us that she overheard a man on the train saying that the longer the war

## The Dollar Chain

A fund maintained by the readers of "The Farmer's Advocate and Home Magazine" for (1) Red Cross Supplies; (2) Soldiers' Comforts; (3) Belgian Relief; (4) Serbian Relief.

Contributions from March 10 to March 17: A Friend, Glencoe, Ont., \$5; Robt. A. Brown, Millford Haven, Ont., \$1; Contributor who gave neither name nor post-office, \$5; Mrs. J. Baldick, Chrysler, Ont., \$1; W. T. Lawrence, Millgrove, Ont., \$1; Geo. H. Staple, Black Hawk, Ont., \$2; Alex. W. Stewart,



Syrup Boiling in the Romantic Way.

Photo taken by Mrs. Walter Buchanan, Ravenna, Ont.

continued the better it would be for the fellows out West. Do you realize the horrible cancer of selfishness which resulted in that careless remark? The speaker did not mind how many people were tortured and killed if only he could pile up more dollars as a result of this world-agonny.

Let us pray and fight against selfishness lest it strangle love in our hearts and make us callously indifferent to all suffering but our own.

Let us fling wide the door and invite the Good Physician to enter and cleanse

Ailsa Craig, Ont., \$1; "Helen," Blyth, Ont., \$2; Mrs. Jas. Orr, South Indian, Ont., \$1; A. G. Smyth, Vittoria, Ont., \$1.

Amount previously acknowledged \$2,126.85

Total to March 17 \$2,146.85

IF YOU CAN'T GO TO THE FRONT, GIVE.

Kindly address contributions to "The Farmer's Advocate and Home Magazine," London, Ont.

## News of the Week

Nova Scotia passed a prohibition bill by a vote of 28 to 3. This brings Halifax into line, the only constituency not already under prohibition, Manitoba has "gone dry" by 2 to 1.

A Toronto man, Mr. G. G. S. Lindsay K.C., who has been in Pekin for the past year, has been appointed to draft new mining laws for China.

Four Thousand United States troops are now in Mexico in pursuit of Villa. The American army is to be increased at once to 120,000 men.

Portugal has entered the war on the side of the Allies, and is mobilizing her forces.

It is reported that 70,000 Turks have petitioned the Sultan to dismiss the Young Turk Government and negotiate for peace with the Allies.

Gen. Gallieni, who resigned as Minister of War in France, because of ill-health, has been succeeded by Gen. Roques.

Holland is greatly incensed at Germany over the sinking of the Tubantia, and is demanding reparation.

After four weeks of the most terrible fighting in the history of the war, the most important positions about Verdun are still held by the French, and the line of operations has been reduced to a front of 2 miles. At time of going to press it is reported that the Germans are launching a heavy attack towards Dvinsk. This looks like an admission of defeat at Verdun, and a belated concession to the advice of General Hindenburg, who always maintained that the main offensive should not be waged on the Western front. It is also reported that Germany has been obliged to refuse assistance to the Turks, who asked for reinforcements against the British in Mesopotamia and the Russians in Armenia. The latter are still sweeping forward. During the week they took the town of Mamakhuatan on the Tigris, and are now preparing an attack on Trebizond, on the southeast of the Black Sea, by sea and land.

## In the Bush in Early Spring.

(MRS. W. BUCHANAN, RAVENNA, ONT.)

It is hardly worth beginning to write an ode to spring,  
For some hundred thousand poets have done the self-same thing,  
But when new life is springing, and snowdrifts getting few  
And all the woods are ringing, what can people do

But write and ease their feelings, of what they hear and see,  
While the crows around are wheeling, or are perched upon a tree?  
So I have got a paper, and I'm writing on my lap  
As I'm tending to the kettles that are boiling down the sap.

I hear the little woodpeckers a-going thump, thump, thump,  
While I am busy keeping all the kettles on the jump;  
I hear the blue jays crying, as 'tis borne upon the breeze,  
And the wind is softly sighing, thro' amongst the leafless trees.

The crows are cawing loudly, and the robins sing their lay,  
As if to say, "The spring has come, be happy while you may."  
The squirrels, and the chipmunks, too, are frisking to and fro,  
And seem to have forgotten all about the frost and snow.

The addertongues are peeping, and the strong and gusty leek,  
Is everywhere in evidence, while little flowers, so meek,  
That all winter have been sleeping in some safe and sure retreat,  
Are lifting up their little heads, so fresh and pure and sweet.

And the maple sap is running, and the wind is in the west,  
And the kettles all are humming and boiling at their best,  
Some clouds are casting shadows, athwart the setting sun,  
And I'll soon be going homewards, for the syrup's nearly done.

Order measurements at eastern. Also pattern for the one for skirt, Address Farmer's Advocate, London, Ontario. Many forged. When ordered. Send the Name. Post Office. County. Province. Number of pages. Age (if child). Measurement. Date of issue. Appeared.



8939 (With Seam Allowance) for Misses 16 8643 Five Misses and



Fashions Dept.

How to Order Patterns.

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

When ordering, please use this form:—  
Send the following pattern to:

Name.....  
Post Office.....  
County.....  
Province.....  
Number of pattern.....  
Age (if child or misses' pattern).....  
Measurement—Waist..... Bust.....  
Date of issue in which pattern appeared.....



8634 Gathered Blouse for Misses and Small Women, 16 and 18 years.  
8884 (With Basting Line and Added Seam Allowance) Gathered Skirt for Misses and Small Women, 16 and 18 years.

8714 Empire Negligee, Small 34 or 36, Medium 38 or 40, Large 42 or 44 bust.



8949 Girl's Dress, 4 to 10 years.



8938 Girl's Dress, 8 to 14 years.

8939 (With Basting Line and Added Seam Allowance) Dressing Jacket for Misses and Small Women, 16 and 18 years.  
8643 Five Gored Petticoat, for Misses and Small Women, 16 and 18 years.



8937 (With Basting Line and Added Seam Allowance) Empire Night Gown, Small 34 or 36, Medium 38 or 40, Large 42 or 44 bust.



1650 Dressing Jacket, One Size.



8944 Dressing Jacket and Cap, Small 34 or 36, Medium 38 or 40, Large 42 or 44 bust.



8654 Girl's Three-Piece Petticoat, 8 to 14 years.

The Windrow

By the second week in March Ireland had sent 142,000 men to the war front, all voluntarily, and recruits were still being added at the rate of 1,000 a week.

Why "Uncle Sam"? During the war of 1812 government stores purchased at Troy, N. Y., were marked "U. S." The inspector in charge of them, Samuel Wilson, was popularly known as "Uncle Sam," hence the name which became representative of the United States of America.

Simon Lake, an American inventor and builder of submarines, proposes that the next vessel for Arctic exploration shall be a submarine equipped to go under the ice when necessary.

Women are taking the place of 150,000 clerks employed by the British Government who were released for active service.

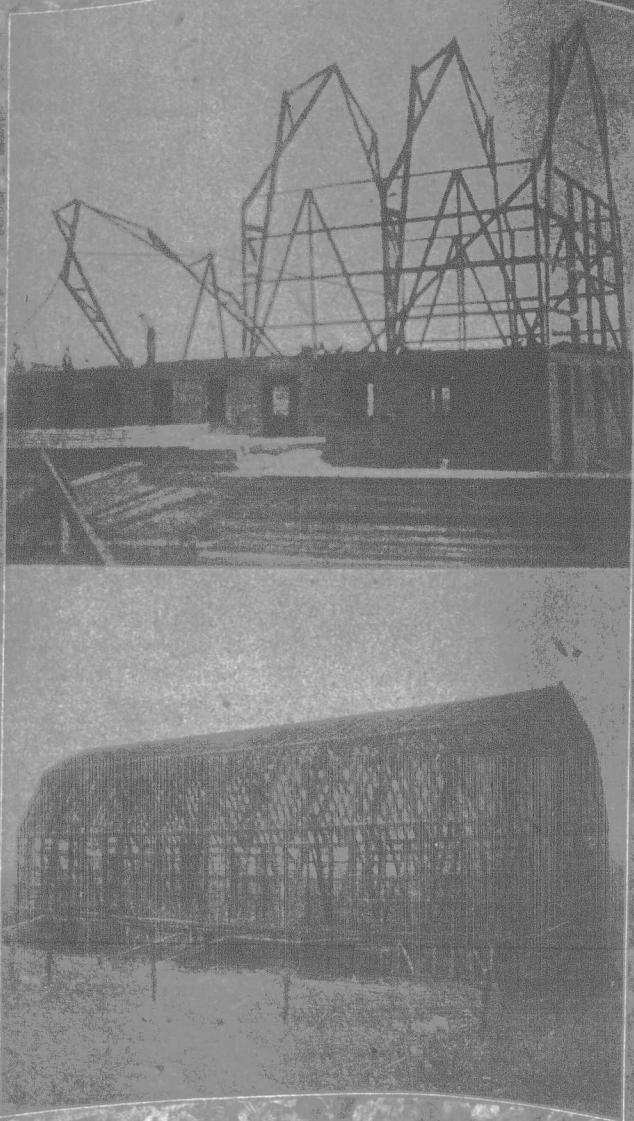
It is being urged that the words on the crest of the prince of Wales, "Ich Dien," meaning "I serve," be abolished, on account of their German form. The Welsh equivalent for "I serve" has been suggested, but is rather unpronounceable—"Gwasanaethaf."

During a sea fight the engine-room men tend the great engines of a battleship with all the care that they would bestow upon the same delicate yet mighty mechanism in time of peace, roaming listlessly, yet with a definite purpose, around the engine-room with oil cans in hand, bestowing drops of lubricant here and there as required. Theirs and the stokers' is almost—not quite—the hardest part of the whole grim drama of a naval battle, for they are absolutely cut off from the fight, and are only cognizant of it by the quivering of the ship as the great turrets over their heads fire or as the enemy's shells thud against the armor, or when some stray shot finds its way through the steel wall and the bunkers, to the boilers. Such an event blends a whole stokehold in one frenzied orgy of death—death by exploding shell and scattering fragments of steel; death by awful wounds from flying, burning coals, or death by scalding, hissing, blinding steam as the water tubes burst all around them.—Tit-Bits.

After the war, says Literary Digest, the week-end tripper will not confine himself to roads—he will launch into the atmosphere in an aeroplane and go wherever fancy leads him. When the war is over 50,000 trained aviators may be without jobs, and a million machines are likely to be on hand. It is only to be expected that air-routes and air-trips will be speedily established.

The pigeon, "first cousin once removed of the dove of peace," has become an important factor in modern warfare. "His special value," notes The Independent, "is as a photographer, a messenger and a spy. Equipped with a camera peculiarly designed for his purpose, he can dodge shells and aeroplanes and penetrate the enemy's lines until their innermost secrets are recorded by his lens. The tiny camera is fastened under the bird's body, where it will not impede flying. Its shutter works automatically. The birds are trained as ordinary carrier pigeons—in fact they are still used to some extent to carry messages—but it is as scouts that they have become indispensable to practically every army in Europe. The French have made the most thorough tests of the war pigeons' efficiency, and their conclusions have resulted in the addition of many automobile pigeon houses to the general army equipment. Whether or not the birds accustomed to carrying cameras and dispatches can be induced to substitute the olive branch, is an interesting subject for speculation."

## Let This Free Book Help You



A horse or team is hitched to the block and tackle, and the truss quickly raised to position. A few men with guy ropes are necessary to steady the truss while being raised.

As soon as the first truss is up, it is braced in position.

The second truss is raised in like manner, and as soon as it is up the girts are added, as shown on the opposite page.

Then, one after the other the trusses are put in place, the girts being spiked on as you go along. The last two trusses, when laid in position for raising, will project over the end of the barn. The projecting portion is supported by temporary props, which are removed when the truss is being raised. The end girts can be added at any time convenient.

To put on the plates, no scaffolding is needed, since it is not difficult to climb on the truss itself.

The next step is to put the purlines in place, and raise to position with block and tackle.

Before putting on the rafters and cornice, the siding is nailed on, because it can be done more conveniently before the rafters and the roof boards are in place, there being nothing to interfere with nailing on the boards under the cornice.

### Ceiling

When there is a loft overhead, stables should be ceiled perfectly tight, so no dust can get through. Close-fitting, tongued and grooved stock should be used, protected by a layer of building paper just between lumber and joists. Sometimes metal siding has been used for the ceiling, but all that is needed is a plain, smooth surface that will not catch dust, harbor lice or collect cobwebs. Some people simply nail up a few wide boards for the purpose, but these shrink, leaving big gaps through which the dust falls.

Both ceiling and walls should be painted white or whitewashed, as the intensity of the light in the stable can be doubled in this way.

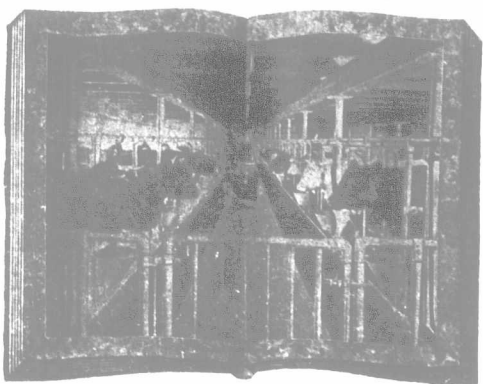
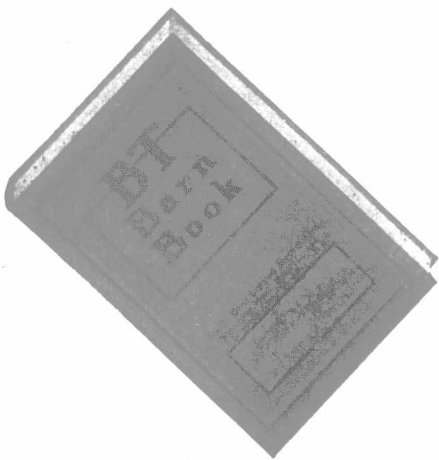
The height of ceiling varies with the width of the barn and the climate of the locality. It should never be too high, or it will be difficult to keep up sufficient air current for effective ventilation without making the barn too cold. 8 feet is about the average height.

### Temperature

Let us say, at this point, that it has not been found necessary to keep the temperature of the dairy barn up to 60 degrees to secure the most economic milk flow. The temperature must always depend upon the humidity of the atmosphere. In well ventilated barns the temperature may go as low as 40 degrees and the cows will not feel any harmful effects. From 40 to 55 degrees is a safe range, in well ventilated barns.

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Wouldn't you like to know how to plan it, so cattle-stands, gutters, mangers and passages would be the right size, no floor space would be wasted, and ventilation and lighting would be effective?

Wouldn't you like to learn the best ideas about site, appearance, design and size—how to lay foundations and floors, get the floor levels and make the concrete, build the walls and silos—how to frame the barn by a method that saves half the cost of the old way—how to frame a wide barn, barn with circle roof, or steel truss barn—how to build ventilation inlets and outlets and frame cupolas for

foul air shafts—how to build mangers so feed would not be wasted—and best sizes and shapes for gutters?

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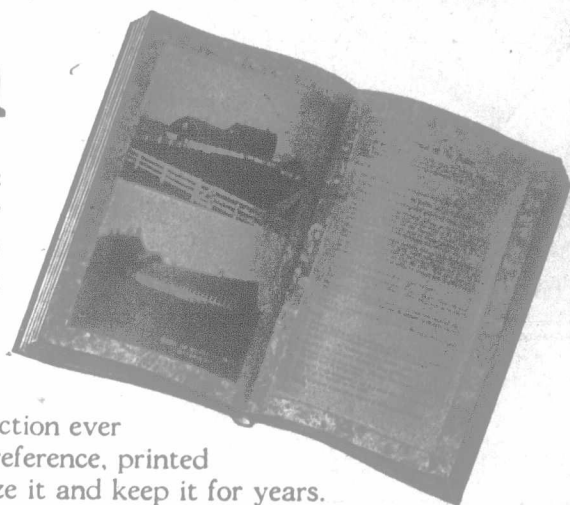
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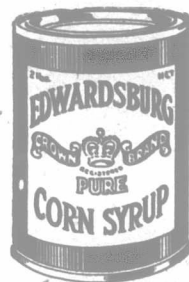
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**The Beaver Circle**

**Our Senior Beavers.**

[For all Beavers from Senior Third to Continuation Classes, inclusive.]

**Song of the Chickadee.**

List to the song of the chickadee Perched in the top of the leafless tree; Keen winds ruffling his breast of down, Coat of gray with its trimmings brown.

Tilting aloft his black-capped head, Giving a lift to his wings outspread, Chickadee chirps: "Chickadee-dee-dee! Got any crumbs to bestow on me?"

Winter and summer I bring you cheer; There's never a day in all the year You may not hear me. I'm small, you see; But I'm bright and active and full of glee."

From limb to limb then he hies away, Out on the branches you see him sway, Black cap bobbing about as he Sings: "Chick, chick, chicka, chicka-dee, dee!"

—Boys and Girls.

**Funnies.**

Courageous Child.—Nellie, aged four, was gazing intently at the visitor's new bonnet.

"Well, dear," asked the lady at last, "what do you think of it?"

"Oh," replied the small observer, "I think it's all right. Aunt Mary told mama it was a perfect fright, but it doesn't frighten me any."—Kansas City Star.

It was little Teddy's first term at school and his mother had been telling the rich old uncle how well the little boy was getting along with his studies and how dearly he loved his school.

"Well, my little man," said the uncle, as the child returned home, "what do you do in school all day?" "I wait till it's time to go home," was Teddy's matter-of-fact reply.

**The Story Competition.**

Dear Puck and Beavers,—I was in the Beaver Circle where there was a new competition, and decided I would try and write one, as I like to make up stories. So here is my story:

Once there were a little girl and boy who lived with their grandfather, who was very kind to them. The boy was ten years old, and his name was Frank. The little girl was eight years old, and her name was Grace. They both were very fond of their grandfather, and did many things to help him.

Frank was always wanting a dog, so his grandfather and Grace planned to give him a surprise his next birthday. When Frank got up the day of his birth-

day his grandfather told him and Grace to go for a walk before breakfast, and when Frank went out into the yard, behold, there he saw a beautiful large Newfoundland dog, and he was so overjoyed he ran and put his arms around the dog's neck and hugged him. He then ran into the house and thanked his grandfather for the beautiful present. He was so eager to get out to play with his dog he hardly ate any breakfast. At breakfast they decided to call the dog Sport. The children and the dog became great friends, and wherever the children were the dog was sure to be found. They got harness for Sport, and he would haul them around in their little wagon. One day Frank and Grace went to a bush quite a piece from home to pick berries, and however it happened, Sport was left at home. When they came into the bush to their surprise they came upon a gypsy camp. They tried to get away, but were caught and brought back. They asked to be left alone, but nobody would listen to them. And they noticed with fear in their hearts that the gypsies were getting ready to move on, and they would have to go with them. Sure enough when the gypsies were ready they were put in a van and travelled all day till about dusk that evening, when they stopped for the night. After having eaten some supper they went and cried themselves to sleep under a tree (for they were camping outside). About midnight they were awakened by something licking their hands and face, and looking up, to their great joy, there stood Sport. So Frank and Grace, led by Sport, crept quietly away, and travelled all night till morning, when they were met by their grandfather and taken safely home. You may be sure nothing was too good for their faithful friend, Sport, who brought them safely away from the gypsies, and they made him a collar with the word "Faithful" engraved on it in large gold letters. They never went away from home again without taking Sport with them. And so my story ends.

MELBA CAMERON.

Carlsbad Springs, Ont. (Sr. IV. Class.)

Dear Puck,—There once lived an old man. He lived with his two grandchildren, a boy and a girl. The boy's name was Willie, and the girl's name was Winnie. Their father and mother had died when they were small. They had a dog, and they called him Jack. He was a beautiful dog and they loved him very much. The old man spun flax. He worked very hard, for he was very poor, to make a living.

There was a steep hill near their house, and the teams had much trouble getting up it. The old man used to carry stones and put them behind the wheels. He earned a few pennies in this way.

One day he said to his grandchildren, "to-morrow you will go with me to the hill. Then you will see how I place the stones, and after that you can help the carriages up the hill." Willie asked his grandfather for the handle of a broom. He took the broom and when a team came he would put it behind the wheels. He hurt his fingers the first couple of times. The next day Winnie went with Willie to the hill. She went to the fence to pick berries.

There were no teams in sight, so Willie also went to the fence to find berries. When he was there a little while he saw a long line of carriages coming. The men in the carriages gave Willie many pennies. Winnie sat down to count the money, but she said, "Look, brother, this is not a penny." Willie told her it was a guinea. The girl said, "Now we can buy many muffins," but Willie said, "I do not believe it belongs to us, because the man who gave it to us must have made a mistake." They followed the carriage and gave the guinea back to the man. He was very happy. He then gave them two guineas for being truthful. They went home and had a nice supper.

Their dog Jack had a cup and he sat at the corner of a busy road. Each person that passed by dropped a penny in the cup. He took them home each night, but one stormy night he got lost. He went into the woods, and some gypsies took him to their camp. Next day Winnie and Willie went to the bush. They saw Jack, but he was with the

him and Grace breakfast, and to the yard, beautiful large he was so over his arms around gged him. He e and thanked beautiful present out to play with any breakfast led to call the n and the dog d wherever, the was sure to be ess for Sport, around in their y Frank and quite a piece s, and however left at home e bush to their a gypsy camp out were caught y asked to be would listen to d with fear in psies were get- and they would Sure enough eady they were led all day till g, when they After having went and cried er a tree (for outside). About ened by some- and face, and, eat joy, there and Grace, led y away, and morning, when grandfather and may be sure or their faith- brought them osies, and they e word "Faith- ge gold letters. m home again h them. And

gypsies. Willie told the gypsies that the dog belonged to them. They gave the dog to Willie. They invited them to their camp. The woman showed Winnie how to braid straw. When they went home the gypsies told them to come again.

When they got home their grandfather was very glad to see Jack. Winnie braided some rushes into baskets and sold them at the store. Next day the whole family and Jack went to the camp. They ate dinner there and that afternoon they went hunting. They got a deer. They carried it home and had a feast. When they got home Willie went to the hill and Winnie made baskets. Jack came home with his cup full of pennies that night. The good old dog died of old age. They buried him near their house, and each time they went near his grave they remembered how he earned many pennies. Their grandfather was sorry when he thought of his good dog.

CLIFFORD S. NAUMAN.  
(Age 13, Sr. IV. Class.)  
R. R. No. 1, Fisherville, Ont.

**Our Junior Beavers.**

(For all Beavers up to Junior Third Class, inclusive.)

**"Old Chap."**

Mother calls me "Billiken" and "Sonny" and a lot Of funny little names, besides the proper one I've got; Grannie calls me "Dearie," when I sit upon her lap, But Daddy nearly always used to say "Old Chap." Grandpa calls me "William," and pats me on the head; Nurse says, "Good-night, sweetheart," when she tucks me up in bed; I don't mind what they call me, not the least little scrap, But I did like to hear Daddy say, "Good-night, Old Chap." Daddy said "Good-bye" to all of us, and went away To what they call "The Better Land," a year ago to-day. But some time I shall go there, though it is not upon the map, And then he'll smile at me and say, "Hullo! Old Chap."  
—ADA LEONORA HARRIS.

**Junior Beavers' Letter Box.**

Dear Puck and Beavers,—I have been reading the letters in "The Farmer's Advocate," and enjoy them very much. I thought I would like to write a letter. We had a school fair last fall. I took oats to show, but owing to so much rain they were a failure. There was a prize given for a handy farm device; I made a square and a milk stool. I got first prize for my square, and second for my milk stool. I got in prize money sixty-five cents. I have one brother, Richard. He had potatoes to show. He got fifth prize. There were baseball, football and races. We had lots of fun. Everyone took their lunch, and we all enjoyed it very much. We have about two miles to go to school. Our teacher's name is Miss McMillan, and all we scholars like her very much.  
HUGH GRIGGS.  
Laurel, Ont., R. R. No. 1.  
(Age 12, Sr. II.)

Dear Puck and Beavers,—This is my first letter to your Circle, which I enjoy reading very much. My sister has written three letters, all of which were printed, and I hope mine will escape the w.-p. b., too, for I want to tell you a little incident that happened with papa's horses last week when they ran out in the field. You know we have an old driver which we always take to Sunday School, but, she has a lame hip, and when she lies down on her side she cannot get up very well until papa helps her. Her name is Maud. She lay on the weak hip in the mud when out. Darkness came on and they all came home but old Maud and Queen (one of the work horses), and when papa had finished milking he took the light to see about them. Queen met him with a whinny and ran back to Maud two or three times, till papa got there and found her in the mud. She could not get up, herself, as it was so soft around her. Don't you think Queen

acted a brave part for a dumb animal? I will close with a riddle.

Father, mother, son and daughter, running all day and cannot catch each other. Ans.—Four buggy wheels.

HARVEY ARMSTRONG.  
Bowmanville, R. R. No. 3.  
(Age 10.)

Dear Puck,—This is my first letter to your delightful Circle. I think the letters are splendid. We have taken "The Farmer's Advocate" longer than I can remember. There are quite a number of soldiers training in our nearest town. They had their pictures taken in a group and sold them in aid of the Red Cross. I haven't seen them training yet, but I hope to see them before they leave. My sister has a camera, and we have some fine time with it. As my letter is getting long I will close, wishing the Beaver Circle every success.

WILHELMINA WRAY.  
Tottenham, Ont. (Age 11, Sr. II.)

**The Honor Roll.**

So many letters are on hand that all cannot be published, therefore, some of the names will have to be put in the Honor Roll. Here it is: Lloyd Wagg, Ina St. John, Lillian Coulter, Marjorie Matheson, Eric Wark, Mae Cameron, Harold Taylor, Bessie Turnbull, Borden Kelsey, Jean Bell, Pearl Moody, Margaret McGuire, Marjorie Erwin, Marion Rutherford, Myrtle Galbraith, Janie Henderson, Albert Gile, Leonard Snider, Mary I. Macfarlane, Dorothy Rosebrugh, Beatrice Scott, Harold Jackson, Elsie Jasper, Nellie Jasper, Wanda Rathwell, Vida Gowland.

**Riddles.**

Why are two t's like hops? Ans.—Because they make beer better.—Sent by Eva Allan.

Everything has it, and so has a needle. Ans.—A name. Sent by Beatrice Scott.

Why would a potato make a good detective? Ans.—Because it has so many eyes. Sent by Harold Jackson.

**Beaver Circle Notes.**

The following would like some of the Beavers to write to them. Oswald Forrester (age 10), Kincardine, Ont.; Myrtle Galbraith, R. 4, Milton, Ont.; Wilhelmina Wray (age 11), Tottenham, Ont.

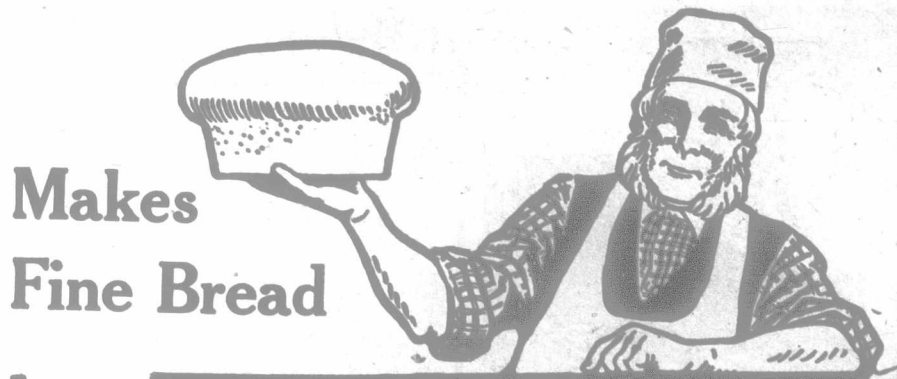
**The Ingle Nook.**

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

**A Garden Talk.**

Dear Ingle Nook Folk.—I wonder if there is any one in the world who does not take an interest, or could not be "interested into" taking an interest, in the making of a garden in spring. The whole process is so creative, and so—curious. You take out your little packages of seed, and regard the little brown heaps of promise with a sort of affectionate awe. Some of the seeds are fine as dust, almost, and glisten with a metallic sheen. Others are grain-like, some round, oval, triangular, others—lettuce seeds for instance—white and narrow like the fine shreds from a water-bleached log. When you come to the beets and nasturtiums and four o'clocks, on the other hand, you find something more substantial, and yet who, absolutely uninitiated, could guess that even these could give rise to juicy red beet-roots, flaming flowers, and sturdy bushes three or four feet high?

In each seed is locked the mysterious principle of life, and yours it is to coax the development of the perfect plant. It is not drudgery to "put in" a garden, a little garden, I mean; it is all joy to the one who loves plants. For the large plot, of course, it is advisable to have the entire planting, almost, carried out in such a way that the greater part of the work can be done with a horse. Even for the very small space it seems not unreasonable to ask that the turning up of the soil be done by the men. The work is too



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Barley Meal	1.85
Geneva Feed (crushed corn, oats and barley)	1.90
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Feed Wheat	2.25
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- David Copperfield, by Dickens.
- Oliver Twist, by Dickens.
- The Talisman, by Scott.
- Waverley, by Scott.
- Last Days of Pompeii, by Lytton.
- Last of the Barons, by Lytton.
- Three Musketeers, by Dumas.
- Vanity Fair by Thackeray.
- Cranford, by Gaskell.
- The Woman in White, by Collins.
- The Pathfinder, by Cooper.
- Never Too Late to Mend, by Reade.
- The Scarlet Letter, by Hawthorne.
- Poems, by Longfellow.
- Poems, by Tennyson.
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hard for any but a very strong woman, especially on clayey soil; a very old and mellow garden, where the soil is of the sandy order, presents fewer difficulties.

In any case, for the vegetable garden, it is well to have the entire planting done in rows running north and south, with tomatoes and other "vines" on the outer borders where they can be trained up to the fence if necessary. By care in planting one can secure "double cropping." For example, when early peas are taken off, beets, cabbage, cauliflowers and celery may be transplanted into the same space; after early beets are removed, turnips may follow; lettuce and radishes may be tucked in everywhere among other plants; and so on. And do you know that some things may be planted in succession, (say at intervals of two weeks) to keep your table going with the tenderest and best? Among these are peas, beans, radish, beets, lettuce, carrots, and corn. Speaking of corn, no variety is better than Golden Bantam. In Canada, with its comparatively short summers, the earliest varieties of tomatoes are to be recommended. If you have not started these in the house or hot-bed buy the plants at transplanting time, and, if the ground is not rich enough try sinking an old can punched with holes in the sides and filled with manure beside each plant; fill this with water at intervals.

The all-round gardener will not forget Hubbard squash, vegetable marrow and vegetable oyster, while she who likes novelties may put in a few martynia for pickles, and Brussels sprouts and kale for late using. Kale, by the way, is not good for cooking until well touched by frost. It may be left in the garden until Christmas and used as needed. "Sea-Kale" is another variety, perennial, grown for its first shoots in spring, which are blanched and may be served like asparagus. It should be grown, like asparagus and rhubarb, in a permanent bed. The shoots are blanched by banking up with earth or covering with ventilated boxes, and the blanched leaves with their thick midribs are cooked.

Rhubarb needs cultivation to keep down weeds, and a very rich soil, with mulching in fall and spring of well-rotted manure. It is said that placing bottomless kegs over the plants in early spring will force the shoots to grow up long and tender. Cut off all seed-stalks.

Artichokes—the "Jerusalem" grown for its tubers, and the "French" grown for its flower-heads which are cooked when well formed,—are both valuable vegetables in any garden, and are so easy of cultivation as to leave no excuse for being omitted. The "French" species, if well managed, will yield "heads" from early summer until frost, but does not flower until the second year unless sown under glass in March or April. The Jerusalem artichoke affords a food quite as valuable as potatoes, and will grow even on poor land. It is too bad that its real value is not more generally understood.

Spinach is delicious, but may usually be dispensed with in the country where it is so easy to secure "greens" without planting—lamb's quarters, pigweed, early shoots of milkweed, early dandelions and purslane. All of these are excellent when cooked quickly and nicely seasoned with butter, pepper and salt. The dandelion is not valued in Canada as it should be; in some parts of France it is cultivated. It should be used when young and tender, before bitterness has set in, and the more rapidly grown it is, the surer it is to be of good variety. The same condition—quick growth—is an absolute necessity for the best radishes, cucumbers, rhubarb, lettuce, green onions, anything in fact, that depends upon crispness for its excellence.

Parsnips, parsley, and melons have not been mentioned, but are necessities to the complete garden. Eggplant is delicious, but must be started so early that it is best to buy the young plants from a green-house when it is time to set them out. Nor would one forget the herb bed, where sage, thyme and chives grow ready to perfect dishes that need just the right seasoning. There should be a place, also, for garden cress, wholesome and appetizing when all else fails to tempt one to eat enough in hot weather.

To have a good garden it is essential first of all, to secure good seed. After

that the quality of the soil is most important; the very best is deep, rich, mellow, well-drained, easily worked. If it is too stiff and hard add sand and plenty of old, well-decayed manure. Fresh manure should never be put on a garden in spring; it burns. When the garden is under way it should be cultivated (shallow) very frequently; there is much good sense in the old saying, "a good hoeing is as good as a rain." Nowadays, however, tillage does not altogether depend upon the old-fashioned hoe. Even for small gardens where the horse-cultivator cannot be run, there are pointed hoes and hand weedeaters that help to make the work easier.

Next day we shall talk about flowers, for I want to tell you about a very pretty garden belonging to a garden enthusiast—a discovery of last year.

Just in closing, buy your seeds as soon as possible, if you have not already done so, and buy them from a reliable firm.

\* \* \* \*

A last word: The above has been written on the supposition that, by garden-making time, the crisis of the war may be over, and hostilities on the down-grade. If this is not the case it may be that even the women of Canada may have to turn their attention to more absolutely essential things in horticulture and agriculture. Farming here is not what it is in Europe, where holdings are smaller, the land so much easier to work because of long tith, and the women used to working in the fields—both they and their ancestors. Here farm women for long enough have had little more to do with out-of-doors work than their city sisters. It is a hundred times harder for women to carry on agriculture in Canada than in Europe. Nevertheless, should the call become urgent, it may be that both country and city women will have to unite to keep up a fair average from the land. If so, they will not fail, they must not fail. Beans and potatoes, wheat and the fruit crop—these may be the challenge of the future to Canada's woman's brain and woman's handiwork.

### Ye Newe Spring Hatte.

"Ye ladye bought ye newe spring hatte,  
And took it home in glee,  
'And husbände, husbände, is itte notte  
A bargayne good to see?"

"'But what is thyshe?' ye husband cried,  
'That lyes across my kœce?'  
Ye ladye toyed with her lappe dogge—  
'Itte is ye bille,' quoth she."

A week or so ago we went to the millinery openings, and, notwithstanding the fact that there is a big war on hand and that economy is preached wherever one turns, "ye billes" seemed to loom large as ever, and the less there was on a hat the more it seemed to cost. "Of course, you have to pay for the style," the shop-girl invariably explained, and one meekly bowed in acquiescence.

If you want to be in the height of fashion for very early spring, you must have a very small hat, very high, or, at least, with a trimming that mounts ambitiously heavenward. The styles to be shown later run to the very broad, flat order. There must not be too much trimming on any of them—otherwise free rein is given regarding material and color. Some of the prettiest have silk crowns and silk under-facings, with tight little knots of flowers here and there. A good deal of malines, all perishable as it is, seemed to be in evidence.

But how little real interest one has in millinery or anything else of such evanescence this spring! After all, what odds about these things in the face of a war-torn world! Let us bid good-bye to the subject.

JUNIA.

### What Our Readers are Thinking.

"S. S. S."—What a row of sibilants! But nothing of the soda-water order is implied, "S. S. S." is the initial-row of a very thoughtful and sensible woman. She says: "Here is a topic that I have long thought ought to be aired in 'The Farmer's Advocate'." The

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advantages of being a farmer's wife! Before the war a lot of women supposed to hold advanced ideas were very much worked up because woman did not have a chance to work and develop the latent talents she was supposed to possess.

Does the case of that deformed child remind you somewhat of the ancient Greek custom of exposing their undesirable offspring in the forest? It seems to me it is hard to tell where such a line of action might lead.

What "S. S. S." says in regard to the farm woman seems to make apropos a reference to what some of us heard Mrs. Pankhurst say, recently, in regard to the Serbian farm women, as they were before the war.

Mrs. Pankhurst, by the way, is a most charming speaker,—dainty, womanly, with a pleasing voice and perfect accent, above all a manner absolutely serious, without one trace of affectation, or "showing off."

In regard to the pork query: A butcher whom we consulted says that the best way to prevent pork from rusting is to keep it in a good pickle and change the pickle from time to time.

The following curing recipes are given: (1) Take 9 lbs. salt, 3 lbs. sugar, 1 pint molasses, 3 oz. saltpetre, 1 oz. soda, 5 to 6 gals. water.

To "A Cavan Blazer." Ingle Nook Editor.—Will you allow still another bachelor to enter the charmed (or charming) Circle? My only plea for recognition is my wish to be of service to "A Cavan Blazer," as he signs himself.

Now, I want to tell him for his encouragement what Ella Wheeler Wilcox says in a recent number of the New York "American." She informs us that with the coming of the telephone "the young girl has developed an astonishing tendency towards the pursuit of the young man."

Now, the solution of the difficulty for "A Cavan Blazer" is before us. Let him get busy and organize a Co-operative Rural Telephone Company, inducing all his neighbors who have tolerably good-looking daughters to subscribe, and not forgetting to install a couple of the instruments in his own house, one in the kitchen and the other in his bed-room.

Correspondence.

Window Boxes.

Dear Junia,—Could you answer through your valuable "Ingle Nook correspondence" the following questions, re flower gardening?

1. In the planting of the pretty window boxes, used on the outside of the windows, are there holes bored in the bottom? What kinds of annuals would be pretty in them? Would prefer something blooming almost all seasons, and of a bright, red color; and also some creeping foliage to fall over the edge.

2. When planting climbing roses, is it necessary that they grow up a wall or can they be trained to twine around a verandah post? When should they be planted? In catalogues the roses are termed two years or three years. Does this mean that it takes two years for them to bloom?

A MIDDLESEX READER.

Middlesex Co., Ont.

There should be holes for drainage in the bottom of window boxes. Put in also, a layer of broken crockery covered with moss or fibre before putting in the soil.

Climbing roses need a trellis. Cinnamon vine is the best "twining" vine I know. Of course, roses, clematis, etc., can be twined about posts, but they need watching and tying in place.

Hymn Given Away.

Mr. T. Baldwin, R. R. 2, Warton, Ont., says he will send a copy of a hymn free to anyone who will send him a stamped envelope, with address.

Burns and Cuts.

In regard to Burns and Cuts, Dr. H. W. Hill, Director of the Institute of Public Health, London, Ont., says:

I think the heading "Keep Air Away" is perhaps correct for very slight burns and scalds where the surface is not destroyed. This is a method of preventing pain rather than of treating the wound, however, and all treatment that tends to prevent evaporation from the surface, such as oils, tend also to encourage blistering.

The injunction to bind a wound I am not at all in favor of. Slight wounds

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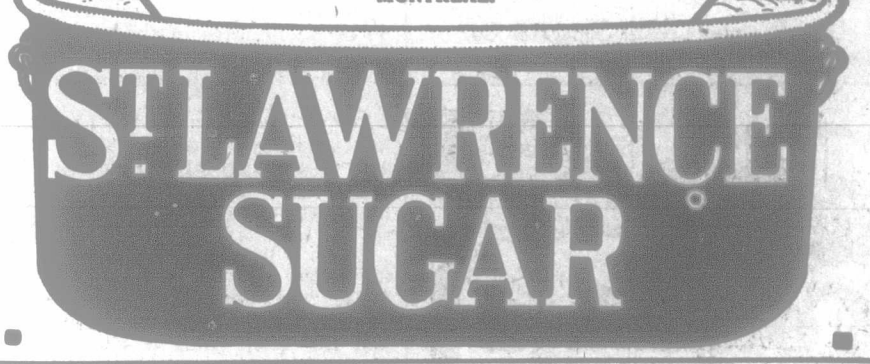
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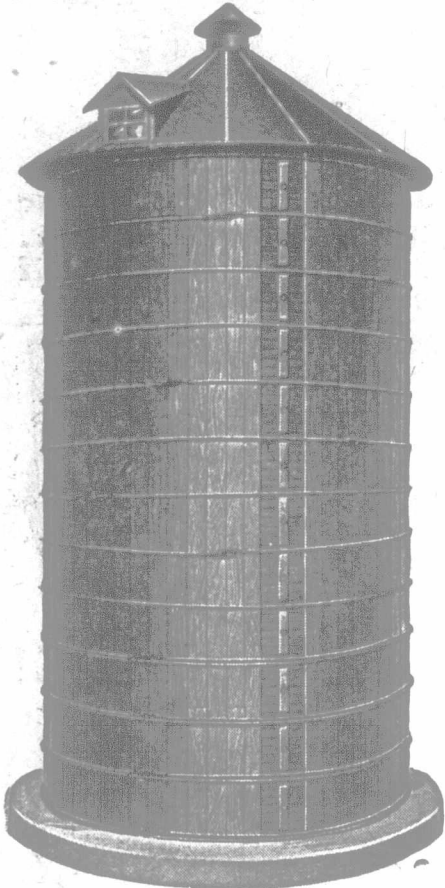
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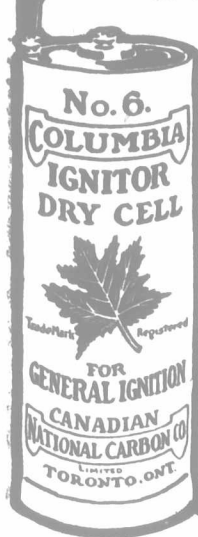


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I would rather see stick together themselves and bad wounds should be stitched, but I do not believe it to be a good practice to draw the edges of the wound together with a bandage. The pressure congests the part. When a medical student I invented a method of using strips of adhesive plaster which were stuck close to the edges of the wound, and then sewing the edges of the plaster together. A method similar to this has been developed of late years. It takes the strain from the raw edges and distributes it over a wide area. By avoiding stitches in the skin, stitch abscesses are not produced.

### Seasonable Cookery.

**Cooking Fish.**—(a) To fry fish have the fat smoking hot before the fish is put in. There should be quite enough to cover the fish, but as it may be used again and again no wastefulness is entailed. When the fat is smoking hot it sears and hardens the outside at once, and so does not soak into the fish and make it indigestible. Only a small quantity of fish should be cooked at a time. Drain on a paper or cloth and serve hot on a hot platter. (b) To boil fish have the water warm and add salt and vinegar to taste. Vinegar helps to keep the fish firm. Allow about 10 minutes for each pound of fish, and let the water simmer, not boil. When done lift out carefully, drain, and place on a hot dish. Serve with melted butter poured over, and garnish with chopped parsley, slices of hard-boiled egg and lemon. If you choose you can make a white sauce and pour over the fish, grating some hard-boiled egg yolk over the top to make it look pretty, and mixing the chopped whites with the sauce. Some always add a dash of nutmeg to fish sauce. White pepper or paprika should be used for seasoning. The best fish for boiling are cod, haddock, conger eel, mackerel—in short all white-fleshed species.

**Finnan Haddock (Smoked).**—Cook for 30 or 35 minutes in the oven in a very little water. Drain, place on a hot dish, dot with bits of butter and serve.

**Salmon Salad.**—Flake 1 can of salmon fine, add 1 cup cabbage cut fine, 1 cup celery (if available) also cut fine. Season with salt and paprika. Mix with mayonnaise and serve on lettuce.

**Eggs, Poached.**—The secret of having eggs poached nicely is to have plenty of boiling water and have it actually boiling when the eggs are dropped in. After that it should not boil. Cover tightly and keep hot for ten minutes. A little salt and vinegar may be added to the water. To poach eggs to perfection use a poacher; if you have not a poacher use tin sealer rings, or poach the eggs, one at a time, in a small, deep saucepan. Serve hot on buttered toast or biscuits, with a dot of butter and sprinkling of pepper or paprika on each.

**Minced Eggs.**—Chop up coarsely 5 hard-boiled eggs, and season with salt. Put over the fire in a pan, 1 cup milk, 1 tablespoon butter, salt and pepper to taste. When it comes to a boil thicken with a tablespoonful of flour dissolved in a little cold milk. When thick like cream add the eggs. Serve on toast.

**Creamed Potatoes With Cheese.**—Peel 5 potatoes and cut into small cubes. Boil until tender in a little salted water. Drain, then add  $\frac{1}{2}$  cup milk, a tablespoon of butter, salt and pepper to taste. Sprinkle with grated cheese and brown in the oven.

**Roast Onions.**—Peel the onions and steam  $1\frac{1}{2}$  hours, then bake them in a pan with a little drippings, salt and a sprinkling of sugar to make them brown on top. Serve very hot.

**Veal Potpie.**—Rinse 3 lbs. veal, put in kettle and cover with boiling water. Add 1 heaping teaspoon salt and remove scum. Next add 1 large spoonful of butter and pepper to season. When nearly tender lay 6 or 8 sliced potatoes on the meat. Make a batter of 3 cups flour, 2 teaspoons baking powder, a little salt, 1 cup sweet milk. Drop a spoonful at a time on the meat. Cover closely, and do not remove cover for 30 minutes. Keep simmering steadily. When done remove the solids and thicken the gravy with butter and flour mixed.

## The Road of Living Men.

Continued from page 515.

doing all these years—some big world's work?"

"No, I have just been wandering about, studying men and waiting for to-day."

She came a step closer, a swift-passing eagerness in her eyes. "What do you mean—waiting for to-day?"

It all might have been different. It was here I faltered, already afraid of my poor boldness. Perversely, my brain caught at an old Oporto memory.

"Do you remember," I questioned, laughing confusedly—"oh, but you didn't hear it—what your mother told me about girls asking questions to hear what boys would say?"

Mary Romany had been brave enough to challenge me for the truth. My part was inconceivably dull. She smiled, and after a moment asked about my father, as we turned down the walk to the next terrace. I mentioned the month and year of his death in Petersburg. She halted and caught my arm.

"My mother died within the same fortnight. . . . He always seemed noble to me—your father."

It appeared obvious now to express the deep reality of her mother's attraction, as I knew it, so I did not answer. Even this is miserable to remember. . . . In the hall of the *International* we passed the music-room, and I asked about her playing. It was all I could think of those old things of Oporto.

"Many periods—for months at a time—I have been away from a piano," she said, "so my studying has been intermittent. . . . But I'll gladly play for a few minutes if you like. I must join my father very soon."

"Is he in Hong Kong?"

"Yes. We are leaving to-night."

I did not hear the music steadily. The new going away had stricken me. Though I had always listened for the name of Romany, I wondered now how I could have passed the recent years, other than in aggressive search for her.

I seem to remember the colors of that music—the deep mild purity of the beginning and a sudden rocket of pearls. Then the pervading white of a human attachment changing to red in my mind, a passionate desire unfulfilled—and from it all came a gray cold melancholy that awed me in its utterness, and enhanced finally into a majestic bereavement. . . . In Tibet, I had wanted music as some men want wine. It was not necessary for me to speak when she had finished. She turned again to the piano and played an early Romance by Tchaikowsky. It was another parting, and there was a mocking bitterness about the breaking in of the soldiers—loud and pitiless and empty—and then the woman was alone, crooning over the broken theme of the parting, and upon her crooning came the hideous soldiery motif repeated, though faintly from a distance. The thing was ending in its sweetness and tragedy.

Mary Romany regarded me for a second. "That's very strange," she said. I waited for her to go on.

"I never played those two things together before. that I know of; and yet, they are both in the same key—Chopin's *F Minor Concerto*, of which I played the *Larghetto* and this Russian *Romance*. . . . It must be our key—"

The windows of the music-room faced the harbor. It was twilight in the city, but afternoon out to sea beyond the shadow of the mountain. Her profile seemed to reflect a touch of that far waning light, and to me every line of feature accentuated the volumes of temperament of which her eyes burned intimations. She was distraught. I started to speak, but she was before me, her gaze lost in the light beyond the water-front and the ship-crowded shadows.

"I wonder if I have been dreaming these ten years? . . . And so you, too, have wandered about the world? We seem to be creatures of ships, forever sailing—a world of winds and coasts and ports—all alien—in a sort of *F Minor* enchantment—"

"And to-night you are sailing, Mary Romany—?"

"Yes—and I must go to my father now. We are on the way to Shanghai and far up the river. Father has a new interest deep in the country."

"But won't I see you again?"

"I shall try to come here for a few minutes after dinner—"

"Thank you—but in China, in the world, won't I see you again?"

"Yes, but—"

An angular giant, pale-faced, of imperious profile, strode past through the hall.

"My father," she whispered. "I'll go to him now—and come here, if I can—just after dinner."

She was gone.

### IV

For a long time I have been sitting here, trying to picture in words what those two hours (until dinner was over) meant to me: I remember hearing voices, but not words; hearing and smelling China as the stars cleared overseas somewhere behind the hotel, an Englishman caned his rickshaw-coolie—but with none of these matters had I any direct relation. Mine was just a child's unquestioning receptivity to impressions. The whole man, Thomas Ryerson, was transfixed in hopeless horror at the thought of Mary Romany going away. It did not occur to me to ask for anything. It did not seem that she wanted me to follow her. I did not count it strange that she had failed to introduce me to her father. I was afraid of myself with her, as I had never been with another living creature.

All was the result of this realization: She has found me less than she hoped; the man has spoiled her memory of the boy. Shame and self-hatred surged through me as I recalled the years. She had not missed upon my face the absence of achievement.

There was no rivaling ambition in my nature to temper the force of romance. Most men have their relation to the world firmly established at twenty-five. Failing in a certain love they can fall back upon their work. There was no such sound bridge of life-interest for the dilettante which I had been.

I haunted the halls, while the guests moved in and out of the dinner-room. When Mary Romany came toward me from a far stair-way, a film wavered before my eyes. The tans and browns of the lamp-lit hall seemed an endless intervention, one of the dusty waste places of the earth, stretching between my heart and her hill.

The music-room was unlit. She crossed to the piano. No word had been spoken. . . . How many men, I wonder, have stood behind their love lady thus—in a darkened room? But the world's drawn sword was between us. . . . Waiting for a train, a voice, a telegram, for someone's step, I am restless and uncentred, held in the concentration of passing time. This meeting of ours, so vital in possibility, so intensely formative, a thousand things to say—and yet, I was tranced before the inevitable moment in which she would leave the room. What an agony all together is ardor, before it becomes low of the soul.

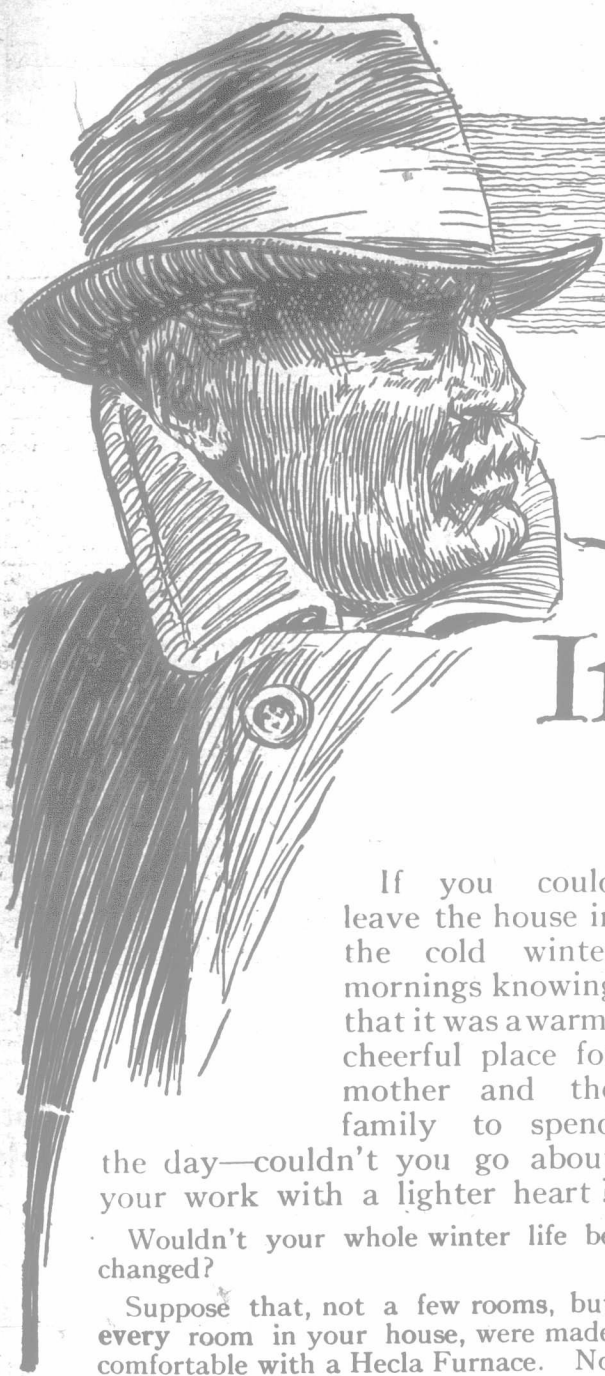
I saw the contour of her shoulder in the shadow, as vision grew penetrative in the dark. I wanted to kiss the seam of her dress just there, but I remembered her disappointment in me. She played a little—something from that same colorful perfect thing of the afternoon. Almost, for an instant, the playing broke the self-consciousness in which was locked my heart's truth. A suffusion of orange light filled the place. I leaned toward her in the wonders of emancipation, but Chopin's mood changed under her hands. Passion turned to melancholy. The Master's soul had seen the nakedness of desire; and in a storm of majestic sorrow, turned upon the artist from the inner life of things, he had suddenly become a voice of the shallow potencies of flesh. . . .

She arose and walked to the window. I do not know how long, but there was cruel silence. Again and again our gaze turned from the harbor, to each other. Once I caught the starry surface-lustre of her eyes as she turned. . . . A missionary was intoning in a low monotonous way on the richness of the Scriptures. His low fluency became a part of the silence. His thoughts merely stirred the old puzzles of childhood. At another time I would have been amazed at the bleakness of his orthodoxy. His thoughts were but sage-brush of the barrens. I forgot him for intervals, as I forgot the harbor-lights and the slopes to the water front.

So near Mary Romany stood. I heard her breathing, and the beating of her heart. And yet we had no words. At the end of my days, I shall count those among the most dramatic of life moments. . . . Something the missionary said now changed from an imperceptible

Continued on page 526.





# If that fine little house were only warm!

If you could leave the house in the cold winter mornings knowing that it was a warm, cheerful place for mother and the family to spend the day—couldn't you go about your work with a lighter heart?

Wouldn't your whole winter life be changed?

Suppose that, not a few rooms, but every room in your house, were made comfortable with a Hecla Furnace. No matter how early you might tumble out in the morning you would have warm rooms to dress in. There would be no waiting around for the house to become habitable. A few minutes attention to your Hecla in the morning would provide warmth and comfort for the whole day.

Cold floors, drafty halls, and dreary sleeping rooms with their dangers of colds and chills would be gone forever. Your home would be a home twelve months in the year from the day you installed your Hecla Heating System.

Instead of being shut off from the world all winter, your home would attract your friends and make life gayer for your family. Add winter comfort to the charm of country life, and the city would lose its attraction for your sons and the hired help. With Hecla heating your home would be the best place on earth for you and yours.

### An Old House Can Be Heated

Without making costly alterations to your house, without a large initial cost, and without much increase in your coal bill you can have a Hecla Heating System in your present home.

Consider now, that your old home can be made modern for anywhere from \$90 to \$150—surely a small investment in happiness and cheer for your family.

Consider that with a few tons of coal a Hecla Furnace will make your home as cosy as the finest city home with its costly heating plant. Some farmers tell us that they use only 3½, 4 or 5 tons of coal during the winter. And if you have wood to burn you can do with very little coal except in mid-winter, when fires are kept constantly burning. The Hecla burns either fuel equally well. It has a large door to take rough chunks of wood. It has a wood grate that slips in or out without the need of bolts or screws.

### Buy Comfort—Guaranteed

A little thought on the subject must clearly show how easy it would be to secure the comfort that would make such a world of difference in your home life. How little action is needed on your part to make the change from winter dreariness to winter cheerfulness?

It is not as though you took any chance in the matter. Hecla Furnaces are guaranteed to heat your home. We plan the heating system and take full responsibility for it. The men who represent us are chosen men. They have our experts to aid them. And they have our guarantee behind every heating job they do. This means that you may be sure of full satisfaction, no matter what the style or plan of your house.

### Save One Ton in Seven

And in addition to a guarantee of thorough heating, the Hecla has other fine features that you will surely want. Some of these cannot be obtained in any other system, because they are Hecla patents.

First: Hecla owners save one ton of coal in seven, because the Hecla has a

patented Fire-pot with a triple heating surface. This is the famous STEEL-RIBBED Fire-pot—the greatest single coal-saving feature ever invented.

### Mellow Air—No Gas, No Dust

Second: No gas or dust from the fire can ever escape through the warm air registers. This we can guarantee because the Hecla has FUSED JOINTS that can never open and allow leakage into the warm air flues. Nor can gas escape from the doors of the Hecla. There is an automatic gas damper that draws off all surplus gas.

Third: Dryness in the air which is found even in the most costly heating systems, is guarded against in the Hecla. The moisture supply is so liberal that Hecla Heating is as mellow as June air.

The Hecla can be checked down to hold the fire for hours without waste. Close fitting doors and dampers, carefully made parts, fine materials, rightly proportioned checks and drafts, all combine to save coal. The Hecla can be shaken down with four separate grate bars, so that no live fire need come through with the ashes. These points are all daily money-savers that make big economies in the course of the season.

# HECLA A Clare Bros.' FURNACE

### Make Plans for the Time When You Will Heat Your Home

Any one who would like to know what it would cost to heat his house with a Hecla can have the information for the asking. It will not matter to us that you are not yet ready to install a heating system. If you feel the need of one and would like to know what your outlay would be, we have men who are employed to furnish you with estimates, full details and blue prints if you want them. This is done without cost to you.

You will certainly be interested in studying the question of heating from the literature we send. Our booklet, "Comfort and Health," is a very thorough treatment of the subject, and we will be glad to send it free to anyone who wants it (and who mentions The Farmer's Advocate). Writing will not place you under any obligation whatever, and will bring you by an early mail the means of planning out for yourself the best way of securing comfortable and economical warmth in your home.

CLARE BROS. & COMPANY, LIMITED

PRESTON, ONTARIO

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page 526.

**POULTRY AND EGGS.**

**A FEW** choice White Wyandotte cockerels at \$2.50 each. Order early, they won't last long at that price. W. B. Powell, Galt, Ont.

**A FEW** nice Golden- and Silver-Laced Wyandotte cockerels for sale. Winners at Mitche and Goderich Winter Shows; prices right. Peter Daley, Box 12, Seaford, Ont.

**ARE YOU INTERESTED?**—Eggs from winners at Panama Pacific Exposition, Madison Square Garden, Guelph, Ottawa. Brahmas Spanish, Partridge Rocks, Partridge Wyandottes, White Leghorns, Barred Rocks (Ontario Agricultural College strain), Indian Runners, Pekin Ducks. War Prices. John Annessey Tilbury, Ont.

**BEULAH** Farm White Wyandottes have proved by their record to be the best laying strain in Canada. Storrs College record, 247. Missouri record 220. Hatching eggs from \$2 per setting, making list free. McLeod Bros., Box A, Stony Creek, Ont.

**BEAUTIFUL** White Rocks. The worth while strain. Our breeders are hens which have proven themselves worth-while as trapped nest pullets. Eggs \$2 the 15. J. A. Butler, M. D., Newcastle, Ont.

**BARRED ROCKS**, Buff Orpingtons and White Wyandottes. True bred-to-lay strains, the result of years' selection. Eggs, one dollar per fifteen. Send for Circular. "Ingleside Farm," Rural 1, Ancaster, Ont.

**BRED-TO-LAY** Barred Rocks, O. A. C. and Guild's strains, unexcelled winter layers. Eggs one dollar per fifteen. Also limited number settings of world record Tom Barron strain white Leghorns, imported direct. Two dollars per fifteen, satisfaction guaranteed. L. A. Pearson, No. 1, Thamesford, Ont.

**BUY EGGS**—For hatching from the money making kind of Barred Rocks, White Wyandottes and Buff Leghorns. Our selected breeding pens are from America's best laying strains and will produce strong healthy chicks of superior quality and pullets that will be early and persistent layers. Your order will have the benefit of our fifteen years' experience in poultry breeding. Eggs \$1.25 fifteen, \$6.50 hundred. Safe delivery and satisfaction guaranteed. Catalogue free. Charles Watson, London, Ont.

**CLARK'S** Orpingtons, buff and white, exhibition and laying strains. Hatching eggs, exhibition \$5 per 15, others \$1 and \$2 per 15, 9 chicks guaranteed; \$6 per 100. A few good cockerels at \$2 and \$3 each. Catalogue free. J. W. Clark, Cedar Row Farm, Cainsville, Ont.

**CHOICE** Indian Runner Ducks from imported stock. Only two dollars each, five dollar trio; also Large Toulouse Geese. S. R. Copland R. 1, Harriston, Ont.

**EGGS** for Hatching—Nearly all varieties poultry, ducks, Bantams; eggs dollar-fifty per fifteen, eight dollars per hundred. Won over 1,000 prizes, medals, specials at leading shows 1915-16, including Canadian National, Toronto, Guelph Winter Fair. Geese, turkey, four dollars dozen. Nineteen years breeder. Motto: square dealing. Luxton & Sons, Mt. Forest, Ont.

**HAVE** you heard of the Table Egg Duck? Here is a new asset for the farm. Write for our circular, it will surprise and interest you. W. Staebler, Box 68, Gananoque, Ont.

**LAYING** strain Barred Rocks, Cockerels, 75¢ dollars, pullets one-fifty each. Rouen drakes, two dollars. Central Poultry Yards, Colborne, Ont.

**ONTARIO** Agricultural College strain of bred to-lay Barred Plymouth Rock eggs, \$1.00 per 15. J. P. Hales, Ontario Agricultural College, Guelph, Ontario.

**REGAL** White Wyandottes, Champion winner New York State Fair, ten years in succession Big, vigorous, snow-white cockerels, \$2, \$3 and \$4 each bred from heavy laying females. Pullets, \$ and \$3 each. Eggs \$3 per setting. Satisfaction guaranteed. Send for catalogue. John S. Martin Drawer F, Port Dover, Canada.

**SINGLE-COMB** White Leghorns "Roseheat Strain" of beauty and utility, bred-to-lay Eggs one-fifty per fifteen, \$7 per hundred. Chick fifteen dollars per hundred. Fertility and liv chicks guaranteed. Roseheat Poultry Farm Richmond Hill, Ont.

**TRAP-NESTED** White Leghorns. Certified egg record with every bird. Eggs, chicks, for sale. Welland View Poultry Farm, Welland, Ont.

**WHITE WYANDOTTE** Cockerels, bred from record laying hens—big, blocky, stay-white birds—\$3 and \$5 each. Eggs for hatching, \$1.7 per 13. John M. Bell, Cataract, Ont.

**WHITE** Wyandottes—Hatching eggs from grand pen of bred-to-lay strains—especially fed for vitality, \$1.50 for 15. Orders now being filled. E. Akerman, Bainsville, Ont.

**WHITE** Leghorns, list at Guelph and Ottawa. Mating list free. W. T. Ferguson, Smith's Falls, Ontario.

**White Wyandottes** I have a very choice lot bred from high class stock. The kind that produces both eggs and meat. Eggs one dollar per setting. Herbert German, Box 141, St. George, Ont.

**Free** to stockmen and poultrymer our 80 page illustrated booklet on feeding; how to construct house which will accommodate 100 hens; gives dimensions, and measurements of every piece of lumber required. Deals with the common diseases of stock and poultry, and the remedies. Tells how to cure roup in four days. Contains full information about Royal Purple Stock and Poultry foods and remedies.

THE W. A. JENKINS MFG. CO. London, Canada

**COLLIN'S HATCHER AND BROODER**

**\$8.50** Follows nature—hatches more eggs—each machine holds 50 eggs—has outside thermometer—can be used any place in home or buildings—guaranteed money back if you don't like it—send at once.

Free CATALOGUE COLLINS MFG. COMPANY, 417 Symington Ave., Toronto.



**The Road of Living Men.**

Continued from page 524.

tugging to a sharp irritation, and his listener, in a low admirable voice, slightly alien, exclaimed wearily:

"My dear Elder, you choose beauty that is clouded, and strength that is cruel—listen:

"By the rivers of Babylon, there we sat down, yea, we wept when we remembered Zion. We hanged our harps upon the willows— . . . Don't you see, can't you see that is beauty? For they that carried us away captive—required of us a song, and they that wasted us requir'd of us mirth—"

whispered. The mystic beauty of the words brought me close to her heart, as for an instant the romantic spell of Chopin had done, but a step in the hall disordered all—a light and agile step, with a queer ill-balance about it. The end had come.

"But in China, in the world, won't I see you again, Mary Romany?"

She caught my face between her hands, drew my lips to hers. "Oh, Ryerson-boy, I cannot forget you.

. . . Yes, sometime again we shall come together—when we have each done our work—"

The step had neared very quickly. The figure now obtruded in the doorway—and drew us to the light.

A tall, delicate youth with a high, white forehead, black wavy hair, and a fresh red mouth. His slender figure swayed strangely, as if shod in moccasins. So real was this impression that I glanced at the black polished leather of his boots. There was hard glitter about his eyes, something bird-like about the whole being, or better yet, something of a satyr, brilliant emptiness. Nothing from me went to him, and nothing came, as our eyes crossed. I heard the name "Santell," and touched a limp, moist hand. Mary Romany's face was flushed; her hand held out to me.

"Come on, Mary," Santell said in a thin, queer voice.

She was gone, but something sustained me. My emotions were burned out; old weary forces were gone from the heart; yet a new breath of life had come. I hastened out of the hotel, and up the road toward the terraces—the spirit of youth in my limbs. I could live. I could alter all life. Anguish of separation could not conquer this sustaining, the unknowable of Mary Romany, nor the mystery of Santell. Only once in a man's life such a kiss comes.

The moon looked over the mountain. So little of flesh did I seem, that I was sure I could climb a moonbeam, straight to those silvered peaks.

To be continued.

**Suits Free.**

Remarkable Cloth that Won't Wear Out! Now readers, would you like a suit or pair of pants absolutely free! A most astounding offer is being made by a well-known English firm! They have discovered a remarkable Holeproof Cloth. You can't tear it! Yet it looks just the same as \$20 suiting. You can't wear it out no matter how hard you wear it, for if during six months of solid, hard grinding work every day of the week (not just Sundays), you wear the smallest hole, another garment will be given free! The firm will send a written guarantee in every parcel. Think readers just \$6.50 for a man's suit and only \$2.25 for a pair of pants sent to you all charges and postage paid and guarantee for six months' solid grinding wear. Now, don't think because you are miles away you cannot test these remarkable cloths, for you simply send a 2 cent post card to The Holeproof Clothing Co., 56 Theobalds Road, London, W.C., Eng., for large range of patterns, easy self-measure chart and fashions. These are absolutely free, and postage paid. Send 2 cent postal card at once! Mention "The Advocate."

**Sale Dates Claimed.**

- March 29—Western Ontario Consignment Sale, London, Harry Smith, Hay, Ont., Manager.
- March 29—Peter Beaver, Guelph, Ont., stallions.
- April 12—Edmund Baker & Sons Winchester, Ont., Holsteins.
- April 13—A. & G. Forbes, West Montrose, Ont., dual-purpose Shorthorns.
- April 19—James Benning, Williams-town, Ont., Ayrshire.

**Buffalo Markets.**

Continued from page 613.

Best Canadians, \$8.50 to \$8.75; fair to good, \$8 to \$8.25; common and plain, \$7.50 to \$7.35.

Butchering steers.—Choice, heavy, \$8.50 to \$8.75; fair to good, \$7.75 to \$8.25; best handy, \$8.50 to \$8.75; common to good, \$7.50 to \$8.25; light, thin, \$7 to \$7.25; yearlings, prime, \$8.50 to \$9; yearlings, common to good, \$8 to \$8.25.

Cows and Heifers.—Prime weighty heifers, \$7.50 to \$8; best handy butcher heifers, \$7.25 to \$7.75; common to good, \$6 to \$7; best heavy fat cows, \$6.50 to \$7; good butchering cows, \$6 to \$6.50; medium to fair, \$5 to \$5.75; cutters, \$4.25 to \$4.75; canners, \$3.25 to \$4.

Bulls.—Best heavy, \$7 to \$7.50; good butchering, \$6.50 to \$6.75.

Stockers and Feeders.—Best feeders, \$6.50 to \$7; common to good, \$6 to \$6.25; best stockers, \$6.25 to \$6.50; common to good, \$5 to \$5.75; good yearlings, \$6.25 to \$6.75; common, \$4 to \$4.75.

Milchers and Springers.—Good to best, in small lots, \$75 to \$90; in car loads, \$60 to \$70; medium to fair, in small lots, \$45 to \$55.

Hogs.—Receipts last week were light, and notwithstanding the falling off in the supply, prices were lower. However, Buffalo held a good margin over all other points. Monday the top was \$10.50, bulk sold at \$10.40, and pigs landed mostly at \$9.25. Tuesday values on better weight grades were ten to fifteen cents lower, Wednesday the market reacted, jumping five to ten cents over Tuesday, Thursday the market dropped back to Tuesday's basis, and Friday there was a further decline of twenty to twenty-five cents, range in prices on best grades being from \$10 to \$10.10, with a few selling at \$10.15.

Pigs were held steady all week, bulk going at \$9.25. Roughs the fore part of the week brought up to \$9.40, and Friday they dropped to \$9 and \$9.25, while stags went from \$7.75 down. Receipts last week were 19,700 head, being against 25,082 head for the week previous, and 20,600 head for the same week a year ago.

Sheep and Lambs.—Last week opened with top lambs selling from \$11.35 to \$11.50, and culls went from \$10.50 down. After Monday receipts were light and the result was a higher trade, top lambs selling on Friday's market as high as \$12, it being the fourth time this year that the latter price was paid on the Buffalo market. Best yearlings offered the past week sold at \$10.35, and sheep, which were scarce, sold as high as any previous time in the history of the local yards, range on top wethers being from \$9 to \$9.25, while ewes went from \$8.50 down. Receipts last week aggregated 21,500 head, being against 16,962 head for the week before, and 15,350 head for the corresponding week a year ago.

Calves.—Approximately 2,425 head were marketed last week, as compared with 2,272 head for the week previous, and 2,050 head for the same week a year ago. Monday, under a red-hot demand, top veals sold generally at \$13, with a few reaching \$13.50, and the next three days no sales were made above \$12.50. Demand Friday, by reason of Jewish holidays, was light, and while best veals opened at \$12, with a few \$12.25, during the late session it was hard to place the top kinds above \$11.50. Cull grades \$9.50 down, and the spread on fed calves was from \$5 to \$6.

**Bulletins Recently Published.**

Sweet Clover—by H. L. Fulmer. Requests for this bulletin should be addressed to the Dept. of Agriculture, Toronto, Ont. The Control of Potato Diseases—H. T. Gussow, Dominion Botanist. The Control of Cut Worms in the Prairie Provinces—E. H. Strickland. Fruit Tree Diseases of Southern Ontario—W. A. McCubbin. For the latter three bulletins requests should be sent to the Department of Agriculture, Ottawa.

**Early Seed Potatoes**

Write for prices. D. MAYNARD. Phone 204 Bonnie Brook Farm, Leamington, Ontario

**WANTS & FOR SALE**

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

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

**ALBERTA** improved and unimproved farms 100 acres up, low prices and very easy terms, also colon's lot on tracts. Write for list and for full information, G. D. Carter and Company, Edmonton, Alberta.

**EXPERIENCED** man wants position on farm. References. Apply 252 Carlton St. Toronto.

**160 ACRES** one mile south of city of Galt dairy or grain farm, stone house, two bank barns, latest improvements. Archie McPherson R.R. 5, Galt.

**O. A. C. 72 AND REG. BANNER OATS** and O. A. C. 21 Barley for sale. Out of list prize standing crop and grown from 1st prize seed. GEO. D. FLETCHER, R. R. 1, Erin, Ont.

**O. A. C. No. 72 Oats, Alsike No. 1.** Grown from prize-winning seed under rules of C. S. G. A. Oats are clean, plump, free of wild oats and noxious weeds. Govt. Inspector allowed 94% score, and reports general conditions of farm first-class. Alsike, almost Extra No. 1, won 3rd prize at Guelph. Samples and prices on request Oscar Klopp, Zurich, Huron Co., Ont.

**PATENTS AND LEGAL** FETHERSTONHAUGH & CO., PATENTS Solicitors—The Old Established Firm. Head Office Royal Bank Building, Toronto, and 5 Elgin St., Ottawa, and other principal cities.

**Journalism**—Course by mail in newspaper correspondence, reporting, preparing special articles, editing, etc., in charge of experienced journalist. Write Canadian Correspondence College, Limited, Dept. E.E., Toronto, Canada.

**J. VICAR MUNRO, Architect** Designs Churches, Homes and Schools. Reasonable charges—no extras.

**54 Bank of Toronto, London, Canada** For Sale High grade White Cap Yellow Dent seed corn, \$2.00 per bushel. F. O. B.

**J. A. King, Wardsville, Ont.** **O. A. C. No. 72, Seed Oats**

Improved under the inspection and direction of the C. S. G. A. Government tested. Free from impurities. Germination test 99%. Grown from treated seed; 90c. per bus. l.o.b. Gormley. Bags included. Write for samples.

**R. F. KLINCK** R. R. No. 2, Gormley, York Co., Ont.

**No. 66** 2,000 lbs. capacity of heavy wheels and drop lever.

**NOW** is the time to order scales. Special sale till May 1st. Write for particulars.

**C. Wilson & Son** 45 Esplanade St. E., Toronto



In a **Mutual Company** all of the surplus is credited to the policy-holders—not 90% or 95%, but the whole.

**Gossip.** Have you written to A. & G. Forbes, West Montrose, Ont., for a catalogue of their Shorthorn sale on April 13? Twenty females and six males of the dual-purpose kind are being offered. See the advertisement in this issue.

This is the last call for the Western Ontario Consignment Sale of Shorthorns to be held in London, Ontario, on March 29. The cattle will be stabled and sold at the Fraser House stables. It is easy to get in, and it is easy to get out of London. Come and see some good stock, even if you do not buy. There are 35 young bulls and 30 high-class heifers to be sold at the bidder's price. Many of the bulls are from Record of Performance cows. The heifers are mainly of first-class Scotch breeding and bred along dual-purpose lines. Harry Smith, Hay, Ontario, is manager of the sale, and Capt. T. E. Robson will be auctioneer. Catalogues are being distributed, which explain the breeding and character of each lot. See the advertisement in this issue, and make arrangements to attend.

Six Weeks and Early Chios from hand selected stock, true to name and free from rot

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**CANNER OATS**  
Out of 1st prize  
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R. I. Erin, Ont.  
No. 1. Grown  
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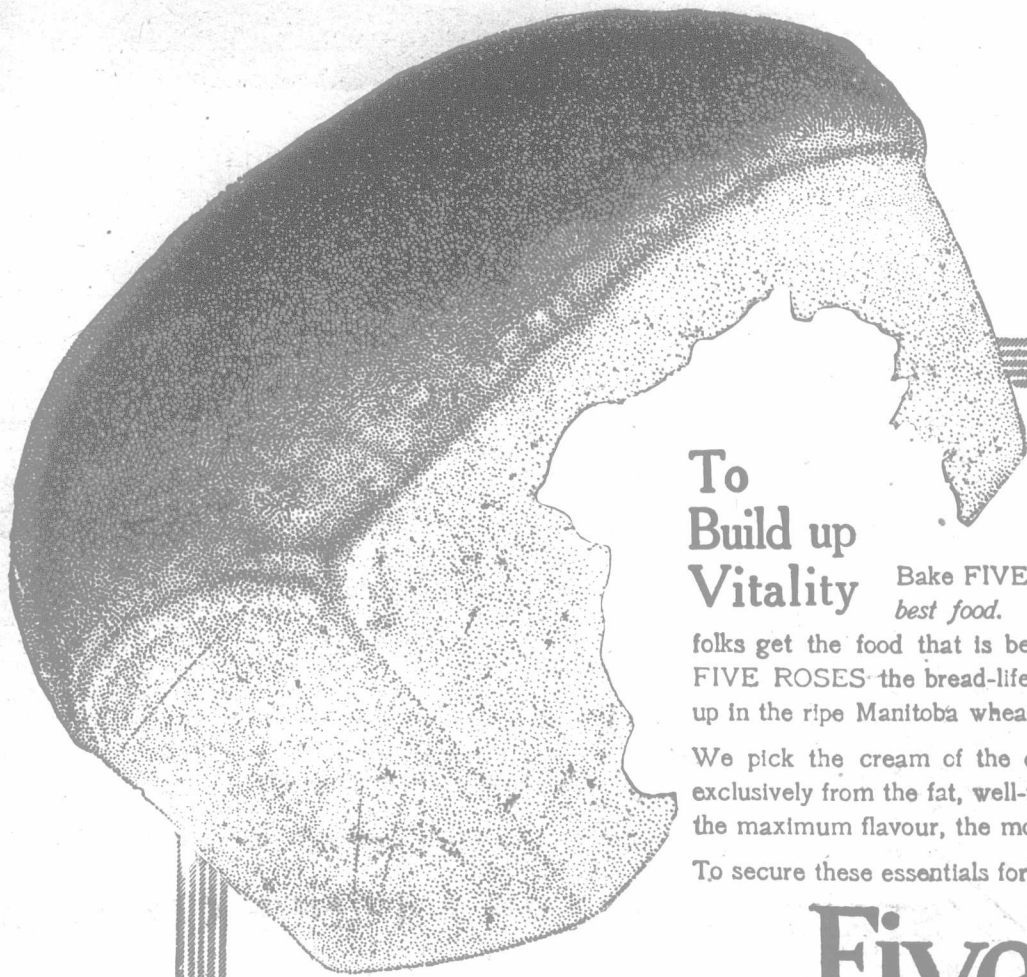
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### To Build up Vitality

Bake FIVE ROSES flour into bread—our cheapest and best food. You who govern the meals, see that your folks get the food that is best for them. It is for you that we put into FIVE ROSES the bread-life, the energizing nutrition so plentifully stored up in the ripe Manitoba wheat.

We pick the cream of the crop for FIVE ROSES users. We mill it exclusively from the fat, well-fed wheat kernels because these alone contain the maximum flavour, the most muscle-building, blood-forming elements.

To secure these essentials for your bread, use

## Five Roses<sup>★</sup> FLOUR for Breads-Cakes Puddings-Pastries

Your folks are well-equipped for work or play when you plan your foods on the FIVE ROSES basis.

Not merely more substantial, it makes bread more digestible. Next to pure milk comes bread in completeness of digestion. Due to the fineness of FIVE ROSES, the texture of all your breadstuffs, cakes, biscuits, etc., is ever so much finer, porous, yielding.

The digestive juices act more surely.

The sooner you ask for FIVE ROSES, the sooner will your folks appreciate why people call good bread "the staff of life".

See that you are given FIVE ROSES at your dealer's.

Packed free from contact with human hands, in bags of 7, 14, 24, 49 and 98 lbs.; also barrels of 98 and 196 lbs.

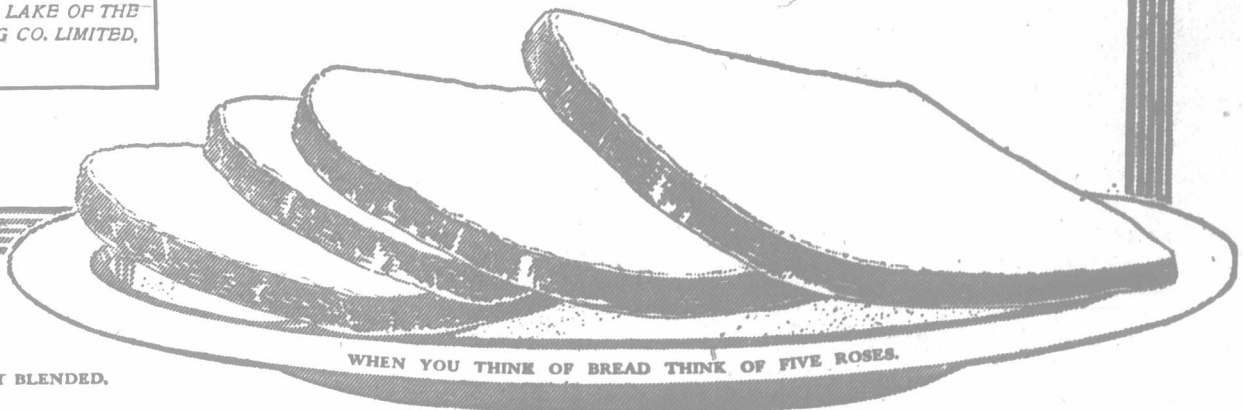
### BREADMAKING MADE EASY

The famous FIVE ROSES Cook Book removes mere "luck" from bakesdays. It tells plainly how and why. It is the beginner's insurance against disappointment. Gives complete, understandable directions on making bread.

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Over 25 pages of recipes, hints, wrinkles on the art of making dainty breadstuffs. A wonderful chapter on Sandwich making. Also over 200 cake recipes, and hundreds of directions for pies, puddings, rolls, biscuits, etc. So essential that over 200,000 women have already written for this 144-page manual. Sent for 10 two-cent stamps.

Address Dept. H. LAKE OF THE WOODS MILLING CO. LIMITED, MONTREAL.



WHEN YOU THINK OF BREAD THINK OF FIVE ROSES.

★ Guaranteed NOT BLEACHED—NOT BLENDED.

### Gossip.

#### Prince of Wales as a Pony Breeder.

Editor "THE FARMER'S ADVOCATE":  
The fact that the Prince of Wales exhibited Dartmoor ponies at the National Pony Society Show in London, gave great satisfaction to owners and lovers of our smaller types of equine stock. The event was noteworthy for two reasons. The Dartmoor is one of the oldest breeds of Moorland, Mountain and forest ponies, and the Royal stud on Dartmoor represents the Prince's first enterprise in stock breeding, although he has since gone in for Shorthorns, Shires, Devon cattle and sheep, and Clydesdale horses. His pony stud, however, was established on its present basis five years ago, with the object of preserving the

type, purity and prepotency of the breed. The stock numbers about 40 head, chosen strictly to standard. The stud is kept on the moor at an elevation of more than 1,300 feet, all the year round, and its only hand feed consists of a little hay when there is snow on the ground.

The Prince is interesting himself in the Devon pack horse, the breed that once carried England's merchandise on its shoulders before the days of the coach. The breed is precious nigh extinction.  
ALBION.

Attention is directed to the advertisement of A. & G. Forbes, West Montrose, Ont. They will hold an auction sale on April 13 at which will be sold 20 females and 6 males of the Shorthorn breed, including the noted stock bull, Bullrush.

### Questions and Answers.

#### Miscellaneous.

##### Hens Do Not Lay.

We have 80 hens, 20 White Wyandottes, 20 Rhode Island Reds, and the rest White Leghorns, with a roosting pen 14 feet by 20 feet, in which it has not frozen but twice this winter. The scratching shed is a comfortable shed, dry, with 12 inches of straw on the ground floor, 20 feet by 20 feet. They are fed three quarts of wheat, 2 quarts of oats in the morning, at noon they get 5 quarts of boiled potatoes and bran mixed. At night they get 3 quarts of corn, and have meat scrap with bran and shorts mixed at noon twice a week, with alfalfa leaves, and an oat sheaf twice a week. They have access to road dust with disinfectant mixed in it all the time. They are

cleaned out every day where they roost, and are only laying about 12 to 16 eggs per day. What is the matter?  
ENQUIRER.

Ans.—We cannot say. We have had several complaints like this recently. Perhaps there is something in the season or in the strain of the hens. Do they get plenty of oyster shell and grit?

##### Bran for Cows—Feed for Hogs.

1. Is Manitoba bran inferior to Ontario bran for feeding to cows?  
2. Which is better, shorts or middlings for feeding to pigs?  
T. J.

Ans.—1. We cannot see how there can be very much difference in the feeding quality of bran. It is all supposed to come up to a certain standard of analysis. Manitoba bran should be equal in quality to Ontario bran.  
2. Middlings.

# NAIL Your Fence Posts Into the Ground!

FARMERS used to skim their milk by hand. Now they use the cream separator. You used to pull up your stumps or burn them. Now you blast them out with powder. You used to carry water by the pailful. Now a gas engine pumps it, grinds your corn, and does innumerable other chores. But lots of you still follow the old-fashion of fence building. You dig a hole three times too big for a wooden post. Then stick the post rot to pieces up the hole, tamp it down, and have the post rot to pieces in the course of a few years, and have to go through the whole performance again. Why do it?

You can drive a line of STANDARD STEEL TUBE FENCE POSTS almost as easily as you can drive a row of nails. With a boy to help you and a barrowful of these

light, space-saving fence posts you can cover as much ground in a short day as three men and a boy could cover in a long day.

They cost less; less per post to buy and only one-third of the labor to erect.

They last longer, as they never rot and cannot burn. They are stronger. They are cleaner. They give you protection against lightning.

They are modern fence posts. Why stick to the old when the new is so much better and cheaper. Standard Wire Fencing is full Government No. 9 Gauge, thoroughly galvanized and absolutely guaranteed.

Standard Posts and Standard Fencing are the ideal combination for any kind of fence on any kind of ground. Write us for full particulars and our price list.

You cannot afford to overlook either our product or our prices.

TEAR OFF, SIGN AND MAIL — — — —

## STANDARD TUBE & FENCE CO., Limited

Woodstock, Ontario

Gentlemen,—Please send me your catalogue price list and special folder on Standard Tube Posts.

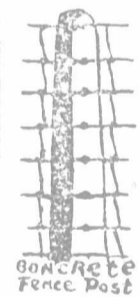
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### Concrete Fence Post Molds

(Makes 100 posts a day)



Concrete Fence Post

Our regular price is \$15.00 each, but during next 60 days we are making a special offer to progressive farmers.

Our offer: Send us only \$7.50 (half price) and we will ship you our Concrete Fence Mold, with instructions for using. We cannot sell more than one to each farmer at this price, but two or more farmers may order and have shipped together.

Write to-day enclosing \$7.50 and get your mold at half price as we intend to withdraw this offer as soon as first 500 are sold.

West Lorne Motors Limited  
West Lorne, Ont.

### Questions and Answers.

Miscellaneous.

#### Corrosive Sublimate as a Disinfectant.

1. Is corrosive sublimate dangerous to use for syringing out a bull's sheath? What strength should be used?
  2. Is there anything that would take the place of it?
- Ans.—1. If corrosive sublimate is used in the proportion of 30 grains to one gallon of water it is not considered dangerous to use for the purpose mentioned. However care should be taken in handling even a diluted solution of corrosive sublimate as it is a strong poison.
2. Carbolic acid, one part to 100 parts of water, or creolin of the same strength may be used, but some breeders claim to get better satisfaction from using corrosive sublimate for disinfecting purposes.

#### Sweet Clover.

1. Will the white blossom sweet clover do well on clay land which is a little rolling?
  2. Does it make good hay? How often may it be cut providing it does well?
  3. Would you advise sowing it with a nurse crop of oats or wheat or will it do better if sown without a nurse crop?
  4. How many pounds of seed would you advise to sow per acre?
- Ans.—1. We have seen some very good stands of white sweet clover on the kind of land mentioned.
2. Providing the seed is sown thickly and the clover is cut before it becomes woody and then properly cured it makes very good hay. As a rule two crops may be cut, sometimes a third but it is not advisable to cut too late in the season. Tilt the cutting bar so it will not cut too close to the ground.
  3. If the seed is sown with a nurse crop, it would be advisable to sow with either wheat or barley in preference to oats. It would possibly be wise to sow even the barley or wheat thinner than would be done if the clover seed was not to be sown. Sweet clover will probably do better if sown on well prepared soil, without a nurse crop.
  4. If sown without a nurse crop use

about 20 pounds of seed per acre, or slightly less seed may be used with a nurse crop.

#### Salt for Pigs—Milk Scales.

We have a cow 4 years old which freshened on January 3, but is not doing well. She is a hearty eater and her bowels work regularly but yet she does not put on flesh, nor give a large quantity of milk. If anything she is decreasing. She only averaged 26 lbs. of milk a day last week. She is well cared for. We feed silage, meal, (a mixture of wheat, oats, and corn,) sugar beets, alfalfa hay and plenty of fresh water, besides salt twice a day. We have also been giving her a "slop" of about a pint of linseed oil cake and a pint of beet meal mixed in a pail of water twice a day. Now she even refuses that.

1. What do you think is the matter, and what would you advise doing for her.
  2. Is salt good for fattening pigs?
  3. What sort of scales would you recommend for weighing milk? I am using one of these spring-balance scales which register up to 26 lbs.
- Ans.—1. Evidently there is nothing wrong with the health of the cow, and with the variety of feeds which are fed it would naturally be expected that she would either put on flesh or produce a good flow of milk. We doubt if any better feeds could be fed unless bran was given in place of corn. The amount fed daily is not given but we presume that she is receiving sufficient feed. The linseed meal and beet meal fed in the manner you are doing are no doubt distasteful to the cow, and would possibly be relished more if fed dry. Every cow has her own peculiar individuality. Some make good use of the feed they receive while others do not appear to do so. We are sorry to say that there are many cows that do not give even 26 lbs. of milk per day nor are they in good condition. The flow of milk naturally decreases the longer a cow is milking.
2. Pigs require a little salt, but it is believed that salt should be placed in a separate trough rather than fed with the grain.
  3. A spring balance or a circular dial scale which weigh up to 60 lbs. are the kinds most used.

EVERY FARMER SHOULD HAVE A

## MARTINDITCHER

PRICE ONLY \$47.50

AND ROAD GRADER

Own your own Ditching Machine

Do your draining when you need it. Send to-day for full particulars of this machine. 1854

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Use a Page Governor Pulley

Highly satisfactory to connect the gasoline engine to Cream Separator, Washing Machine, etc. Absorbs engine vibration, gives the desired speed, starts the Separator gradually—as by hand. All metal, no levers, very strong, simple. Price \$7.50 F.O.B. Toronto or freight prepaid if shipped with an engine.

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### "1900" Gravity Washer

Sent free for one month's trial. Write for particulars.

"1900" WASHER COMPANY  
357 Yonge Street Toronto, Ont.  
(Factory, 79-81 Portland St., Toronto)

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Write for free catalogue, self-measurement form and patterns. Address:

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Mention Farmers' Advocate.

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Registered Patent Solicitor and Attorney,  
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at a small cost by using our Attachable outfit. FITS ANY BICYCLE. Easily attached. No special tools required. Write today for bar-gain list and free book describing the SHAW Bicycle Motor Attachment. Motorcycles, all makes, new and second-hand, \$35 and up.

SHAW MANUFACTURING CO.  
154-179 GALE STREET, KANSAS CITY, MO.

### Look Out For

The Imperial Life Assurance Company

Its advertisement in next week's issue entitled

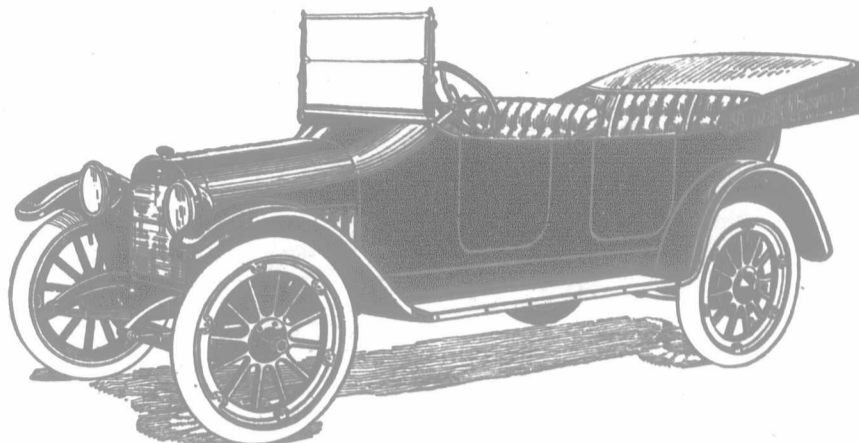
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It has an interesting message for YOU

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**A Six  
Cylinder  
5-Passenger  
For \$1110**

(F.O.B. OSHAWA)



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**REAL SERVICE**

McLaughlin Service is assured by twelve branches conveniently located. Hundreds of Agencies from Coast to Coast. One million dollars invested in Branch Houses and equipment.

Large stocks of parts carried for all models at Oshawa and at the branches.

Forty-seven years of manufacturing and marketing of vehicles for Canadians.

Thorough knowledge through experience of Canadian needs.

Consider carefully the SERVICE you buy—it is very important and necessary.

This model was designed and built by us, especially to meet the requirements of Canadian farmers.

It is just the right size for easy handling—not too large nor too small.

A woman can drive it easily.

It is solidly built to stand the wear.

It has powerful "Valve-in-Head Motor" developing from 30-35 H.P.

Has genuine leather upholstery, hair filling and deep spring cushions.

Has electric starting and lighting system—vacuum feed—is furnished complete to the smallest detail.

Remember "Every One A Six" and that the McLaughlin Co's. 47 years' experience in business with Canadian Farmers is behind every car.

Write to-day for free booklet "Farm Life and Freedom"

1846

**THE McLAUGHLIN MOTOR CAR CO. LIMITED OSHAWA ONT.**

12 Branches Throughout Canada

**Questions and Answers.**  
Miscellaneous.

**Impaction of the Rumen—Indigestion in Cattle—Seed Potatoes From a Blighted Field.**

I had a cow which became badly bloated, and I operated with a knife to allow the gas to escape. She lost her appetite and I gave her one pound of Epsom salts, but they did not seem to act, so I gave her four or five more doses of salts and two quarts of oil, but after ten days she died. On open-

ing her I found the stomach full of soft slushy food.

1. What was the trouble?
2. What should I have given her?
3. What is the best remedy for indigestion in cattle?
4. Would it do to cover young potatoes with two inches of earth to protect them from frost?
5. Will peas do well if planted on the same land two years in succession?
6. Will potatoes from a blighted crop be suitable for seed? Is there any way of treating the seed?

R. J. Mc. R.

Ans.—1 and 2. From the description given we are inclined to think that the

cow had impaction of the rumen. If so, the treatment recommended is to purge with 2 lbs. of Epsom salts and 2 ounces of ginger. Follow up with one dram each of sulphate of iron, gentian and nux vomica, and 4 drams bicarbonate of soda twice daily. Feed lightly on good hay, bran and pulped roots. If bloating is not severe 2 ounces oil of turpentine in a pint of raw linseed oil should give relief. When bloating is excessive, puncturing is necessary, but it should be done with a trocar and canula rather than with a knife.

3. Treatment recommended for indigestion is to purge with 1½ lbs. Epsom salts and one ounce ginger, follow this with 2 drams nux vomica

three times daily along with good feed.

4. Protecting young potato plants from frost, with a light covering of earth is a practice followed by several growers of early potatoes.

5. They may do all right, but it is not considered to be a good practice to follow. Crops usually give larger yields when a rotation is followed. Peas generally do best when grown on sod either spring or fall ploughed.

6. The disease is believed to winter over in the tuber, and planting seed from an infected field would tend to spread the blight. We do not know of any method of treating potatoes before planting to prevent blight.

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fence posts you  
cover as much  
in a short day as  
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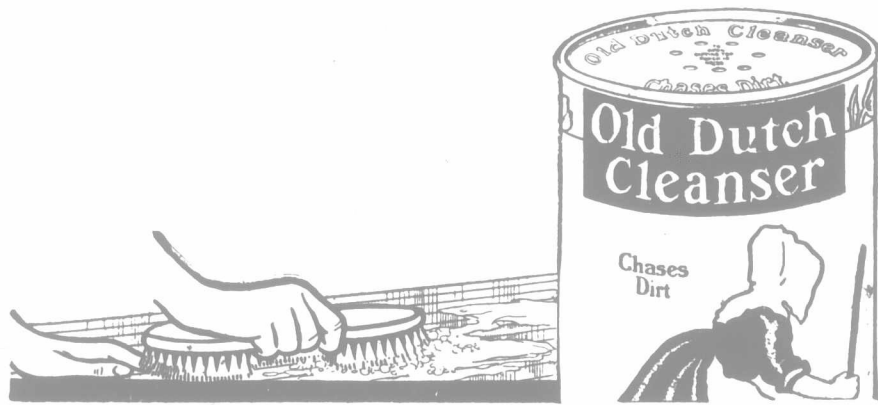
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These Honest,  
Time-Tried  
Ingredients—



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In RAMSAY PAINT you get the most accurate and thorough combination of approved raw materials. Master painters will tell you no better materials exist. Your own good judgment will tell you that scientific machine mixing is superior to guess-work and "hand paddling."

Specify Ramsay for your next big-job—and for the odd jobs you do yourself get the right Ramsay finish. Splendid service from the local Ramsay dealer or write the manufacturers. (2)

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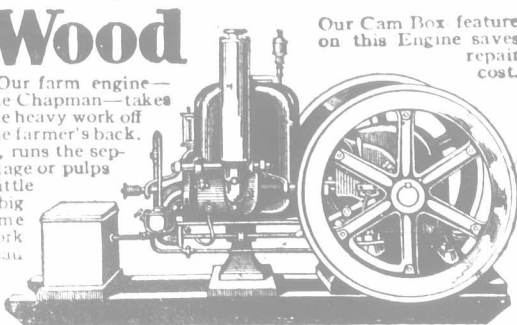
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**PURITY FLOUR**  
"More Bread and Better Bread"

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Our farm engine—the Chapman—takes the heavy work off the farmer's back. It pumps water, saws wood, runs the separator, grinds grain, cuts silage or pulps roots. Very little fuel cost—big saving in time and double work can be done. We will sell you a Chapman with pump to operate our grinder, black blower, wood saw, grind mill, etc. The Chapman is yours to study you. It is given you full particulars. On request, we will mail our Engine Book and Special Machinery Catalogue. Log in and call on us for all the machinery our people will operate.



Our Cam Box feature on this Engine saves repair cost.

Ontario Wind Engine & Pump Co., Ltd.  
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When Writing Please Mention Advocate

### Questions and Answers. Miscellaneous.

#### Water Colored.

Could you tell me what makes my well water red in color? Do you think it is crockery tiles; they are 24 inches across top, just the same as used for sewage. I am bothered with quicksand, and I thought the quicksand could not move the tiles, or would brick well be best. I put a cement well in my stable, and it flavors the water, and it is a spring well, too. Would you please advise me what to do.  
W. M.

Ans.—The tiles used may color it. The red color is an indication of iron in the water. Brick or stone wells, or driven wells give satisfaction.

#### Lymphangitis.

Γ Horse had lymphangitis and his leg swells up when standing ever since. He also has a crack in front of his hock which forms a scab and is always falling off. What treatment would you advise?  
H. F.

Ans.—Lymphangitis is a disease that is frequently followed by the leg swelling when the horse is idle. Local treatment consists in long and repeated bathing with warm water, applying camphorated ointment or liniment after bathing and excluding drafts. To prevent the disease in horses disposed to it, it is necessary to either give exercise every day or to reduce the grain ration, probably both. When the horse is not working substitute part of the grain ration with bran. By bathing and applying ointment the crack in front of the hock will probably heal.

#### Filly Perspires Freely.

I have a two-year-old filly that has perspired freely during the past few days. Her mane and body become quite wet. She has a scurfiness on the neck and front. She has the run of the barnyard during the day, but is tied in at night. Her feed consists of wheat straw, bean straw, clover hay and a few oats. She eats all right and does not appear to be sick. I would like to know the cause of her sweating, and the treatment for the same.  
SUBSCRIBER.

Ans.—From the symptoms given it is difficult to diagnose the case. Evidently there is not much the matter with the filly when she has a good appetite and does not appear sick. A colt that roughs it frequently grows a heavy, thick coat of hair, and on a warm day may sweat quite freely. So long as the colt eats and looks all right we doubt if you need be alarmed over it perspiring freely. The scurfiness may be a kind of eczema. Bathe with warm soap suds, rub dry, then apply an ointment.

#### Kind of Silo.

I have a square silo which has been in use for 16 years, but it is about done, and will not keep silage during the summer. Would like to get an opinion on a hollow tile silo, as there are none in this locality. I saw one last week in the U. S. A., five miles from here.

1. Would they be a better silo than concrete?
2. What would be the difference in price?

A CONSTANT READER.  
Ans.—1. Silos built of either concrete, prepared wood, or hollow tile are proving satisfactory. All have good features about them which appeal to some more than to others. Each kind of silo has its champions, among the farmers; some prefer one kind, some another.

2. The hollow tile wall silo may be a little more expensive, but it is claimed that owing to the air space in the wall, there is less danger from freezing of the silage, which makes up for the extra expense. We would advise writing to the manufacturers of different kinds of silos advertised in these columns and obtain prices and descriptions of their silos.

"If I knew you and you knew me,  
'Tis seldom we would disagree.  
But never having yet clasped hands,  
Both often fail to understand  
That each intends to do what's right,  
And treat each other 'honor bright.'  
How little to complain there'd be  
If I knew you, and you knew me."

THE MODEL T  
FORD CAR  
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### Ford Owners

Dealers, Salesmen and Repairmen should have a copy of this new book. It contains 300 (5 x 7 pages) with over 100 specially-made engravings and two large folding plates. Price \$1.00.

Many self-educational books on mechanics, electricity, agriculture and high-grade copyrighted fiction.

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**WINDSOR STOCK FEED COOKERS**  
are safe, simple cookers of all stock foods and grains. Price, complete, \$9 and up.

**WINDSOR STEEL WHEELS**  
are made from highest-quality material. Will fit any wagon and give life-long service.

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is a useful, practical outfit for repairing boots, shoes, harness and tinware. Price only \$2.75.

**WINDSOR GASOLINE MOTORS**  
A high-grade motor for every purpose. Send for catalogue of complete list.

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SEALED tenders, addressed to the Postmaster General, will be received at Ottawa until noon, Friday, the 14th day of April, 1916, for the conveyance of His Majesty's mails, on a proposed contract for four years, six times per week, over Glanworth No. 1 Rural Route, from the 1st of July, 1916, next.

Printed notices containing further information as to conditions of proposed contract may be seen and blank forms of tender may be obtained at the Post Offices of Glanworth, Belmont, St. Thomas and Wilton Grove, and at the office of the Post Office Inspector, London.

G. C. ANDERSON, Superintendent,  
Post Office Department, Canada, Mail Service Branch, Ottawa, 3rd March, 1916.

### Ayrshire Bull

FOR SALE

"Auchenbrain Pride" (Imp) -33208-

A grand stock bull, vigorous, prepotent and a get ter of fine heifers. Also our entire herd of pure bred Ayrshires.

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C. H. ROGERS, WALKERTON, ONT.

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We are the most extensive growers of strawberries on the north shore of Lake Erie. This season we have a large stock of the best standard and ever-bearing varieties, also red and black raspberry plants. All nursery stock offered for sale is grown on our farm. Write for catalogue.

Wm. Walker, Port Burwell, Ont.

### Strawberries

seed potatoes, etc.—50 standard varieties strawberries, including Fall-bearing, St. Regis, Everbearing and other raspberries. Blackberries, currants, gooseberries, grapes, asparagus. Cobbler and Green Mountain potatoes. Catalogue free.

H. L. MCCONNELL & SON, Port Burwell, Ont.

### Rack-cured Seed Corn

All varieties. Write us before placing your order for seed corn. We have quantity and quality. Our seed corn is all hand selected and thoroughly rack-cured.

ST. JOACHIM CORN GROWERS' CLUB  
Box No. 4 St. Joachim, Ont.

### Williams Strawberry plants.

The recognized commercial strawberry of the Niagara district. We specialize in this variety. Strong well-rooted plants for spring delivery one dollar per hundred, by mail prepaid. Fifty cents per hundred, four dollars per thousand, by express. Safe delivery guaranteed.

Wm. H. Bunting, The Carleton Fruit Farm  
St. Catharines

### Improved Yelloweye seed beans free from all disease \$4 per bushel, bag free.

R. D. Ferguson  
R. R. No. 2, Port Stanley, Ont.

### Choice Seeds

—Alsike at \$10; O. A. C No. 21 Barley at 80 cts New bags 25c; samples sent.

A. BINGLE Grimsby, Ontario

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Don't keep that few hundred dollars on "check" in an account earning no interest, or only a paltry 3%.

Invest it in a 5% Mortgage Debenture of the Standard Reliance Mortgage Corporation.

Thousands of farmers and townspeople are holders of our Debentures.

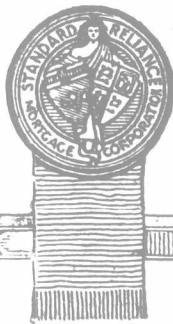
*And never a cent of their money has been lost.*

A \$1,000 Debenture at 5% for five years pays \$280 in interest, or 28% gain. It is one of the safest, if not the safest, investment, for never a dollar has been lost in Ontario Mortgage Debentures.

Wouldn't you like to invest your money to earn equal profits? Alright then—write for our booklet, about Profits from Savings. It tells you how to get 5% for your savings instead of 3%. Address Dept.: 9

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Head Office 82-88 King St. E. Toronto

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It's becoming more acute. The men are being called to the colors, leaving few men available. The women are taking on additional work, but there's a limit to the work that can be expected of the housewife. Only one solution—machines to save man-power on the farm, conveniences to save time in the home.

## HARDWOOD FLOORS

add one day to every week. No sweeping day is necessary as with carpets—ten minutes with a dustless mop, better than ten hours with a broom. And in the kitchen, no scrubbing—Hardwood Floors are not porous, hence will not absorb grease and dirt stains.

BRIGHT, CHEERY, CLEAN ROOMS.

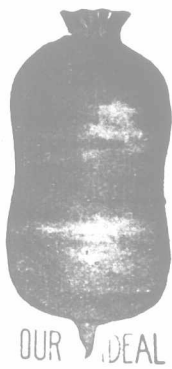
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Eastern Factory: Meaford, Ont., and Ste. Agathe, Que. Western Factory: Fort William, Ont.

Deliveries arranged to any point in Canada.

## MANGEL "OUR IDEAL"



Yellow Flesh LEADS THE WAY. BEATS EVERYTHING.

For Feeding. For Cropping. But be sure it is "OUR IDEAL."

Try one pound CANADIAN GROWN Seed 45c. P. Free.

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"Waterloo Giant White Sugar." The best Sugar Mangel 40c. per lb. Post Free.

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Special Collections (extra value) Vegetable and Flower Seeds, 12 packets 25c. 18 packets 50c. 32 packets \$1.00 all Post Free.

DEPT. A. ONTARIO SEED CO. Successors, WATERLOO, ONTARIO

## CENTRAL NURSERIES

For reliable Apple, Pear, Plum, Cherry, Peach and Ornamental Trees, Shrubs, Roses Grape Vines, Berry Plants, Evergreens, Hedges, etc.—good ones, too. Also Seed Potatoes.

We ship direct to customers. Our apple trees are extra fine. Write us for prices on your lists for early Spring Planting.—36 years at it. No agents.

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



## Questions and Answers. Miscellaneous.

### Cement.

Is there such a thing as natural cement? Where can you get minerals analyzed? On my farm there is a spot where you can dig up white, soft stuff, and after it is up a short time it gets as hard as a stone. C. K. M.

Ans.—Cement is ground and prepared from rock or marl. Send a sample to the chemical Department, O. A. C., Guelph, Ont.

### Permanent Pasture.

1. What variety of seed would you recommend to sow for a permanent pasture on high, gravelly, clay soil? Timothy seems to dry out during the summer, and the last few years it has been difficult to secure a stand of clover, although the land is in good tilth.

2. Would orchard grass make good hay, or is it better for pasture? If there are any other varieties that would suit this kind of land better we would like to know them. C. S.

Ans.—1. The grasses best adapted for permanent pasture require a year or two to become thoroughly established. It is, therefore, good policy in seeding down such a pasture to use timothy and red clover along with the following grasses: orchard grass, 4 lbs.; meadow fescue, 4 lbs.; tall oat grass, 2 lbs.; alfalfa, 5 lbs.; white clover, 3 lbs.; alsike, 1 lb.; Kentucky blue grass, 3 lbs., per acre. The amount of timothy and clover need not be large. This may appear like a heavy seeding, but is considered necessary in order to furnish good pasture over a number of years.

2. Orchard grass is more suitable for pasture than for hay. If it is necessary to make hay of orchard grass, it should be cut early in the season before it becomes woody.

### Size of Grain Drill—Sliding Hay Rack—Harrow Cart.

1. Would you advise buying a 3-horse grain drill rather than a 2-horse? If so, would 2 horses handle a 15 hoe-drill if the driver rides? Which would be better, hoe or disc drill for heavy clay soil?

2. Is the movable or sliding hay rack to use with a hay loader a good idea? Where can the metals be secured? Please discuss the matter.

3. Is a harrow cart a practical help? J. S.

Ans.—1. With the prevailing scarcity of help the larger implements are advisable, and 3 horses should be able to handle a 15 hoe-drill with the driver riding. Some farmers prefer the disc drill, others favor the hoe drill. If the ground is anyway stony, possibly the hoe drill would be more satisfactory. Read the article in this issue, taking a tip from George regarding spring cultivation.

2. The movable hay rack is claimed by some farmers to be very satisfactory. A rack that has been in use for some time was made by using 16-foot sills to which is attached on the outside a series of rollers, 2 by 6 inches made of maple, and put on, with large lap screws, two feet apart and 2 inches down from the top of sills. The front half of the deck is built on a pair of 2 by 4-inch scantlings 8 feet long, which rests on the rollers. The rear half of the rack is built in sections and folds up at the back, while the front half of the load is being put on. A small tackle may be used to pull the one-half load ahead when it is loaded. It is necessary to have the rack above the bolster stakes. If it is desired the rear half of the rack may be built solid with the rollers coming a couple of inches above the floor of the rack from each sill every two feet. The front half could be built with grooves for the rollers and arranged to slide on top of the rear half. By having the rear end high makes it easier to move the half load forward. A stop-block would have to be arranged to hold the front of the rack in place while being loaded.

3. The number of farmers using harrow carts is increasing every year. The use of the cart is claimed to be practical.

## Selected Seed Grain

	Per Bus.
O. A. C. 72 Oats	\$0.75
Banner Oats	.70
Newmarket Oats	.70
American Beauty	.70
Early Yields New (Imported)	2.00
Early Empire	
Barley O. A. C. 21	\$0.80
Black Barley	1.50
Golden Vine Peas	2.00
Some No. 1 Red Clover	17.00
Still on hand. Alfalfa	16.00
Timothy, No. 1 for Purity	5.50
Alsike No. 1	14.00

You might beat the price but not our quality.

We have some good value in Seed Potatoes for future shipment, also seed Corn.

Write for prices. Terms Cash.

Bags extra at value.

Ex. Warehouse Guelph.

## THE HEWER SEED CO.

90 Macdonnell St. East, Guelph, Ont.

## SEEDS

Red Clover, Alsike, Timothy, Alfalfa, Sweet Clover, Seed Corn, and Rape Seed, all extra clean, pure seed with high Government tests for purity and germination. Ask us for samples and prices. We guarantee satisfaction.

H. WHITE & CO. LIMITED,  
Wholesale and Retail Seed Merchants.

SHELburne, ONT.

## O. A. C. 72 Oats

1000 bus. good clean oats, grown from prize-winning seed on clean land. Write for samples and price.

W. R. DOUGALL, Hensall, P.O., Ont.

## O.A.C. No. 72 Oats

1200 bushels of good clean seed true to name grown from selected seed from first prize field a year ago, last year had only half enough to fill orders. Samples and price on application.

Edgar Broderick

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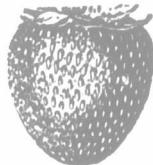
Our Guarantee

If not satisfied in ten days, return corn at no expense and money will be refunded. Bags furnished.

Don't delay. Write at once for our price-giving free delivery offer.

R.R. No. 1, Cottam, Ont. JACKSON BROS  
The Roselands and Alforddale Farms

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Leading varieties \$4.00 per 1,000. Fifty plants each of four choice varieties, early and late for \$1.00. Send for price list.

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Goose Wheat—400 bushels Goose wheat, grown from seed winning the eight first prizes at Markham, Toronto, Ottawa and Guelph, out of 20 entries, field competition, 1914. 1st for field, 1st Guelph, 1st and 2nd Toronto, 2 thirds in open class Spring wheat Ottawa, 1915. \$1.75 per bus. f.o.b. Unionville. Bags included. R. S. FRISBY & SON, R.R. No. 1, Unionville, Ont.

Strawberry Plants that grow—varieties you want to buy, at prices you want to pay. List free. ONTARIO NURSERY COMPANY  
Wellington Ontario

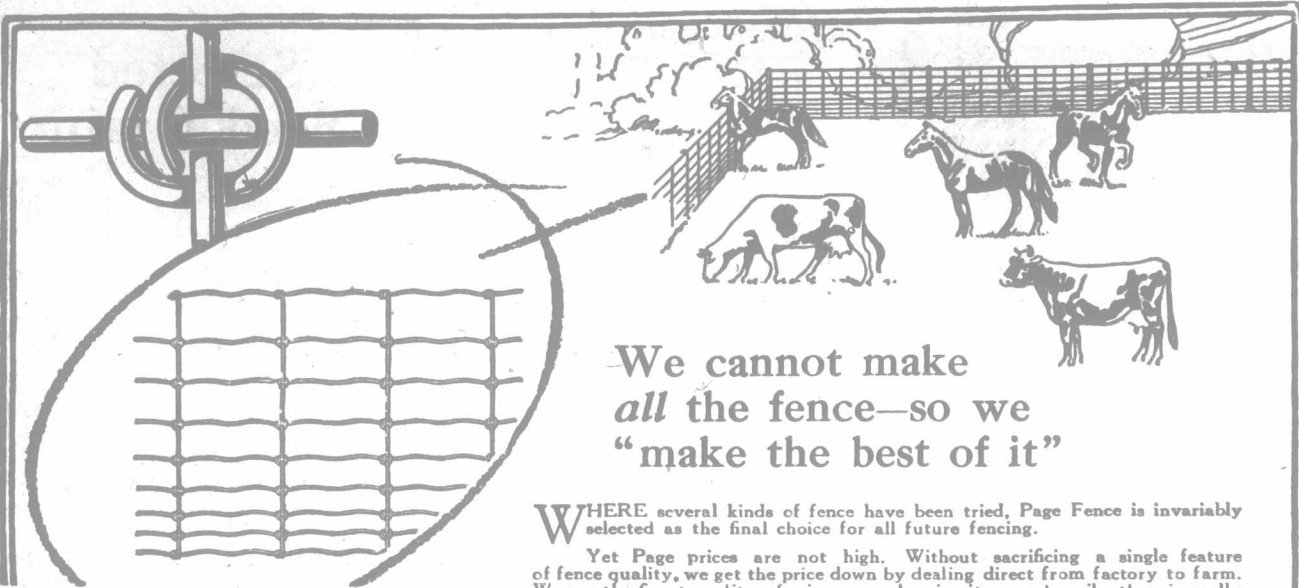
Seed Oats For Sale—O.A.C. No. 72, free from wild oats and noxious weeds. Heavy yielding, good strong straw. Price 80c., bags extra.  
TOOLE BROS. Mount Albert, Ont.

O.A.C. No. 21 Barley for Sale—85c. per bus. f.o.b. Galt. Same barley in sacks, sealed by C. S. G. A., at \$1 per bus. Improved O.A.C. No. 72 oats at 80c. per bus.

GEORGE R. BARRIE, R.R. No. 7, Galt, Ont.

Seed High grade Alsike, Gov't Standard No. 1, Ontario grown, government tested, \$11 per bushel; No. 2, \$10. Freight paid in Ontario or Quebec on orders of two bushels or more. Cash or marked check with order. Bags 25 cents.

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WHERE several kinds of fence have been tried, Page Fence is invariably selected as the final choice for all future fencing.

Yet Page prices are not high. Without sacrificing a single feature of fence quality, we get the price down by dealing direct from factory to farm. We use the finest quality of wire; we galvanize it more heavily than is really necessary, just to be on the safe side; and even the locks are of No. 9 wire.

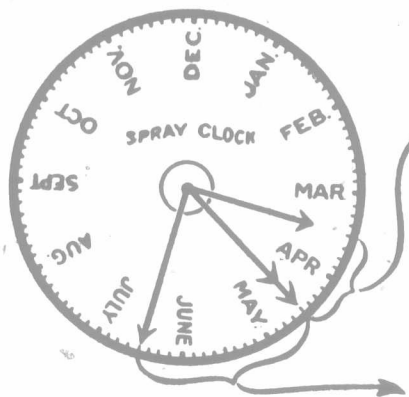
But the real trick of making Page Fence is in the Page looms—fence made on them cannot have uneven wires. Every rod of fence that comes through them is locked tight for keeps—with a lifetime of wear in it.

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**THE PAGE WIRE FENCE COMPANY LIMITED.**

1143 King Street West, TORONTO.

No. of bars.	Height.	Stays ins. apart.	Price in Old Ontario.
6	40	22	.29½
7	40	22	.33
7	48	22	.34
8	42	16½	.41
8	47	22	.40
8	47	16½	.42½
9	48	22	.43
9	48	16½	.46
9	52	22	.43
9	52	16½	.46
10	48	16½	.49
10	48	12	.54
10	52	16½	.49
11	55	16½	.54



From HALF PAST MARCH to HALF PAST APRIL Use

**SOLUBLE SULPHUR**

Full strength—10 to 12 lbs. to 40 gallons of water.

From HALF PAST APRIL to HALF PAST JUNE Use

SOLUBLE SULPHUR Weak Solution—1 to 1½ lbs. to 40 gallons of water and add

**ARSENATE OF LEAD**

Soluble Sulphur has made good. It is used in the largest and most successful orchards in Canada and United States. It comes to you in powder form. No leakage—no freight in water—no empty barrels to return. Perfectly soluble—no clogged nozzles. Easy to mix, easy to apply and sticks like paint. It is better than Lime and Sulphur in every count.

Soluble Sulphur is a complete spray for dormant

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Every spray does better work if the spray pump has large capacity, high power and uniform pressure. No cheap pump can give this efficiency. With the Bean Pump you can be sure the spraying is well done; that every tree and every branch gets enough. Bean Pumps ensure thoroughness.

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WHEREVER FRUIT EXCELS, NIAGARA SPRAY IS USED. SEND FOR PRICE LIST AND CATALOGUE.

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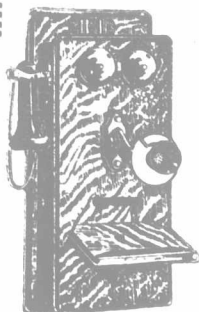
If you wish your butter to be smooth and uniform, use the

**“BRITISH” Butter Worker**

Adopted by the best dairies in Gt. Britain and Canada. Makes the butter firm—even consistent all through. Results in better butter and bigger profits!

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**Tobacco is Needed at the Front.**

The 70,000 Canadian soldiers at the front, a number which is being augmented all the time, are not getting enough tobacco which is essential to their welfare. Francis R. Jones, Organizing Secretary of the Overseas Club has been making an appeal for funds to supply more tobacco. Give our Canadian boys a smoke.

Money received for the tobacco Fund should be paid in, at least twice a month, to either the Bank of Montreal, the Canadian Bank of Commerce, the Union Bank of Canada, the Dominion Bank, the Bank of Hamilton, the Bank of Toronto, the Bank of Nova Scotia, the Bank of Ottawa or the Northern Crown Bank, together with a list of contributors with names and addresses written legibly in order that the post cards may be correctly addressed.

Any further information regarding the Fund will be gladly given on application to the Office of the Overseas Club, Room 28, Windsor Hotel, Montreal.

FRANCIS R. JONES, Organizing Secretary

**Good Prices for Milking Shorthorns.**

Fifty-four dual-purpose Shorthorn bulls, cows and heifers were cashed for \$30,390 in less than three hours, at the annual sale held by the Milking Shorthorn Cattle Club of America, at Plainsville, Ohio, on March 2. The attendance was large and it was considered one of the best sales held of the breed in a long time. The \$1,000 mark was exceeded on females while 22 cows and heifers sold for an average of \$500 or more. There was also a splendid demand for bulls, 13 head averaging \$377. The highest price, \$1,585, was paid for Bellevue Daisy, bred by Richard G. Wood, of Conshohocken, Pa. Another firm secured Rose Fairfield, an undefeated cow at six fairs in 1915, and also the possessor of a record of 10,045 lbs. of milk in 300 days. Bessie Rose realized \$1,400, and Lulu Clay, a daughter of General Clay, with a record of 6,994 lbs., changed hands at \$1,300. A six months bull calf representing the best of English breeding, was finally secured at \$1,325.

**Herd Books Recently Published.**

Volume 4 of the Canadian National Records for sheep, has been issued from the press, and is now in circulation. Shropshire, Leicester, Cotswold, Oxford Down, Lincoln, Dorset Horn, Suffolk, Hampshire, Southdown and Cheviot, are all recorded in this volume. Address, Accountant, Canadian National Live Stock Records, Ottawa, Canada.

Volume 26 of the Dominion Swine Breeder's Record is also in circulation. Yorkshire, Berkshire, Chester White, Tamworth, Hampshire, Poland China, and Duroc Jersey are included in this one volume. Address, Accountant, Canadian National Live Stock Records, Ottawa.

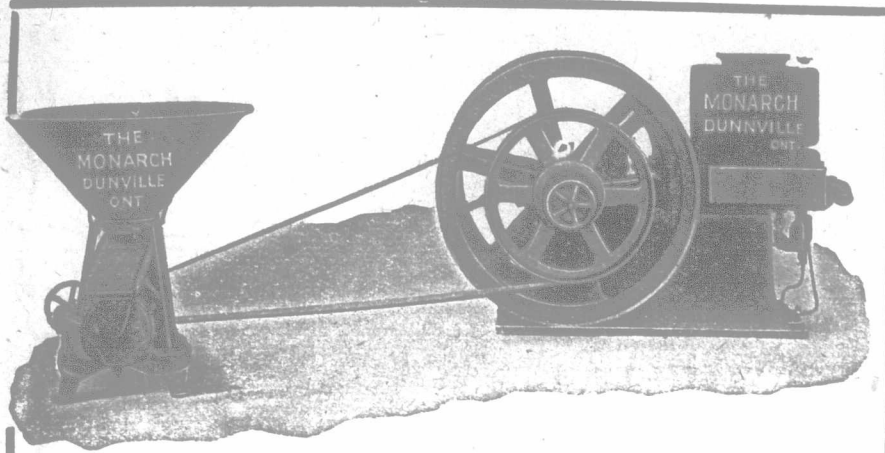
Volume 14 of the American Shetland Stud Book has been issued from the press. This is edited and compiled by the Secretary, J. M. Wade, Lafayette, Indiana, to whom all correspondence should be addressed.

**Recent Publications.**

The following books have been recently published, and may be procured through this office at the price mentioned, postpaid:

- Diseases of Poultry—Pearl, Surface & Curtis.....\$2.10
- The Marketing of Farm Products—L. D. H. Weld.....1.00
- The Wheat Industry—Bengtson & Griffith......80
- Field Crop Production—George Livingstone.....1.50
- Soils, Their Properties and Management—Lyon, Fippin & Buckman.....2.00
- Soils and Plant Life—Cunningham & Lancelot.....1.20
- The Farmer and the Interests—Clarus Ager......70
- Feeds and Feeding—Henry & Morrison (revised and the 15th edition).....2.20





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**FENCES AND GATES**  
Special March prices. Write:  
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**Seed Corn**—Prizewinning Wisconsin No. 7 and Longfellow, the best for the silo.  
GEORGE R. WEST & SONS  
Northwood, R.R. No. 3. Ontario.

### The American Cotswold Meeting.

The annual Stockholders' meeting; pursuant to the call of the American Cotswold Registry Association, was held at the Stock Yards Inn, Chicago, Ill., on Feb. 25., D. C. Lewis, Camp Point, Ill., presiding. The election of officers for 1916 resulted in the reelection of all present officers and directors as follows: Pres., D. C. Lewis, Camp Point, Ill.; Vice-Pres., F. Poirson, Ft. Wayne, Ind.; 2nd. Vice-Pres., J. R. Allen, Draper, Utah; Secretary and Treasurer, F. W. Harding, Waukesha, Wis. Directors: D. C. Lewis; J. R. Allen; F. Poirson; J. D. Brien, Ridgetown, Ontario; F. A. Koser, Riskreall, Oregon. The Treasurer's Report for 1915 showed receipts for recording pedigrees \$1,549; for recording transfers, \$36.75; expenditures for special prizes, \$365; salaries, \$733; office supplies, and sundries, \$209.07. Total expenditures for the year, \$1,307.67. Net balance for the year \$278.08, which added to the surplus \$4,149.28, brought forward, cash on hand \$4,427.36. Volume No. 17 is nearly complete in the printers' hands, and approximately 2,200 pedigrees have been accepted for volume No. 18. Appropriations at fairs and expositions for 1916 were made as follows: for the International Live Stock Exposition, \$200; Pacific International Show, Portland, Oregon, \$50, to be pro-rated on the winners in the open class; Guelph, Ontario, Fat Stock Show, December 1915, \$20; for the best pen of four Cotswold lambs, owned by exhibitor, providing Cotswolds win the cup offered at the Show for best pen of four long wool lambs. To the Toronto Industrial Exposition, Ontario, the Western Fair, London, Ontario, and to all State Fairs which provide a classification for Cotswold sheep, \$15 is offered on a pen, four lambs, either sex, bred by exhibitor in the State or Province exhibited, as follows: first prize \$10; second prize \$5. Cotswold breeders reported that they were generally enjoying a good demand for their surplus stock, and bright prospects were ahead for better trade, owing to the generally prosperous condition of the mutton and wool industry. The next meeting will be held during the International Live Stock Exposition, at Chicago, the first week in December.

### A Record Sale of Herefords.

What was reputed to be a record sale of Herefords, the world over, was conducted by O. Harris & Sons, Harris, Mo., on March 1. This firm sold 61 Herefords at public auction for \$76,025, and established the phenomenal average of \$1,246. This is reputed to be the world's record for the Hereford breed at public auction, and is the outcome of twenty years' effort of men who have established ideals of their own in Hereford type and have striven to realize those ideals through selection and proper matings. The blood of the Repeaters was dominant in this sale. Repeater 63rd., junior champion at Kansas City, last fall, a son of Repeater, topped the sale list at \$8,100. J. D. Canary & Son purchased Repeater 63rd. at this splendid price. Repeater 50th. by Repeater 8th., at \$1,150, went to Glen. D. Davis. Repeater 49th., by the same sire, sold at the same price to Harrison Frazier. Repeater 54th., by Repeater 7th., went to the herd of J. A. Dickens, of Colorado, for \$2,500. Repeater 66th. was not bought until J. O. Southard, an extensive Kansas breeder, raised the bid to \$7,000. Exciting bidding ensued for both Repeater 66th., and Repeater 63rd., showing that the public are willing to pay for the superior animal. Repeater 65th. by Repeater 8th., went to \$2,550, while Repeater 70th. was bought at \$2,050. The six sons of Repeater sold at an average price of \$3,642. The 24 sons and grandsons of Repeater sold, averaged \$1,766. Live stock men should require no better lesson than this to impress upon them the influence of a good sire, and what it may mean in future transactions. Defender's Lassie 2nd., with a cow calf at side, by Repeater 7th., topped the female list at \$2,575. A. Frank Litton was the buyer. Miss Repeater 11th. and calf realized \$2,200. The entire list of females were readily bought up at good figures. The way they sold and the splendid prices realized for the males should add a new stimulus to Hereford breeding.

Every Sheet is true and even

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"EMPIRE" Corrugated Iron is made with deep corrugations fitting closely and snugly; it makes a splendid, strong, rigid wall that withstands all storms. Remember—building with Metal gives you fire-proof, weather-proof and lightning-proof buildings.

Our "Metallic" building materials—the "Quality First" kind—may cost a little more than other building materials, but they're permanent. "Easlake" Galvanized Shingles; "Metallic" Ceilings; "Metallic" Rock and Brick-faces and Clapboard Siding; Roof-lights and Ventilators. Silo Tops, etc., save you money.

Write for interesting booklet giving complete information, prices, etc.

**Metallic Roofing Co. Limited**  
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BY TWIN-SCREW MAIL STEAMERS FROM  
**St. John (N.S.)**  
AND  
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SPECIAL FACILITIES FOR TOURISTS.  
Next sailing from HALIFAX: R.M.S.P. "Chaudiere" March 24, 1916  
APPLY TO THE  
**Royal Mail Steam Packet Co.,**  
87-89, Granville St., HALIFAX (N.S.)  
or to the Local TICKET AGENTS.

### AUCTION SALE OF

## Dual-Purpose Shorthorns

20 Females and 6 Males

Including the noted stock-getter, Bullrush (Imp.) 69738—Vol. 54 E, and several young bulls got by him from heavy-milking dams. The females are of a deep-milking strain, nearly all bred, and some heavy with calf. Sale on

Thursday, April 13, 1916

Write for catalogue to the proprietors


**A. & G. FORBES**  
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HIGHEST PRICES PAID FOR  
**FURS - HIDES - WOOL**  
PRICE LIST, SPORTSMEN'S CATALOG AND TRAPPERS' GUIDE FREE FOR THE ASKING  
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NO. 3 HALLAM BUILDING - TORONTO

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O. A. C. 21 Barley and 72 Oats our specialty. Our supply is clean, pure and true to name. Price—Barley, 90c., Oats, 80c. per bush. 16 oz. cotton bags, 25c.  
**JNO ELDER & SONS.** - - Hensall, Ont.

**Another Money-Saver**



**GIANT Griffiths YOKE ROPE**

Costs you less than a third the price of a Leather Breast Strap and gives you greater strength where you need it.

Note the heavy steel slide that bears the strain and wear of the yoke ring—the strong, hard rope that ensures greater strength.

**\$1.00 PER PAIR COMPLETE WITH POST PAID SNAPS AND SLIDES.** (\$1.25 West of Fort William.)

Order a pair from your dealer, or if he doesn't stock them write us and we will see that you are supplied. Get acquainted with Griffiths' Specialties. You get more value for less money by using them. WRITE to-day for Booklet entitled "What's New for the Stable."

G. L. GRIFFITH & SON,  
66 Waterloo St., Stratford.

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We need your cream and will make it "worth your while" to ship to us. A card brings particulars.

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Write for our proposition.

**Silverwoods Limited**  
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We pay express charges and furnish cans. Remit promptly. Take all you can make. Write us.

**THE BERLIN CREAMERY CO.**  
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Guarantees to you a high-priced market for cream every day of the year.  
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GUNS, TRAPS, SPORTING GOODS  
**JOHN HALLAM, Limited**  
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**Co-operative Experiments in Weed Eradication, 1916.**

During the past four years the Ontario Agricultural and Experimental Union have carried on co-operative experiments in the eradication of weeds. Some fifty-eight farmers have taken part in these experiments, and some very interesting and valuable results have been obtained. The weeds experimented with were perennial sow thistle, twitch grass, bladder campion, wild mustard and ox-eye daisy. The results obtained may be summarized as follows:

1. That good cultivation, followed by rape sown in drills, provides a means of eradicating both perennial sow thistle and twitch grass.
2. That rape is a more satisfactory crop to use in the destruction of twitch grass than buckwheat.
3. That rape gives much better results in the eradication of twitch grass and perennial sow thistle when sown in drills and cultivated than it does when sown broadcast.
4. That thorough, deep cultivation, in fall and spring, followed by a well-cared for hoed crop, will destroy bladder campion.
5. That mustard may be prevented from seeding in oats, wheat and barley by spraying with a twenty per cent. solution of iron sulphate without any serious injury to the standing crop or to the fresh seedlings of clover.

Those who took part in these experiments profited by the experience in nearly every instance; they cleaned the field experimented upon, demonstrated to their own satisfaction the effectiveness of the method tried, and at the same time the results furnished practical information to others. These co-operative experiments in weed eradication will be continued this year (1916), and it is hoped that a large number of men will take part in them in order that sufficient information may be gathered to warrant definite statements being made in regard to the best methods of controlling these pernicious weeds. The experiments for 1916 are as follows:

1. The use of rape in the destruction of perennial sow thistle.
2. A system of intensive cropping and cultivation, using winter rye followed by turnips, rape, or buckwheat, for eradicating perennial sow thistle.
3. The use of rape in the destruction of twitch grass.
4. A method of cultivation and cropping for the destruction of twitch grass.
5. A method for the eradication of bladder campion or cow bell.
6. Spraying with iron sulphate to destroy mustard in cereal crops.
7. A method of cultivation and cropping for the destruction of ox-eye daisy.

Those who are troubled with any of these bad weeds are invited to write to the Director of Co-operative Experiments in Weed Eradication, Ontario Agricultural College, Guelph, Ont. He will be glad to furnish full information concerning these experiments and to supply application blanks for the same. All experimenters will be supplied with full and detailed instruction for carrying out the experiments selected, and with blank forms on which to report the results of the same. All interested in clean farming are asked to co-operate in this work. Address all communications to J. E. Howitt, Ontario Agricultural College, Guelph.

**Gossip**

At the South Huron Seed Show, held at Hensall, on the 7th instant, Oscar Klopp won second prize on his O. A. C. No. 72 oats, and first prize for alsike clover, which are advertised in another column.

Do not neglect to read, in another column, in this issue, the advertisement of Edward Baker & Sons, Winchester, Ontario. They have claimed April 12 as the date for their sale of Holsteins. Eighty head will be sold, and in the offering will be several cows with R. O. M. records, and others ready to qualify. The herd bull is Count Pontiac Clothilde, a son of King Pontiac Artis Canada, and a 23-pound four-year-old cow. Illustrated catalogues will be mailed on request.

**No More Sore Shoulders**



**EFFICIENCY**

A watch word of many of Canada's most prosperous business houses—the dictionary says efficiency means productive of effects; why not use VENTIPLEX HORSE PADS thereby making your horses efficient in their drawing power.

**VENTIPLEX PADS**

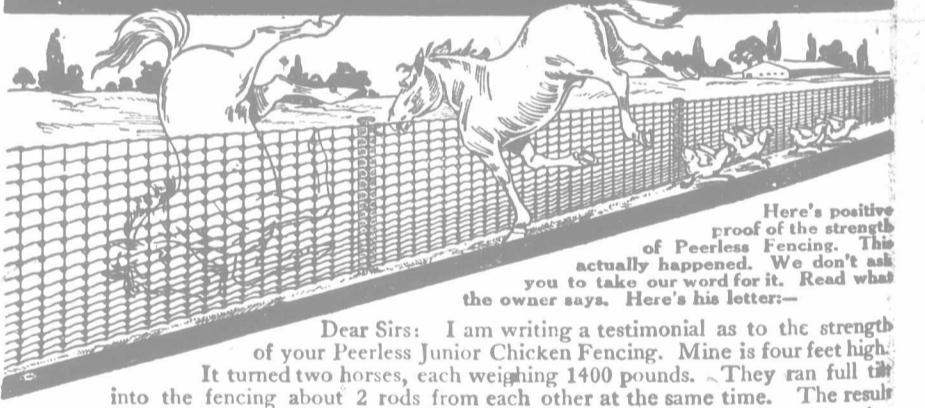
cure gall sores by removing their cause. Ventiplex pads are made of our patent Ventiplex fabric, it's soft, cool and comfortable on the horse and easily washed when soiled.

Your dealer will gladly supply you, and your booklet giving further information is at our office, send us your name and address and we will forward it to you.

**The Burlington-Windsor Blanket Co.**  
TORONTO CANADA



**THIS ACTUALLY HAPPENED**



Here's positive proof of the strength of Peerless Fencing. This actually happened. We don't ask you to take our word for it. Read what the owner says. Here's his letter:—

Dear Sirs: I am writing a testimonial as to the strength of your Peerless Junior Chicken Fencing. Mine is four feet high. It turned two horses, each weighing 1400 pounds. They ran full tilt into the fencing about 2 rods from each other at the same time. The result was that they turned a somersault over the fence, alighting on their heads and necks, scratching them up some, but the fence remained intact.

Yours truly,  
Joe Boothroyd, Surrey Center, B. C.

Think of it! A dead weight of nearly a ton and a half coming with violent force against our poultry fencing—not field fencing—and yet

**Our PEERLESS Junior Poultry Fencing Held**

What greater test can you ask? We build it stronger than is necessary under ordinary circumstances. We build it of Open Hearth steel wire with all the impurities burned out and all the strength and toughness left in. Well galvanized. Every intersection is locked together with Peerless Lock. Top and bottom wires of Peerless Poultry Fencing are heavy—extra strong. Consequently, fewer posts are required. Peerless fencing can't sag—can't get out of shape—can't help giving absolute satisfaction.

Catalog giving details on request. Describes our poultry, farm and ornamental fencing, also Peerless farm gates.

**The Banwell-Hoxie Wire Fence Co., Ltd.**  
Winnipeg, Manitoba  
Hamilton, Ont.



**RAW FURS**

**WE WANT SPRING MUSKRATS**

We Pay Express and Postage. PROMPT RETURNS.  
**E. T. CARTER & CO., 84 Front St. E., TORONTO**



HORSE  
power.

ENED

Here's positive  
proof of the strength  
of the strength  
fencing. This  
is ed. We don't ask  
for it. Read what  
letter:-

is to the strength  
is four feet high.  
They ran full time.  
The result  
heads and necks,

rey Center, B. C.  
nt force against our

Held

or ordinary circum-  
ed out and all the  
ed together with  
extra strong. Con-  
of shape—can't help

ental fencing.

RS

TS

RETURNS.

ORONTO

# CALDWELL'S

## Raise calves without milk

Caldwell's Calf Meal enables you to sell your whole milk, yet raise as good or better calves. Tests prove it without an equal for "weaning-up" purposes.

### CALDWELL'S CALF MEAL

is rich in protein and furnishes a complete substitute for whole milk. Analysis shows Protein 19 to 20%, Fat 7 to 8%, Fibre 5%. The high quality ingredients as guaranteed to the Government are: Linseed, Wheat, Oats, Corn, Locust Bean, Pea and Molasses Meal in correct proportions to ensure best results.

Caldwell's Calf Meal is a big money-maker for users and has the recommendation of leading stockmen. Write for free booklet.

The Caldwell Feed & Cereal Co., Ltd.

DUNDAS, ONTARIO

MAKERS OF ALL KINDS OF HIGH-CLASS

## STANDARD FEEDS

AYLMER SPRAYERS  
have won Medals  
and are used by  
seven Governments

### USE THE

# AYLMER SPRAYER

Fruit growers use  
Aylmer Sprayers be-  
cause they give RE-  
SULTS. Aylmer  
Sprayers have the force to  
drive the mixture into cre-  
vices of bark and buds and  
make it penetrate the hiding  
places of the destructive little insects. No time wasted  
on repairs during the spraying. Season if you get a  
Sprayer that DOES NOT GET OUT OF ORDER.  
Any man who has had the exasperating experience of  
having to stop on account of loose "packing" on the  
pistons, will be glad to own an Aylmer Sprayer. It is  
the only Sprayer constructed without troublesome  
"packing." In the Aylmer, the pistons are made tight  
by three bronze expanding rings, the same as the  
pistons in automobile engines. This Sprayer is easy  
to pump and there is no pressure leakage; every  
ounce of pressure being turned into spray work.  
Agitators prevent clogging; nozzles are up-to-  
date; throw full distance and with full  
power from a stream to a spray.  
Every part designed to give perfect  
service. Prices low. FREE  
GUIDE TO SPRAY MIX-  
TURES sent on re-  
quest.

#### Aylmer Sprayer Outfit:

Pump, complete, 10  
feet hose; 2 Bordeaux  
nozzles; 1 brass stop  
cock; 1 Y; 1 long ex-  
tension rod; Without  
barrel \$15.25. Lined  
Bamboo extension  
rod, in place of  
iron rod, \$1.50  
extra. Bar-  
rel, \$3.00 extra.  
Shipped  
freight pre-  
paid, any  
station in  
Ontario.



Aylmer Pump and Scale Co. Ltd.  
WATER ST., AYLMEER, ONT.

## 1915 Graham Bros. Champion Stud 1916

At the great Guelph and Ottawa Winter shows we showed in the Clydesdale classes, the grand champion, senior champion, junior champion, reserve grand champion, reserve senior champion, reserve junior champion. Stallions: champion and reserve grand champion mare. The best five stallions and the best stallion and two mares. We had 14 firsts, 6 seconds, 4 thirds.

We offer a great lot of big young stallions and mares imported and Canadian bred of the above breeds, the very best to be found in Canada and at very reasonable prices.

Graham Bros.

Claremont, Ont.

## 1915 Importation Clydesdales 1915 Importation

With the addition of our 1915 importation of Clydesdale stallions we are particularly strong for this season's trade. Prize-winners at all the leading shows, including championships. Up to a ton and over in weight, with breeding and quality unsurpassed. We can supply the wants of the trade, no matter how high the standard. Stallions from 1 year up to 8 years, in-foal mares and fillies. Terms to suit.

SMITH & RICHARDSON,

COLUMBUS, ONT.

Myrtle, Brooklin and Oshawa Stations

Clydesdale Stallions and Mares We are now offering for sale a number of extra good stallions, also mares in foal. Write or call on

JOHN A. BOAG & SON, Queensville, Ontario

Percherons and Holsteins—We have Percheron stallions from yearlings up, 1st prize winners at Toronto; also mares and fillies from yearlings up, quality and type unsurpassed. In Holsteins we have for sale, cows, heifers and young bulls. Come and make your selection. Toronto and York Radial Line. W. G. HILL & SON, Queensville, Ont., P.O. and Station.

Up to a Ton  
in Weight

If you are looking for a ton stallion on faultless underpinning, bred to produce the big, high-priced horses, come and see what I have, there are none better and none priced easier.

### CLYDESDALES Imp.

Character  
& quality

MITCHELL, ONT.

### Gossip.

#### Shorthorn Sales.

The following report of recent sales comes from Robt. Miller, Stouffville, Ont.:

"Since our auction sale in Toronto on February 2, I have sold the following Shorthorns: To W. B. McQuillan, Howell, Mich., the young bull, Butterfly Sultan = 102053, = sired by Superb Sultan = 75413, = and from Imported Jubilee Maid 2nd = 59505, =, the dam of the great dual-purpose sire, Butterfly King, at the head of the Dual-Purpose Herd owned by the Province of Alberta. To Ratcliff Bros., Stouffville, Ont., I sold the Lavender cow, Lavender Beauty 5th, and her yearling heifer Lavender Rose, a splendid pair, the cow a great milker. To W. J. Davidson, Cookstown, Ont., the bull Forrest King, a strong, thick bull that should breed well. To J. C. Wilkinson & Son, Watford, Ont., the cow Hazel Slip and her bull calf. To James L. Aitken, Cheviot, Sask., the young bull, Scottish Ransom by Imp. Scottish Peer, and from a cow descended from Imp. Lydia Languish. To R. T. Lewis, Green Bay, Manitoulin. The young bull, Red Peer, from same sire and from Lady Blossom, this is a nice calf. To W. H. Hartin, Twin Elm, Ont., the splendid bull calf, Royal Adair, by Imported Royal Fancy. To John Steele, Almonte, Ont., the roan bull, Stamford Selection. To Howland Bros., Kleinburg, Ont., the young bull, Ramsden Pride, a good one. To James Findlay, Markdale, the young bull, Royal Edward, a beautifully-bred Lovelace' and a very promising bull. To Wm. Batty, West Hill, two very promising young dual-purpose cows. To Victor G. Bowes, Meaford, a good Meadow Flower bull. To Wm. C. Wilson & Son, Hawkestone, a bull and a heifer that are right and bred right.

#### Oxfords, Yorkshires and Collies at Codrington.

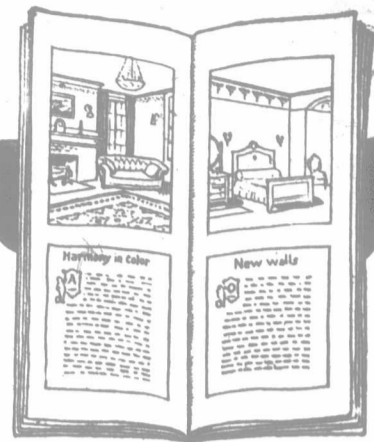
A letter from B. Armstrong and Son, Codrington, Ontario, whose advertisement appears in this paper, states that they are not offering any Shorthorn females for sale, as they have on hand only their foundation stock. Their stock of Oxford sheep, they write, consists of only their breeders, which were selected last fall. They are all shearing ewes, weighing upwards of 200 lbs. each. They were the pick of two flocks of high merit, and some of their ewes they consider good enough to win in Toronto. Messrs. Armstrong claim that nothing is too good for them. They paid a long price for the ewes, but they are well satisfied with them. The Yorkshire pigs they are now offering are from a very large litter. They are from a large sow of excellent show quality, kind and an excellent milker, and one of the best breeders they have had. She is now raising fourteen pigs herself, and five of the litter were given to another sow which farrowed about the same time. In collies, Messrs. Armstrong believe they have one of the best females in Canada. She was bred to "Parbold Picador", conceded to be the greatest sire living to-day. She will probably whelp before this is read. They also have two Canadian bred females of high-class quality that will whelp later.

These breeders also have rose-comb Rhode Island Reds, bred to lay, and slate-colored turkeys.

#### Drainage Expert.

The farm Drainage Campaign, inaugurated by the Ontario Agricultural College in 1905 has developed such proportions that it has become necessary to divide the work of the Department of Physics. Professor W. H. Day, as head of the Department, will continue in that capacity, and besides teaching will conduct experiments in Evaporation, Cold Storage, Farm Power, Farm Water Supply, Ventilation, and so forth. The Drainage work has been assigned to J. R. Spry, and all correspondence regarding this important branch should hereafter be directed to him. Mr Spry has been associated with Professor Day in his drainage work almost from the beginning.

G. C. CREELMAN,



### Going to Decorate?

If you are going to "do" the dining-room or the bedroom, or even the kitchen, this spring, you need this book. It illustrates in photogravure, in colors, rooms done with Alabastine. It contains suggestions and ideas for color schemes, and it shows how you can do the work yourself.

## Alabastine

### Artistic Wall Tints

A copy of "Homes Healthful and Beautiful" costs but 15c. (coin or stamps), but if it saves you from making even one mistake—and there is nothing easier to make than mistakes in color—will it not pay for itself a hundred times over? Then send for it now and study it before you start housecleaning.

THE ALABASTINE COMPANY LIMITED

86 Willow Street Paris, Ontario

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Get Only 20c  
The Latest Modern Silage Methods

Tells you all there is to know about present-day silage feeding—how to build silos. Gives reliable and unbiased facts (we do not sell silos) on every silo built—home made—stave, hoop and octagonal silos—pit, brick, tile, cement, concrete silos—all modifications. Also covers every crop used for silage—4 of them. Here's an entirely new book—264 pages—better than former copies used as text books in colleges. Copyrighted November, 1914. Ten page index. We send it for 20c coin or stamps. Send for this new copy today.

### Silver's "Ohio" Silo Fillers

Write for catalog and four-color poster folders which we send free. Enclose 20c to cover duty and postage and we send "Modern Silage Methods" with them.

The Silver Mfg. Co.  
343 Broadway, Salem, O.

#### ANIMALS PAY THE COST

of clean, sanitary quarters in more work and better health.

PRATTS  
Disinfectant  
50 cts. qt., \$1.50 gal.  
Guaranteed or Money Back.  
Dealers every-where.

Pratt Food Co. of Can. Ltd. Toronto.



O.A.C. No. 72 Oats Pure, clean seed, germinates 98% by Govt. test. Free from smut, re-cleaned twice. Price \$1.00 per bushel. Cotton bago 25 cents extra. W. C. SHEARER. Bright, Ont.

Two Black Percheron stallions, 2 years old, weight, 1,600 or better; height, 16 or 16 1/2; extra quality, for sale at farmers' prices. NORMAN ATKIN, North Malden P.O. Amherstburg Station.

## DANGEROUS

as well as painful

Backache Neuralgia  
Lumbago Rheumatism  
Stiff Joints Sprains

**Gombault's Caustic Balsam**  
WILL RELIEVE YOU.

It is penetrating, soothing and healing and for all  
Sores or Wounds, Felons, Exterior Cancers, Burns,  
Boils, Carbuncles and all Swellings where an outward  
application is required CAUSTIC BALSAM HAS NO  
EQUAL. Removes the soreness—strengthens the muscles.  
Price \$1.50 per bottle. Sold by druggists or sent  
by express prepaid. Write for Booklet L.

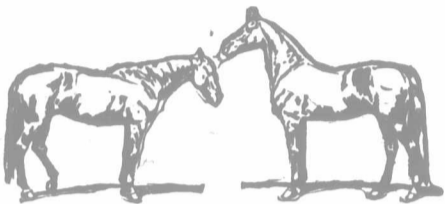
The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

MADE IN CANADA

## SAVE-THI-HORSE

(Trade-Mark, Registered)

SPAVIN REMEDY



### THIS SHOWS!

Such unusual and continual results as the following prove that this remedy is so reliable—and successful—that it is positively a safe and secure investment to buy it under our CONTRACT. This is a signed, legal contract to cure or refund the money. 20 Years a Success.

"If anybody writes from around here, send them to me and I will show what it has done," writes Mr. John Davis, R. 1, Annandale, N. J., and he tells this interesting experience: "I bought a mare that ran away and hurt her knee. They had tried about everything and the man I got her of said, 'You can't make her go sound.' I said nothing; but I got a bottle of Save-The-Horse and before one-half the bottle was used she was sound as a dollar."

"Two years later she went lame behind, and I could not use her. The doctor said 'a ringbone.' He gave a blister, and it got better in 3 weeks to fire and blister; at the end of 3 weeks the blister healed, but horse as lame as ever. So I told my wife I will use Save-The-Horse. You would be surprised, as in the next 3 weeks she was working every day and has never taken a lame step since. Two neighbors also had good success with Save-The-Horse."

**BOOK FREE** No Matter what remedy you think of using, Don't Fail to send for our FREE 96-page Save-The-Horse BOOK. It is a mind setting on 58 Forms of LAMENESS—illustrated. Write today! If only a postal.

We Or'd'rated the plan of treating horses—Under a Signed Contract to Return Money if Remedy Fails on Ringbone—Thoropin—SPAVIN—or ANY Shoulder, Knee, Ankle, Hoof or Tendon Disease. But write. BOOK, Sample Contract and ADVICE—ALL FREE (to Horse Owners & Managers). Address TROY CHEMICAL CO. 145 Van Horn Street, TORONTO, ONT.

Druggists Everywhere sell Save-The-Horse with CONTRACT, or we send by Parcel Post or Express paid.



## ABSORBINE

TRADE MARK REG. U.S. PAT. OFF.

Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is an ANTISEPTIC AND GERMICIDE [NON-POISONOUS]

Does not blister or remove the hair and horse can be worked. Pleasant to use. \$2.00 a bottle, delivered. Describe your case for special instructions and Book 5 K free. ABSORBINE, JR., antiseptic liniment for mankind reduces Strains, Painful, Knots, Swollen Veins, Milk Leg, Cuts, Concentrated—only a few drops required at an application. Price \$1 per bottle at dealers or delivered. W. F. YOUNG, P. D. F. 258 Lyman's Bldg., Montreal, Can.

## BITTER LICK

MEDICATED

### Salt Brick

Great Conditioner & Worm Destroyer

Bitter Lick is a compressed salt brick, medicated with roots, herbs, etc., in such proportion as will keep horses in excellent condition and free from worms. Bitter Lick keeps the appetite keen; all horses like it; tones the digestion and prevents colic. It has no cheap filler and takes the place of worm and condition powders, etc., keeps horses healthy for only one cent a week.

Ask your dealer or write for booklet to STEELE BRIGGS SEED CO., Winnipeg, Man. and Toronto, Ont.

## Belgian Horses

Stallions, mares and fillies, any age. French Canadian horses, mares and fillies, any age; also York-shire swine, any age.

DR. J. C. REID & BROS.,

Belgian Farm Chateaugay, P. Q.

## Experiments with Farm Crops.

The members of the Ontario Agricultural and Experimental Union are prepared to state that for 1916 they are prepared to distribute into every township of Ontario material of high quality for experiments with grain, fodder crops, roots, grasses, clovers and alfalfa, as follows:

### List of Experiments for 1916. Grain Crops.

1, testing two varieties of oats; 2a, testing O. A. C. No. 21 barley and emmer; 2b, testing two varieties of two-rowed barley; 3, testing two varieties of hullless barley; 4, testing two varieties of spring wheat; 5, testing two varieties of buckwheat; 6, testing three varieties of field peas; 7, testing two varieties of spring rye; 8, testing two varieties of soy, soja, or Japanese beans; 9, testing seven varieties of husking corn.

### Root Crops.

10, testing three varieties of mangels; 11, testing two varieties of sugar beets for feeding purposes; 12, testing three varieties of Swedish turnips; 13, testing two varieties of fall turnips; 14, testing two varieties of carrots.

### Forage, Fodder, Silage and Hay Crops.

15, testing the planting of corn at six distances in the row; 16, testing three varieties of millet; 17, testing two varieties of sorghum; 18, testing grass peas and two varieties of vetches; 19, testing rape, kale and field cabbage; 20, testing three varieties of clover; 21, testing two varieties of alfalfa; 22, testing four varieties of grasses.

### Culinary Crops.

23, testing three varieties of field beans; 24, testing two varieties of sweet corn.

### Miscellaneous Experiments.

28, testing two varieties of potatoes; 29, testing three grain mixtures for grain production; 30, testing three grain mixtures for fodder production.

Any person in Ontario may choose any one of the experiments for 1916 and apply for the same. The material will be furnished in the order in which the applications are received, while the supply lasts. Each applicant should make a second choice, as the material for the experiment selected as first choice might be exhausted before his application is received. All material will be furnished free of charge to each applicant, and the produce will, of course, become the property of the person who conducts the experiment. Each person applying for an experiment should write his name and address very carefully, and should give the name of the county in which he lives.

C. A. ZAVITZ,  
O. A. C., Guelph. Director.

### Gossip.

Ezra C. Schweitzer, Stratford, Ontario, writes "The Farmer's Advocate" that he has recently concluded an official test of his Holstein cow, Alice Mechthilde Lass, No. 15833. Her record for 7 days was 612.4 pounds milk and 23.837 pounds of fat, or the equivalent of 29.796 pounds of butter. In fourteen days she made 1,225 pounds milk and 47.20 pounds fat, or 59.003 pounds butter. In 30 days she made 2,605.1 pounds milk, 100.30 pounds fat, or 125.38 pounds butter, making an average for butter-fat for 30 days 3.85 per cent. "The record," writes Mr. Schweitzer, "indicates the excellent staying qualities, both for milk and fat." He also writes that he has for sale three male calves from this cow. The last calf was born on January 14, 1916, and weighed 120 lbs. at birth. There are for sale also two yearlings ready for service. Mr. Schweitzer concludes, "taking quality into consideration, I have these bulls marked very low."

## A Live Tip to Horse Owners



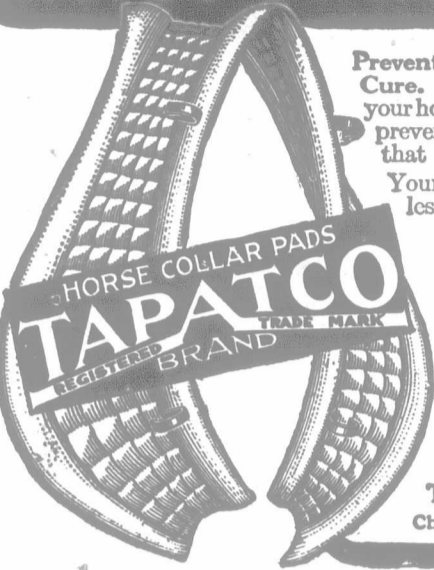
Prevention is better than Cure. Get more work out of your horses by using Tapatco pads. They prevent the galls, bruises and sore shoulders that come from loose, ill fitting collars. Your horse does poor work and suffers needlessly with an unpadded collar. Tapatco pads

### Fit Any Collar

Without adjustment. They are made of a good quality drilling and are filled with our own specially prepared composite stuffing. It is soft and springy. Porous and very absorbent. Quickly dries out after being used. These pads fit the neck and shoulders of your horse and prevent all chafes, galls and sores.

We also make a complete line of riding saddle pads. Ask the Dealer for Tapatco book of emergency horse remedies FREE.

The American Pad & Textile Co.,  
Chatham, Ont.



## Percheron Stallions and Mares



All imported from France, four to seven years old, all proven foal-getters, Government approved; first-class certificates, weighing 1,900 to 2,100 lbs. Blacks and grays. I am going to close them out. Now is your opportunity to get a good stallion at your own price. Terms to suit. Write at once for particulars and come.

J. B. HOGATE, - - - Weston, Ontario

## Imported Registered Stallions and Mares

In Percherons we have our very best to offer: Blacks and Grays, 3 to 5 years old. Belgians and Clydesdale Stallions, right type and quality. These have all been tested in the stud, and guaranteed good foal-getters. Mares from 2 to 5 years old. Percheron, Clydesdale and standard-bred, these are over 3 years old, all safe in foal. If you want a Champion Stallion or Mare, come along and we will sell for less money than any other man in the business, and terms to suit. Grenville is situated midway between Ottawa and Montreal, on the C.P.R., C.N.R. and G.T.R. Two trains daily each way.

J. E. ARNOLD GRENVILLE, QUL.

**For Sale—An Imported Clydesdale Stallion** 8 years old, weighing 2,000 lbs. A bay, nicely marked with a white face and four white legs. A sure foal-getter and a good worker. Been here for five years, and scores of his colts are to be seen. Price \$1,000 cash. No second price or terms.

HENRY M. DOUGLAS, Central Hotel, Elmvalé, Ont.

Quality IMP. CLYDESDALES IMP. Breeding Strengthened by the best Unsurpassed November importation I can now supply Clyde. stallions with the big size required, the flashiest kind of quality and the most popular breeding. Also Clyde. mares and one right choice French Coach stallion.

JAMES TORRANCE, Markham, Ont.

## ABERDEEN-ANGUS HEIFERS IN CALF

We are offering at reasonable prices a few two-year-old heifers that are in calf to our choice herd bulls. These heifers are by imported sires and dams.

Correspondence solicited or come and make your own selection.

Clydesdale Teams Prices Reasonable LARKIN FARMS QUEENSTON, ONTARIO

## ORCHARD GROVE HEREFORDS

Have several young bulls and heifers for sale. Satisfaction guaranteed.

L. O. CLIFFORD, Oshawa, Ont.

**Robert Miller Still Pays the Freight**—And he is offering in Shorthorns some of the best young bulls and heifers that can be produced. Young bulls fit for service some younger still; heifers fit for service and younger, and some in calf. They are of the best Scotch families, and some of them from great milking families. They are in good condition and made right, just what you want to make a proper foundation for a good herd, and suitable to improve any herd in the land. They will be priced so that you can afford to buy, if you will tell me what you want. Our business has been established 79 years and still it grows. There is a reason.

ROBERT MILLER, Strouville, Ontario

**Quality Scotch Shorthorns**—High-class breeding—We have fitted for immediate sale several extra choice young bulls of serviceable age at a price, quality and breeding considered that cannot be duplicated in the country; also high-class heifers.

RICHARDSON BROS., Columbus, Ont.

**Shorthorns 10 Bulls** 4 good ones 18 months of age, 3 twelve and 3 seven. 6 roans and 4 reds all registered and got by the good kind of stock, and will be sold cheap to make room. 80 breeding females to select from.

Jno. Elder & Sons, Hensall, Ont.

**Rosedale Stock Farm** For Sale—One 3 yr. old Shire stallion, one 3 yr. old Hackney stallion, both winners of 1915. Also two Shorthorn bulls 10 and 11 months old.

G. T. R., & C. P. R., & Electric Lines. Long Distance Telephone. J. M. Gardhouse, Weston, Ontario

**DUAL-PURPOSE SHORTHORNS** For Sale—One 2 yr. old, and two yearling bulls, closely related to "Royal Princess," the lat prize cow at Guelph which gave 51 lbs. per day, testing 4.6% fat.

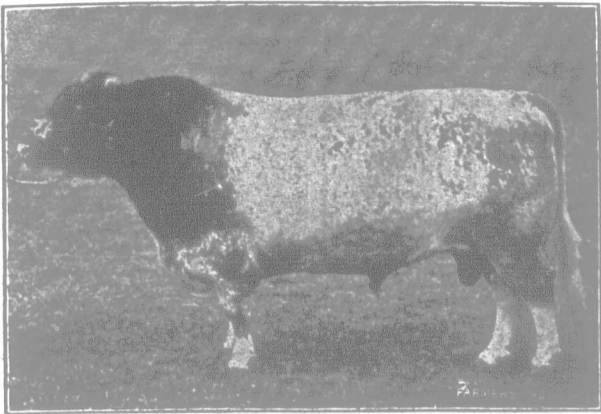
S. W. JACKSON, WOODSTOCK, ONT. Burgessville Phone

### SHORTHORNS AND SHIRES

For Sale—A few choice young bulls, cows and heifers, of high-class quality, choice breeding and from splendid milking dams. Also two young stallions and a few mares and fillies. Prices reasonable.

JOHN GARDHOUSE & SONS, Weston, Ont. C.P.R., G.T.R. & Electric Railway L-D Phone.

# Great Shorthorn Sale



## Wednesday, March 29th, 1916

At Fraser House Stables, London, Ont.

**THIRTY-FIVE YOUNG BULLS** include the best individuals that have been at public sale in Ontario in years, some from Record of Performance cows.

**THIRTY HIGH-CLASS HEIFERS** that will please the most exacting, the older ones well along in calf. Mainly of first-class Scotch breeding and bred along dual-purpose lines. Many from heavy-milking dams.

The consignment consists of selections from the herds of J. F. Gibson, J. Watt & Son, Harry Smith, The Nicholsons, Herb. Lee, Wm. Waldie and others.

Freights to any point in Ontario to Ontario purchasers will be refunded by the Ontario Government. We are making a special low rate to the Western Provinces.

Write for catalogues, and plan to attend the sale.

T. E. ROBSON, Auctioneer.

**HARRY SMITH - Hay, Ontario**

Manager of the Sale

# Dairy Shorthorn Bulls

From 12 to 14 months old, from good dams and by our stock bull, College Duke -85912- . Address—

## Weldwood Farm

Farmer's Advocate London, Ontario

# Twenty Imported Bulls

These imported bulls, along with 10 home-bred bulls, may now be seen at our farms. There are some choice ones among them. We also imported four cows and a heifer, all of which are forward in calf. An invitation is extended to anyone interested in this class of stock to visit us at any time. Correspondence will receive our most careful attention.

Burlington Jct., G. T. R.  
Burlington Phone or Telegraph.

J. A. & H. M. PETTIT  
Freeman, Ont

# The Salem Shorthorns

are headed by "Gainford Marquis" (Imp.). Records prove that he is the greatest Shorthorn show and breeding bull in existence. Special offering: Eight bulls from eight to fifteen months.

J. A. WATT, Elora, Ont., G.T.R. & C.P.R.

# Escana Farm Shorthorns

FOR SALE: Two imported bulls, proven valuable sires; 12 bulls, 10 to 20 months old, all by imp. sires and from high-class dams; also for sale, 20 heifers and young cows, several with calves at foot, all of very choicest breeding, and especially suitable for foundation purposes.

Mail orders a specialty. Satisfaction guaranteed. Burlington P.O., Ontario  
Mitchell Bros. Jos. McCrudden, Manager. Farm 1/4 mile from Burlington Jct.

**GLENGOW SHORTHORNS AND COTSWOLDS**  
Pure Scotch in breeding, we have an exceptionally choice lot of bulls for this season's trade, ranging in age from 8 to 15 months, big mellow fellows and bred in the purple. Also ram and ewe lambs of first quality.  
Wm. Smith & Son, Columbus, Ont. Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.

**"Maple Hall Farm" Shorthorns** Three choice young bulls, eight to twelve months old; also younger ones and some young cows with calves at foot. Two-year-old heifers and younger ones.  
O. BIRRELL & SON, Clarendon, Ontario  
Stations: Greenburn, C. N. R., Clarendon, C. P. R., Pickering, G. T. R.

**OAK LODGE STOCK FARM**  
Shorthorn Bull, 20 months old, bred from dam of milking strain. Two bulls, twelve months old. Will be sold at a price that will please customers.  
J. E. BRETHOUR & NEPHEWS BURFORD, ONT.

## Questions and Answers. Miscellaneous.

### Raising Young Pigs. I

1. One of my brood sows which has been running out in the barnyard all winter has frozen her teats. She is about to farrow in a week. Is there anything I can put on her teats so that she will let the young pigs feed?  
2. If I should have to raise some of the pigs, what is the best method of preparing cows' milk for them?  
E. T. M.

Ans.—1. The only thing that we believe can be done is to apply something that will be softening and healing. Vaseline, glycerine, or sweet oil should be good for this purpose. Rub the affected parts twice daily.

2. Add a little brown sugar to the milk, and if the cows are pretty well on in their lactation period it would be best to add a little laxative to the milk. The first few feeds may be given with a spoon, but they will soon learn to drink from a shallow trough.

### Veterinary.

#### Fatality in Sheep—Cracked Heels.

1. There is some disease among my sheep. They take sick suddenly, act stupidly and appear blind, but regain sight in a few hours. They stand with heads up and breathe heavily, but the breathing soon becomes normal. They refuse to eat. One made a spontaneous recovery in about a week. Another died in about two weeks. A third is sick now.

2. Horse struck his fetlock two years ago. The limb swelled and scratches developed. I treated it and it got all right, but when standing after a hard drive, if asked to stand over, he would sometimes lift the leg sideways, but never went sore or lame. Last winter the same occurred, and I again treated successfully; now the parts are swollen and cracked again.  
A. H.

Ans.—1. The symptoms indicate digestive trouble. Purge with 8 ounces raw linseed oil and follow up with 10 grains nux vomica three times daily. If the bowels do not act freely in 24 hours repeat the dose of oil.

2. This horse appears predisposed to cracked heels. Your treatment so far has given good results, and it might be wise to adopt it again. I would advise purging with 8 drams aloes and 2 drams ginger, and following up with 1 oz. Fowler's solution of arsenic three times daily for a week, and dressing the cracks three times daily with oxide of zinc ointment. To each oz. of which has been added 20 drops of carbolic acid. Keep clean and dry as possible and do not wash.  
V.

### Gossip.

#### A. Groff's Shorthorns and Yorkshires.

There are not many of the higher class herds of Shorthorns in this country that at some time in the last twenty-five years have not been materially strengthened by the addition of one or more animals purchased from the well-known Groff herd near Elora, Ont. This herd has turned out many choice Shorthorns, whose breeding left little to be desired, Miss Ramsdens, Duchess, Cruickshank Lady Fanny, Merry Lass, and Minas, the get of such famous and well-bred bulls as Imp. Proud Gift, Imp. Joy of Morning, Valley Farm Argonet, Royal Hero, etc. At the present time at the head of the herd is Roan Winner 92685, by Imp. Royal Winner; dam Miss Groat 2nd, by Imp. Scottish Pride; grandam, Imp. Meg Groat. He is a roan of great scale and splendid balance. The several sons of his for sale look like developing into herd headers of sterling worth. One is a red, 10 months old, a Miss Ramsden, this is an extra choice young bull of heavy, even flesh. Another is a roan yearling, Lady Fanny. Another is an 8-months-old Merry Lass. Another, Lady Fanny, is 7 months old. Still another 7-months one is a Mina. These are for sale, as well as a limited number of heifers. In Yorkshires for sale are some choice 6-months-old sows. Minnies and Colston Sallies, got by a Duke of Kent sire. Also younger ones of either sex. For particulars write A. Groff, R. M. D., Elora, Ont.

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Our herd is headed by Beautys Erwin -8736—grand champion bull at Edmonton 1914 and London 1915. He is out of our champion cow Beauty 4th, -1852—, and sired by Erwin C. -8735—; grand champion bull at Chicago 1913. He is assisted by young Leroy, sired by grand champion bull Chicago 1913. We have stock by these bulls for sale.  
JAMES BOWMAN, Elm Park, Guelph, Ont.

### Tweedhill—Aberdeen-Angus.

Choice young bulls of serviceable age; also females. If you want anything in this line write: James Sharp R. R. 1, Terra Cotta, Ontario Cheltenham, C.P.R. & G.T.R.

### ANGUS BULLS

4 young Aberdeen Angus bulls, well bred, from 4 to 10 months old. Reasonable price or quick sale—also heifers.  
M. G. RANSFORD, Clinton, Ontario

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Get a high-class Angus bull and breed the champion steers. I have showing quality bulls from 10 to 24 months of age; also choice 1- and 2-year-old heifers.  
T. B. BROADFOOT, Fergus, Ont.

### Middlebrook A.-Angus

For sale are several choice prize-winning sons of my 1915 gr. champion bull, Black Abbot Prince, and his Toronto and London 1st prize 1/2 brother, also winning daughters of the same. John Lowe, Elora, Ont., R.M.D.

### Aberdeen - Angus

A few choice heifers and three young bulls from the imported sire "Pradmere" for sale—Apply to A. DINSMORE, Mgr., "Grape Grange" Farm, Clarksburg, Ontario. 1 1/4 miles from Thornbury, G. T. R.

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**SHORTHORNS**

Five high-class bulls, from 10 to 15 months, two sires by Real Sultan, others just as good. Am pricing them low, as it is getting late in the season. A few heifers and young cows to offer, some milking families. Freight paid.

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The products of this herd have been in very strong demand. There's a reason. Can always supply a good young bull at a price which will make him well worth the money. Not many females for sale but can show a few which should interest you.

**W. A. DRYDEN, Maple Shade Farm, Brooklin, Ont.**  
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**Spring Valley Shorthorns** Herd headed by the two great breeding bulls Newton Ringleade (imp.) 73783, and Nonpareil Ramsden 83422. Can supply a few of either sex.

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**Shorthorns and Clydesdales**—Two bulls, serviceable age, both good ones and are offering females of all ages. Have some choice heifers bred to Clansmar 87809; also two mares in foal, 3 and 4 years old, and one 2-year-old filly. All from imp. stock.

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**JAMES McPHERSON & SONS, DUNDALK, ONT.**

**Shorthorns PRESENT OFFERING**

**Bulls** Master Butterfly, red roan, calved, June 1917 sired by Nonpareil Lord = 87184 =. Dam Blythsome Girl 5th, = 66982 =. Master Ramsden, red roan, calved, May 1915, sired by Nonpareil Lord = 87184 =, dam, Miss Ramsden 144th, by Lord Lavender = 70558 =. Fifteen choice yearling heifers.

**A. J. HOWDEN, COLUMBUS, ONT. Myrtle, C. P. R. & G. T. R. Oshawa, C. N. R.**

**Woodholme Shorthorns** For Sale—Four bulls sired by imp. Lord Gordon, fit to head good herds and a number of cheap bulls for graded herds, from good milking families. Also a few good heifers in nice condition that I can sell worth the money. Mail orders filled with greatest care. Write your wants.

**G. M. FORSYTH, Claremont, Ontario**

**SPRUCEDALE HOLSTEINS** 3 bulls from a cow with official test of 29,796 lbs. butter 7 days and 59,003 lbs., 14 days. Last calf born Jan. 14, 1916, weight 120 lbs. at birth, is nicely marked and every inch a show calf. Considering quality these bulls will be priced very low.

**EZRA G. SCHWEITZER, R. R. No. 3, Stratford, Ont.**

**Questions and Answers, Veterinary.**

**Fatality in Calves.**

I have lost two calves at about 6 weeks of age. Was feeding skim milk, calf meal, turnips, rolled oats oil cake and clover hay. They took diarrhoea at 4 weeks of age, and in a few days a swelling appeared on their lower jaws about the size of a hen egg, and was very hard. The breath was fetid. After one died I opened the lump, which contained a white granular substance. There was also a patch on one side of the tongue. Now a third calf has a lump on its jaw, but has not diarrhoea.

**C. B. B.**

Ans.—The diarrhoea was doubtless caused by too heavy feeding. If possible give some whole milk, but whether whole or skim-milk add to it 1/4 of its bulk of lime water, in addition give a little chopped oats with the hulls sifted out, a little oil cake, and a reasonable allowance of good clover hay. It is not the infectious form of diarrhoea, else it would attack them at an earlier age. We do not understand the nature or the cause of the lumps you mention. It would require a personal examination to enable a man to give a valuable opinion on this point. It would be wise to call in your veterinarian.

**Miscellaneous.**

**Lump Jaw.**

About a week ago a two-year-old steer showed a swelling under his jaw. In examining it I find a loose lump close to the windpipe, just below the jaw. It is still swelled and the lump is bigger than an egg.

1. Will this develop into lump jaw?
  2. Will an operation cure it?
  3. Is it contagious before it breaks and runs?
  4. What is the cause? Is it from an injury? The animal is in good condition and healthy.
  5. Will it come back if killed now, or will it breed in cattle?
  6. Do you think it would be caused from feeding barley straw?
  7. Do you advise feeding salt daily to cattle and horses on their feed?
  8. Is two ounces too much at one feed?
- H. N.**

Ans.—1. The symptoms point to lump jaw.

2. Treatment for lump jaw consists of giving iodide of potassium three times daily. Commence with one dram dose, and increase the dose by one-half dram daily until the steer refuses feed and water, fluid runs from eyes and mouth, and the skin becomes scruddy. When any of these symptoms become well marked cease giving the drug. If necessary, repeat treatment in three months. When the bone is not involved the quickest method of treatment is to dissect the tumor out. The operation should be performed by a veterinarian. When taken in time treatment results in a cure.

3. It is not considered so.

4 and 6. Lump jaw may be caused by an injury which permits the fungus of the disease to secure a lodging place. It is claimed that this fungus has been found between the fibers of pieces of barley, found embedded in the grains, and on the awns of cereals which were in the tongues of cattle. It is supposed that infection occurs by the mouth from cattle partaking of food material carrying the fungi which obtain entrance through wounds in the delicate membrane lining the mouth cavity. When feeding barley straw, the membrane of the mouth might easily be torn by a barley awn, and the disease thus gain entrance.

5. Treatment should effect a cure, and the disease is not considered to be hereditary.

7. We would advise having salt before horses all the time, but do not know as it matters so much with cattle. Some feeders prefer salting their cattle with the feed.

8. Some animals desire more salt than others, but on an average from one to two ounces of salt will be consumed daily if it is available. We doubt if it is advisable to feed over two ounces.

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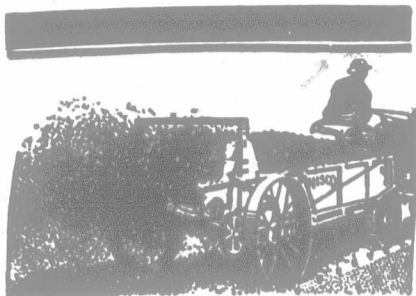
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Our Illustrated Catalogue will be mailed on request.

Edward Baker & Sons, Proprietors. Winchester, Ont.

### Questions and Answers. Miscellaneous.

**Skim-milk Versus Whey for Hogs.**  
Which, in your opinion, is better for pigs, skim-milk or whey? Should skim-milk be fed when warm from the separator or allowed to stand for a time.  
Wm. T.

Ans.—Skim-milk is considerably more valuable as a feed for hogs than is whey. It is figured that about 500 pounds of skim-milk is equal to 100 pounds of corn or other grain, or from 750 to 800 pounds of whey equal 100 pounds of grain. We prefer feeding the skim-milk while sweet, to young pigs, but for older pigs it has been claimed that they will be more thrifty on sour milk than on sweet milk. One pound of grain to four pounds of skim-milk is very satisfactory proportions to feed.

**Feeding Value of Corn.**  
What is the difference in analysis between corn of the Dent varieties and Southern Sweet varieties? We have some successful feeders who claim that Southern Sweet corn gives them better results than varieties of corn that are expected to give their feeding value through the grain.  
W. H.

Ans.—We are not prepared to give the exact analysis of the Southern Sweet variety. The ordinary sweet corn is very similar to the Dents, according to chemical analysis. The Southern Sweet is a heavy yielder, but we cannot state definitely its feeding value compared with the Dent or Flint varieties. Prof. Day, of the Ontario Agricultural College, is testing out the feeding value of different varieties of corn, among which is the Southern Sweet. We expect the results of his investigations will be available at a later date.

**Alfalfa.**  
I have five acres of new land that I purpose breaking up in the spring and sowing to oats and alfalfa. Will alfalfa grow successfully in St. Johns, N. B.? If not, what would you recommend?  
M. E.

Ans.—If soil conditions are satisfactory and the seed is of a hardy variety we see no reason why alfalfa should not give good results. However we would not advise sowing alfalfa with the first crop on new land, as there is usually a considerable amount of natural grass grows up, which has a tendency to choke out the alfalfa plants. We would prefer cropping the new land for a year or two and endeavor to have it free from weeds and natural grass, then alfalfa may be sown with a nurse crop, preferably one bushel of barley per acre, in the spring, or sown on well-prepared land without a nurse crop.

**Variety of Corn—Warts.**  
1. What variety of corn would you consider best to grow in this section of the country where the seasons are short? The soil is a sandy loam.  
2. I have a pure-bred Shorthorn heifer that has growths resembling warts, on her neck. They appear to be loose on the outside of the skin. Two lumps are about one-half the size of a hen's egg, and smaller ones are coming. They appear to grow rather quickly. I would like you to tell me what they are and how to remove them.  
C. B.

Ans.—1. In a district where the season is short it may be difficult to grow a variety of corn that can be depended on to mature. However, for silage purposes, the flint varieties, as Longfellow, Compton's Early or Salzer's North Dakota, and the earliest of the Dent varieties should give good returns. Golden Glow is a Dent corn which is claimed to be a quick maturing variety. Wisconsin No. 7, White Cap Dent, Bailey and Leaming are also varieties of Dent corn that are highly recommended, but are not quite so early as varieties previously named.  
2. Evidently the growths are warts, and may appear without any apparent cause. A daily application of butter of antimony, or other caustic, will eventually remove them, but in cases where they are large it is advisable to dissect them off and dress the raw surfaces twice daily, until healed, with a five-per-cent. solution of carbolic acid.

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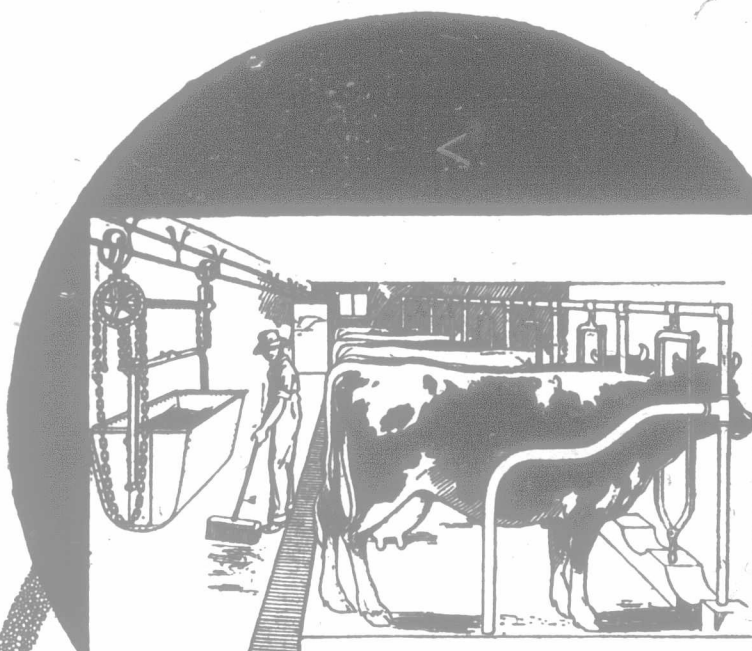
**HOSPITAL FOR INSANE, Hamilton, Ont.** For Sale—Holstein Bulls, months from Record of Performance or Record of Merit dams and the grand bulls Sir Korndyke Wayne Dekol, grandson of Pontiac Korndyke, or Lakeview, Duchland Le Strance, a grandson of Count Hengerveld Fayne Dekol. Prices right. APPLY TO SUPERINTENDENT.

**QUEEN CITY HOLSTEINS**  
Present Offering is 10 young bulls, from 6 to 14 months of age, the records of whose dams sires dam and her full sister, range from 28 to 32 lbs. They are sons of King Lyons Hengerveld Segis.  
R. F. HICKS Newtonbrook, Ont. On T. & Y. Railroad Line

**Cloverlea Dairy Farm** offers for sale a choice 23-lb. bull ready for immediate service. Write us for price and particulars. We have also a limited number of choice young bulls from our herd sire, Pontiac Norine Korndyke, from R. O. M. dams which will be priced right. L.-D. Phone.

**GRIESBACH BROS., Collingwood, Ontario**  
**Clover Bar Holsteins** My special offering just now are some choice young bulls out of official record dams and sired by Count Mercedes Ormsby, whose dam has 3 30-lb. sisters, and a 24-lb. 4-year-old and a 21.06-lb. 3-year-old daughters and his sire was the great Sir Admiral Ormsby. Also a few females.  
PETER SMITH, R. R. No. 3, Stratford, Ont. Stratford or Sebringville Stations.

**EVERGREEN STOCK FARM—REGISTERED HOLSTEINS**  
Present offering: Several bull and heifer calves; also a few yearling heifers bred and ready to breed. Write for prices and descriptions. Bell phone.  
A. E. HULET NORWICH, ONTARIO



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ORMSTOWN, P. QUE.

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- 2 First-class yearling heifers.
- 1 First-class yearling bull (extra) fit for immediate service.
- 2 First-class bull calves.

All sired by Royal Merger II, out of my best cows.

Also 2 mares, 4 years; 3 imported, registered Shetland ponies; 1 gelding, coming 2. Clydesdale mares and fillies of the very best breeding and conformation. Apply to:—

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Two well bred Holstein Bulls for sale, one 4 months, the other 1 year old. Priced right for quick sale.

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SIR LYONS HENGERVELD SEGIS 69859

I have for sale three sons of the above sire, from 6 to 16 months old, from large and high-producing cows.

GEO. COOPER, Willowdale, Ont.  
E. & Y. Railroad Line.

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Two bulls over a year old, three more fit for service. Two grandsons of "Rag Apple Korndyke 8th" (May) and several sons of "King Segis Pontiac Duplicate," one of the best.

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Offers choice bulls with 20,000 lb. breeding, including Pontiac Korndyke Plus, 2 years old, out of Plus Pontiac Artis, 20,900 lbs. milk, 985 lbs. butter, champion 3-year-old of Canada in R.O.P. test, and sired by Inka Sylvia Beets Posch, the sire of May Echo Sylvia, champion milk cow of the world for 120 days, and the only bull in Canada with two 33-lb. daughters. Also the champion yearling bull at Guelph, by the same sire, and another yearling with four 20,000 dams in his pedigree. Also a few richly-bred young females.

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The only herd in America that has two sires in service whose dams average 119 lbs. milk a day and over 35 lbs. butter a week. Cows that will give 100 lbs. milk a day are what we are trying to breed. At present we have more of them than any other herd in Canada. We can supply foundation stock of this breeding. Visitors always welcome. Long-Distance Phone.

D. C. FLATT & SON, R.R. 2, Hamilton, Ont

## RIVERSIDE HOLSTEINS

Herd headed by King Johanna Pontiac Korndyke, a grandson of Pontiac Korndyke, and a brother of Pontiac Lady Korndyke, 38.02 lbs. butter in seven days, 156.92 in 30 days—world's record when made.

J. W. Richardson, R. R. No. 2, Caledonia, Ontario

Quality and Production are combined in the dams of the young bulls for sale; dams average from 25 to 31 lbs. butter in 7 days. Also females of all ages for sale.

M. L. HALEY

Springford, Ont.

M. H. HALEY

Dumfries Farm Holsteins—Think this over, we have 175 head of Holsteins 50 cows milking, 25 heifers due to calve in the fall, and 60 heifers from calves up to 2 years, as well as a dozen yearling bulls, and anything you may select is for sale. Breeding and individuality the very best.

S. G. & ERLE KITCHEN, St. George, Ont

30-lb. Bred Holsteins 30-lb. The home of Sir Sadie Korndyke Segis, sire of the 4-year-old 49 lb. cow, Dan Sadie Korndyke Segis, who is the sire of the King Segis De Kol Korndyke, 31.74 butter. We have some of his bull calves for sale out of cows with records up to 26 lbs. Write for extended pedigree, or come to see them.

D. B. TRACY, Cobourg, Ont.

## For Sale---Sons of King Segis Walker

From high testing daughters of Pontiac Korndyke. Photo and pedigree sent on application.

A. A. FAREWELL

OSHAWA, ONTARIO

## Questions and Answers. Miscellaneous.

### Re Guinea Fowl.

EDITOR "THE FARMER'S ADVOCATE":

Having seen in Feb. 24th issue of "The Farmer's Advocate" a question asked about guinea fowl, I would say the hen bird is always distinguished by the call "go-back!" "go-back!" while the male bird makes a noise like "tut-tut-tut." I would like also to impress upon the minds of the readers that a pair of guineas are very profitable on the farm, as they are a sure cure for hawks. If a hawk makes its appearance the guineas make such a noise that the intruder never stops to see what it is.

A CONSTANT READER

### Material for Stable Wall.

1. How many cubic yards of gravel will be required to build a wall 62 by 44 feet, 1 foot thick and 8 feet high?

2. How would you prefer starting the foundation?

3. How many barrels of cement would be required to build the said wall?

4. Do you think a 12-inch wall is heavy enough?

5. Is there any use putting three inch tile in the wall for ventilation?

6. Is concrete considered to make a better wall than one built of stone?

7. What size windows and how many would be sufficient to light this size of stable?

8. How many head of horses and cattle should a stable this size accommodate?

9. How strong should the mixture of cement and gravel be made for the wall?  
W. E. M.

Ans.—1. About 63 cubic yards of gravel will be required to build the 8 feet of wall above ground. If the foundation is built 15 inches thick and 2 feet in the ground it will require about 20 cubic yards of gravel, or, if built 20 inches thick, 36 cubic yards.

2. The bottom of the wall should be below the frost line, and rest on solid ground. The depth to which to dig the foundation in order to get below the frost line will depend on location and exposure. A trench, 2 feet deep, should be sufficient. On solid ground a foundation 15 inches thick should be sufficient, but if the ground is anyway springy it would be wise to make a wider footing. A tile drain should be put in just below the foundation to prevent water standing around the wall. If the ground is dry it lessens the danger from injury to the wall by frost.

3. Using gravel and cement in the proportions of one of cement to eight of gravel and putting in a foundation 2 feet wide and 15 inches thick will require about 68 bbls. of cement.

4. If carefully built, it should be satisfactory.

5. There are more satisfactory methods of ventilation than by using tile. If a sufficient number of three inch tile are used they would no doubt aid in ventilating the stable.

6. We do not think so.

7. Five or 6 windows, 3 by 4 feet in size, on each long side, and 2 or 3 on each end of the stable should furnish sufficient light.

8. It would depend on how the stable was arranged. Across one end of the stable, 6 single horse stalls each 5 feet wide, a small box stall, and a narrow passage leading from the feed passage to the passage behind the horses could be put in. Twenty-two to 24 feet, depending on the width of the passages and length of stalls would be necessary for a horse stable. This would leave a space about 38 feet by 44 feet for cattle. If they are tied in two rows lengthwise of the stable and 3 feet allowed for each animal, 12 could be tied in each row, and a narrow passage left at one end. Allowing for a 9-foot passage behind each row of cattle, a 6-foot feed passage, 5 feet for length of stalls, and 2 feet for width of mangers, there would still be room for 4 box stalls or calf pens each 8 by 9 feet.

9. Walls built of one part cement to eight parts gravel have been standing for a number of years, and appear all right.



EVERY READER



Fernbrook Three yearling closely related champions and 1 ch

MOLLIER BR

## Lakes

A few young performance daughters sired by 35758, gr and Sir GEO. H. Dominion Exp D. McArt

STOCK Sired by my Whitehall King alf heifers an

D. M. Watt

High-Cl richly-bred yo rner cow, imps write me. Geo D. A. MacFA

For Sale Champion, To from pr 2 wann IRA NICHOL





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GEO. H. MONTGOMERY, Proprietor, Dominion Express Bldg., Montreal Que. D. McArthur, Mgr., Phillipsburg, Que.

STOCKWOOD AYRSHIRES

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If you are wanting a richly-bred young bull out of a 50-lb.-a-day and a year cow, imported or Canadian-bred dam or sire, write me. Females all ages. Prices are easy.

D. A. MacFARLANE, KESLO, QUEBEC.

For Sale

Two Jersey bulls, grandson's Fairy Glen's Raleigh dam of one, Junior Champion, Toronto, 1915. Several Berkshire pigs from prize winners at Toronto and Guelph.

IRA NICHOLS, Woodstock, Ont.

Questions and Answers. Miscellaneous.

On the Peace River District.

The following are questions sent to W. D. Albright, of the Peace River District, Alberta, after reading an article from his pen, published in our issue of Jan. 6. They may be of interest to readers who contemplate going West, and to any who knew Mr. Albright or who wish to improve their knowledge of the great country to the north and west of Edmonton. Mr. Albright has an article in this issue.

In the last issue of "The Farmer's Advocate," January 6, 1916, I noticed a letter from you; I took great pleasure in reading it. I wonder if you would care to answer this. I am enclosing stamps for a reply. My brother and I are desirous of locating on homestead land somewhere in Alberta during the coming summer, and would like to get the opinion and ideas of some one in your country as to routes to travel, etc., before starting out. I might say we have both been in the West for some time. At present we are not tied to any particular place. In your letter to "The Farmer's Advocate" you have described the land very well. In your section what price are horses to buy on the spot? Are oxen used by homesteaders starting up? How far from a railroad could a person locate a homestead in the spring? Is there any alkali there? Have any wet seasons since you have been there? Could a person obtain employment within nine miles of homestead while fulfilling homestead duties? Any information you would care to give me I would be very much obliged to you for.

Middlesex Co., Ont. M. J. M.

Ans.—I sincerely believe the Peace River country is the very best objective for the settler of to-day. Come any way you like to Edmonton, then by the E. D. & B. C. to McLennan, from which point you may come on west by rail to Spirit River, and thence to Grande Prairie, or you may take the Central Canada branch northwest to Peace River Crossing.

Horses, 1,200 to 1,400 lbs., of fair quality may be purchased for \$150 to \$250 or \$300 apiece. High premium on mares now. Oxen may be had at \$150 to \$200 per team, and are really the best for the homesteader of limited means. Three of them make a good breaking team. They can work on grass. By spring, steel will be in Grande Prairie and it may still be possible to locate a fairly good (though perhaps scrubby) quarter within fifteen or twenty miles from the end of steel.

There is little or no alkali.

Last season was wet, but not too wet for cropping. In fact, it was ideal.

You could probably obtain employment for spare time. I want a good man right now.

Freight rates are high. If you come, bring nothing but cash. All wants can be filled on the spot. Of course, if one had a lot of stock and machinery that he could not sell without heavy sacrifice, he might have to bring it along, but it is a nuisance to prospecting homesteaders. The country is so big, and one is never sure in just which part he will choose to locate. Grande Prairie is already pretty well taken up, though there are scattering homesteads, and I strongly recommend this locality.

W. D. A.

Having sold my farm here I am coming West this spring in search of a home. I would ask if you would please let me know as to whether there is any land to be had at a reasonable cost in your district. I would like about 640 acres in one block if possible. I have a large family, mostly boys, and some capital. I think by what I have heard of that place that it must be right.

Essex Co., Ont. J. O. M.

Ans.—Good land may be bought within a few miles of Beaverlodge in considerable blocks (half to a full section) at around \$10.00 per acre. Some ask more, some a little less. A few fair homesteads may still be had in the neighborhood also.

I should judge this country would

AYRSHIRES

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A few thoroughbred, pedigreed bull and heifer young calves, imported in dam from a specially-selected imported herd of pure-bred Ayrshires. Write for full particulars and prices to:

J. and C. C. Ballantyne

R. R. No. 1, "Evie" Stock Farm CHESTERVILLE, ONT.

Read what "The Scottish Farmer," Scotland, had to say regarding Messrs. Ballantyne's importation of Ayrshire Cattle:

A select shipment of Ayrshire cattle—14 two-year-old heifers and one bull calf—has just been despatched by Mr. Hugh B. W. Crawford, of Chapmanton, to the order of Messrs. J. & C. C. Ballantyne, Montreal, Canada.

Mr. Crawford drew from his own herds for eleven of the number, while the remainder came from the celebrated herds of Balmangan and Lessnessock. These were all selected with the profitable commercial idea in view, and were as far removed as possible from the tight vessel, short-teated type. Mr. Crawford's own heifers were all by sires which had given proof of their breeding qualities. In these were represented sires used at Chapmanton and bred at Garclaugh, Hillhouse (McKinlay) Holthouse, Whitehill, Hillhouse (Howie's) Kirkland, Lessnessock and Netherbert, and in every case these sires had dams with the very best records. The bull calf is out of a fine Envy Me dam, while his sire is Netherbert Neptune, by Brae Rising Star. It will thus be seen Messrs. J. & C. C. Ballantyne have a sire showing some inbreeding of the most

fashionable blood. The bull Netherbert Neptune, used for the last two years at Chapmanton, has for a dam the fine old cow in Mr. Clement's herd, Glasscock Nelly. She was bought by Mr. Clement, after winning twice in succession the 1,200 gallon class at Fenwick. It is also worthy of note that some of the Chapmanton heifers included in the lot were got by Chapmanton Eldorado, bred at Garclaugh, whose dam in Mr. Roberts' hand in America, in this year, so far, beating the famous world's champion, Brown Kate, in her records, while some heifers by Chapmanton Eldorado are this year making between 900 and 1,000 gallons in Mr. Crawford's herd in thirty-six weeks.

The heifers from Balmangan have for sire Findlaystone Baron Scott, a bull bred in the celebrated Netherbert herd from a high record dam, while of those from Lessnessock one was bred at Sunnyside, and the other was bred by Mr. Montgomerie on the intelligent commercial lines displayed in the management of his famous herd.

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We sell Best-by-Test Fertilizers at a cross figure and it pays to get our quotation. Arrange with your dealer to club in with others to make up a car load shipment. Write for free booklet—"Facts About Fertilizers." It tells kinds to use and how much, besides other valuable information. Yours for the asking.

FARMERS Club your orders for car-load shipments. Ask your Dealer for prices.

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City View Ayrshires

Every cow qualified in Record of Performance with an average of 4.5 per cent. fat. Do you want a young bull from one of them? All ages up to 18 months. Write: JAMES BEGG & SON, R. R. 1, St. Thomas, Ont.

Lakeview Farm, Bronte, Ont.,

offer for sale, sons and grand-sons of 100-lb. cows; one is out of a 24.66 lb. 3-year-old daughter of Lakeview Rattler's, 28.10 lbs., the latest Canadian champion 30-day butter cow 8 months after calving, and is half brother to L.D. Artis, 34.66-lb. Canadian champion senior 3-year-old. Terms to suit purchaser MAJOR E. F. OSLER, Prop. T. A. DAWSON, Mgr.

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LONDON, ONTARIO John Pringle, Proprietor Canada's Most Beautiful Jersey Herd—Half the herd imported from the Island of Jersey. Several cows in the Record of Merit and others now under official test. Some very choice stock for sale. When writing, state distinctly what you desire, or, better still, come and see them. Farm just outside city limits. We work show cows and show our work cows.

Brampton Jerseys

We are busy. Sales were never more abundant. Our cows on yearly test never did better. We have some bulls for sale from Record of Performance cows. These bulls are fit for any show-ring.

DON JERSEYS

Special Offering—A few choice yearling bulls fit for service, also heifer calves six months old, sired by Eminent Royal Fern. Write for what you want. D. DUNCAN & SON, Todmorden, R. R. No. 1, Duncan Sta., C.N.O.

Shropshires and Cotswolds for Sale—Yearling rams and yearling ewes a few imported 3-shear ewes, an extra good lot of ram lambs from imported ewes. Prices very reasonable.

JOHN MILLER, Claremont, Ont. Claremont, C.P.R., 3 miles Pickering, G.T.R., 7 miles Greenburn, C.N.R., 4 miles

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JOHN W. TODD  
A. R. No. 1, Corinth, Ontario

**Morrison Tamworths and Shorthorns**, bred from the prize-winning herds of England. Choice Tamworths, both sexes, all ages, 150 head to choose from. Choice Shorthorns, 3 extra fine red roan bull calves, 8 months old, dandies, also sows and heifers of the deep-milking strain.

CHAS. CURRIE, Morrison, Ont.

**Alderly Edge Yorkshires**

Two boars and two sows, farrowed Sept., weight about 150 lbs. Price right.

J. R. KENNEDY Knowlton, Que.

**Prospect Hill Berkshires**—Special offering for the trade: a fine lot of young sows that farrowed in June and July. Being bred and ready to breed; also some boars same age. Terms and prices right.

JOHN WEIR & SON, R. R. No. 1, Paris, Ont.

**Pine Grove Berkshires**—Sows bred and ready to breed. Boars fit for service. Young things, both sexes, from my prize-winning herd.

W. W. Brownridge, R. R. 3, Georgetown, Ont.

**Avonhurst Yorkshires and Collies**. We are offering young pigs either sex Feb. farrowed from a litter of 21, of which 19 are raised. These are choice pigs of the best breeding. We guarantee satisfaction.

B. Armstrong & Son, Codrington, Ont.

suit you. I am exceedingly well satisfied after 2½ years' experience.

Steel on the Grande Prairie branch of the E. D. & B. C. is expected to reach Grand Prairie townsite this month (March), and may be projected westward through Beaverlodge neighborhood this summer, though that is still quite problematical.

W. D. A.

I saw a piece you had written in "The Farmer's Advocate," and I thought I would like to write to you and see if you could tell me if there are any good homesteads to take there yet. Is the winter very cold? Is there any railroad near where you are?

Bruce Co., Ont. J. A. D.

Ans.—Our average winter temperature is not extreme, though we are subject to cold spells, especially in January. There are still a few fair homesteads in Grande Prairie, and many more in other extensive areas of the country. Steel is expected to reach Grande Prairie city (30 miles east of Beaverlodge) sometime this month. It is already (March 3) laid half-way down from Spirit River settlement (60 miles north of Grande Prairie).

W. D. A.

**Questions and Answers.**  
Miscellaneous.

**Breeding Age of a Cow.**

To what age will a Jersey cow breed if she is in good health and condition, and has a good mouth? SUBSCRIBER.

Ans.—We cannot say definitely, as it may vary with different animals. There have been cows eighteen or nineteen years old, and possibly older that bred regularly.

**Filly Has Worms.**

I have an eight-months-old filly which I have fed well on good hay and rolled oats, and given her a large box stall to run in. To-day I noticed she passed white worms 6 or 7 inches in length. She is thin and rough. What would you advise to give her?

S. C. W.

Ans.—Take 4 drams each of sulphate of iron, sulphate of copper, tartar emetic and calomel. Mix and make into 12 powders. Give a powder every night and morning, and when the last has been given, give six ounces raw linseed oil.

**Calf Losing Hair—Lump on Calves' Jaws.**

1. I have a calf about 6 or 7 weeks old which is losing all its hair. I have 3 of them in the pig-pen, and feed them skim-milk and hay.

2. Two of the above calves, and one which is tied in the cow stable, have lump jaw. Can you give me the cause and remedy?

3. I cut down a big willow tree in front of my house about four years ago, and the shoots grow from the stump every year. How can I kill this without digging up the stump? A. S.

Ans.—1. Symptoms would point to some parasite working on the body of the calf. Isolate the calf affected and whitewash the premises in order to prevent the spread of the parasite, as it may be contagious. If there is a scurf on the body of the calf, moisten with sweet oil to remove it, then dress the parts affected with tincture of iodine daily until cured.

2. It is rather singular that a number of calves should be affected the same way. Without a personal examination it is rather difficult to say just what the lumps are due to. We are inclined to think that the growths are tumors rather than lump jaw. If they are tumors they could be dissected out, the wound stitched, and then dressed three times daily until healed with a five-per-cent. solution of carbolic acid. If on opening the lump it is found to contain pus, all that will be necessary is to flush out the cavity three times daily, with the carbolic acid solution, until healed. We would advise having your veterinarian examine the lumps. If it should be lump jaw, the cause and cure is discussed under that heading in the question and answers column of this issue.

3. The willow is a very persistent grower, and we know of no satisfactory method of preventing the shoots from growing, except by girdling the stump near the ground and cutting off any new growth as soon as it appears.

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Largest and oldest importers and breeders of

**OXFORDS**

in Canada. Look up our show record, it will give you an idea of the kind of Oxfords we have for sale.

PETER ARKELL & SONS, Proprietors, Teeswater, Ont.  
Customers, beware of imitations of this advertisement

**Oxford Down Sheep—Summer Hill Farm**

We breed and import Registered Oxfords. Rams and ewes in any quantity for sale—all recorded. Positively no grades registered as pure-breeds; also no grades handled except by order.

PETER ARKELL & CO., Proprietors, Box 454, Teeswater, Ont.

**Maplehurst Herd of Tamworth Swine, S. C. W. Leghorns and White Rocks**—This herd has won about 90 per cent. of the prizes offered in the last ten years at the Canadian National, Toronto, Ottawa, London and the Guelph Winter Fair.

D. DOUGLAS & SONS, R. R. No. 4, Mitchell, Ontario

**BERKSHIRES**

My Berkshires for many years have won the leading prices at Toronto, London and Guelph. Highcleres and Sallys the best strain of the breed, both sexes, any age.

ADAM THOMPSON R. R. No. 1, STRATFORD, ONT  
Shakespeare Station, G. T. R.

**Lynnmore Stock Farm**

Our present offering is young breeding Berkshires, both sexes and any desired age, sire and dams imported, high class in type and quality and priced right. Also one 1 year-old imported dairy-bred Shorthorn bull with official backing for generations back.

F. W. COCKSHUTT, BRANTFORD, ONT

**ELMHURST LARGE ENGLISH BERKSHIRES**

From our recent importation of sows, together with the stock boar, Suddon Toronto we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.

H. M. VANDERLIP, Breeder and Importer, R. R. 1, Brantford, Ontario  
Langford Station on Brantford and Hamilton Radial

**Newcastle Tamworths and Shorthorns**

Boars ready for service March, April and May, others ready to breed; both sexes ready to wean. All descendants of Imp and Championship stock. Several extra choice young bull and heifer calves, recently dropped, grand milking strain; 2 bulls, 6 and seven months old, several extra choice young cows with calves at foot, also heifers all ages. Prices reasonable.

A. A. COLWILL, Newcastle, Ont.

**Cloverdale Large English Berkshires!**

Sows bred, others ready to breed; boars ready for service; younger stock, both sexes, pairs not akin. All breeding stock imp. or from imp. stock. Prices reasonable.

C. J. Lang, Burketon, Ont. R. R. 3

**Duroc Jersey Swine, Jersey Cattle**—In Duroc Jerseys we have either sex of any desired age, bred from winners and champions for generations back. In Jerseys we have young cows in calf, and young bulls, high in quality and high in producing blood.

MAC CAMPBELL & SONS, Northwood, Ont.

**YORKSHIRES**

Our offering never better. Champion hog winner of 12 firsts, 5 championships, 2 years' showing, still at the head. Boars and sows all ages, same breed.

WM. MANNING & SONS WOODVILLE, ONTARIO

**Cloverdale Seed**

(Governor)

No. 1 Red  
No. 2 Red  
No. 1 Alsike  
No. 2 Alsike  
No. 1 Alfalfa

No. 2 Timothy  
(This is a new variety)  
No. 3 Timothy  
White Clover

Terms of sale: extra at 2¢ east of Montreal. We guarantee the quality of our seed. Ask for our price list.

**TODAY**

Stouffville

**Cloverdale**

Governor

We guarantee on arrival, to us at highly reduced prices. No. 1 Alfalfa free of ordinary seed.

No. 1 Splendid  
No. 2 Good

No. 1 Extra  
No. 2 Extra

No. 1 Purified

Haldimand Northern

Freight paid  
Clover Seed  
Bags are 25 lbs.  
Cash must be paid  
Ask for samples  
We also have  
at 75c. in  
O. A. C.  
bush. lot

The Caldwell

**GRAND**

Are You

The Grand  
System  
HOMES  
EXC

MARCH 7TH

Tickets valid to include

**WINNIPEG EDMONTON**

Proportionate to Manitoba, S. P. M. O'FLY

Full particulars at

**CLOVER**

Our Alsike, Tim compare favorably with Canadian market.

Don't Buy

of doubtful germ  
Glow corn was the  
100% grows. Keen  
back if not satisfied.  
Spruce Row Farm

# Clover Seeds

(Government Standard)

	Per Bus.
No. 1 Red Clover	\$16.25
No. 2 Red Clover	15.75
No. 1 Alsike	13.00
No. 2 Alsike	12.00
No. 1 Alfalfa	16.00
(Northern grown)	
No. 2 Timothy	5.50
(This seed grades No. 1 Purity)	
No. 3 Timothy	5.00
White Blossom Sweet Clover	12.50

Terms cash with order. Bags extra at 25c. each. On all orders east of Manitoba of \$25 or over we pay the freight.

We guarantee seeds to satisfy or ship back at our expense. Ask for samples if necessary.

**TODD & COOK**  
Seed Merchants  
Stouffville Ontario

## CLOVER SEEDS

Government Standard

We guarantee our seeds to suit you on arrival, or you ship them back to us at our expense. We can highly recommend the grades marked No. 2 as being exceptionally free of weeds and good for all ordinary sowing.

RED CLOVER	Bush.
No. 1 Splendid Sample	\$16.25
No. 2 Good for purity and color	15.50
ALSIKE	
No. 1 Extra No. 1 for purity	12.50
No. 2 Extra pure and nice color	11.00
TIMOTHY	
No. 1 Purity, No. 2 appearance	5.50
ALFALFA	
Haldimand grown—All sold.	
Northern	16.00

Freight paid on \$25.00 worth Clover Seed.

Bags are 25c. each extra. Cash must accompany order. Ask for samples if necessary. We also have O. A. C. No. 72 Oats at 75c. in 10 bushel lots. O. A. C. 21 Barley—75c., in 20 bush. lots. Jute bags, 7c. each.

**The Caledonia Milling Co.**  
Limited  
Haldimand Co. CALEDONIA, ONT.

## GRAND TRUNK RAILWAY SYSTEM

### Are You Going West?

The Grand Trunk Railway System will Run

### HOMESEEKERS' EXCURSIONS

Each Tuesday

MARCH 7TH TO OCTOBER 31ST (INCLUSIVE)

Tickets valid to return within two months inclusive of date of sale.

WINNIPEG and return \$35.00  
EDMONTON and return \$43.00

Proportionate low rates to other points in Manitoba, Saskatchewan and Alberta. Full particulars and tickets on application to agents.

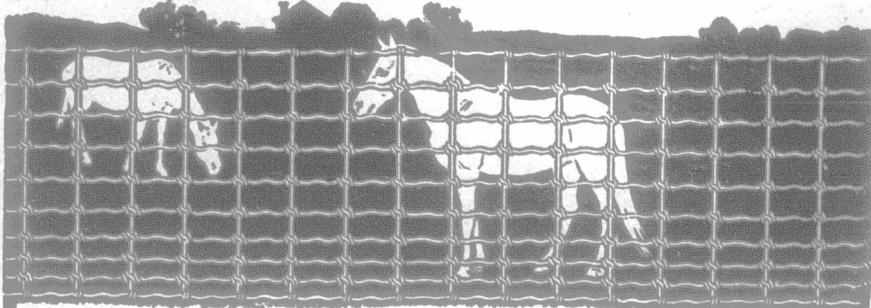
## CLOVER SEED

Our Alsike, Timothy, Red Clover, etc., will compare favorably with anything on the Canadian market. Send for price list. "Purity Our Pride"

S. F. M. O'FLYNN & SON, Shelburne, Ont. District of Columbia

## Don't Buy Seed Corn

of doubtful germination qualities. Our Golden Glow corn was dried in furnace heat. Almost 100% grows. Keep it dry and test it. Money back if not satisfied. \$8.00 per bushel shelled. Spruce Row Farm, Route No. 2, Sarnia, Ont.



## Fencing? Yes, but what kind?

The farmer who thoroughly examines the relative merits of the various brands of wire fences offered to him will not have any difficulty about deciding upon the one he ought to have. Let him decide by that most unerring of all tests—weight. Why judge by weight? Because weight means strength, and strength means durability and long life. Of the different makes of wire fences, there must naturally be one that will weigh heavier than the rest.

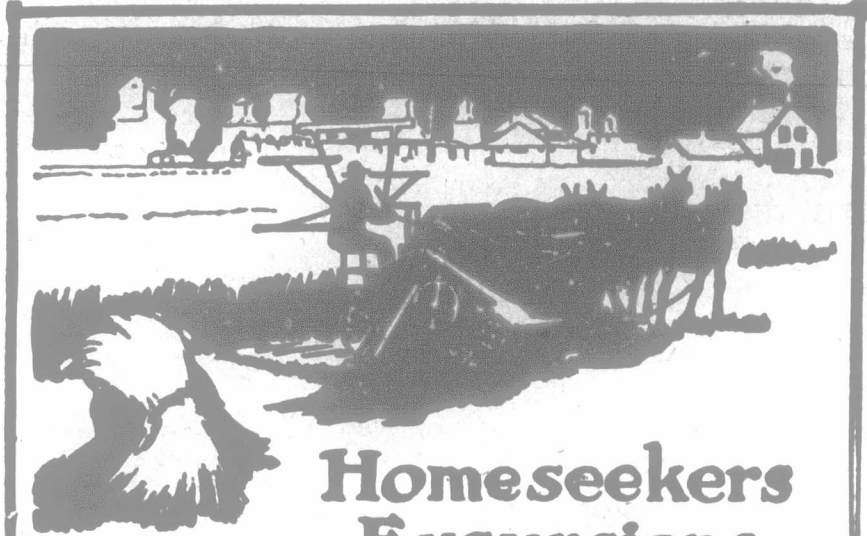
### The heavy-weight among fences is the "Ideal"

The reason is that all the wires are full gauge No. 9 hard steel wire; every wire is full of life and strength, and heavily galvanized to properly protect and preserve that strength. You therefore get longer service from "Ideal"—most for your money in strength, durability and all-round satisfaction.

## Ideal Fence

It is to your interest before buying fencing to get a copy of our catalogue; a postal will bring it.

The McGregor-Banwell Fence Co., Limited  
Walkerville, Ontario, Canada. 22



## Homeseekers Excursions

Every Tuesday, March to October "All Rail"

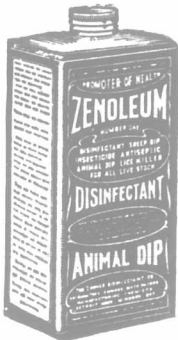
Every Wednesday During Season Navigation "Great Lakes Route"

Somewhere out on the prairies where last year Canada's Greatest Wheat Crop was produced there is a home waiting for you. The

## CANADIAN PACIFIC

will take you there, give you all the information about the best places, and help you to succeed.

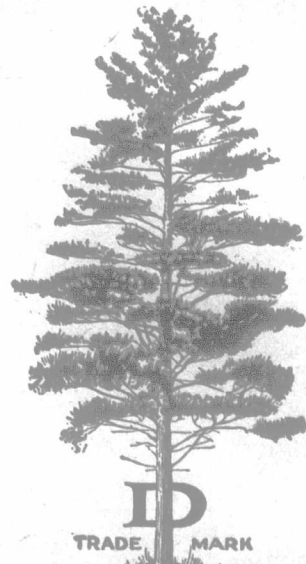
Particulars from any Canadian Pacific Ticket Agent, or write W. B. Howard, District Passenger Agent, Toronto.



## Zenoleum Kills Lice

Every owner of Poultry or Live Stock is constantly fighting against those pesky parasite pests, lice, mites, fleas and ticks, that torment his cows, horses, pigs, sheep and poultry. Zenoleum kills these pests. Zenoleum is harmless, will not burn, is not greasy or dirty, and will not poison. It is the cheapest and most powerful Germicide. It is used at the Dominion Experimental Farms at Ottawa, at Guelph and by 50 Agricultural Colleges in Canada and U.S.A. A \$1.50 tin makes 80 gallons of Disinfectant dip. Write for Booklet. Ask your dealer or send 25 cents for a tin containing enough for 5 gallons of dip, carriage prepaid. Write for Booklet—How to Cure Sick Livestock.

ZENNER DISINFECTANT CO., Sandwich St., Windsor, Ont.



TRADE MARK  
IT STANDS ALONE  
"PINE TREE"

## TIMOTHY SEED

An extra re-cleaned and pure seed at moderate cost.

ASK YOUR DEALER

If he cannot furnish you, write  
**THE ALBERT DICKINSON CO.**  
Seed Merchants CHICAGO, ILL.



Blocks wheels and takes profits.

## MICA AXLE GREASE

Kills friction and makes profits.

Dealers Everywhere

The Imperial Oil Company Limited

BRANCHES IN ALL CITIES

ALWAYS WINS field competitions because of its wonderful capacity

## See The "Bissell"

Disc Harrow in action and you'll buy no other. Write for Harrow Catalog to Dept. W  
**T. E. Bissell Co., Limited**  
Elera, Ontario

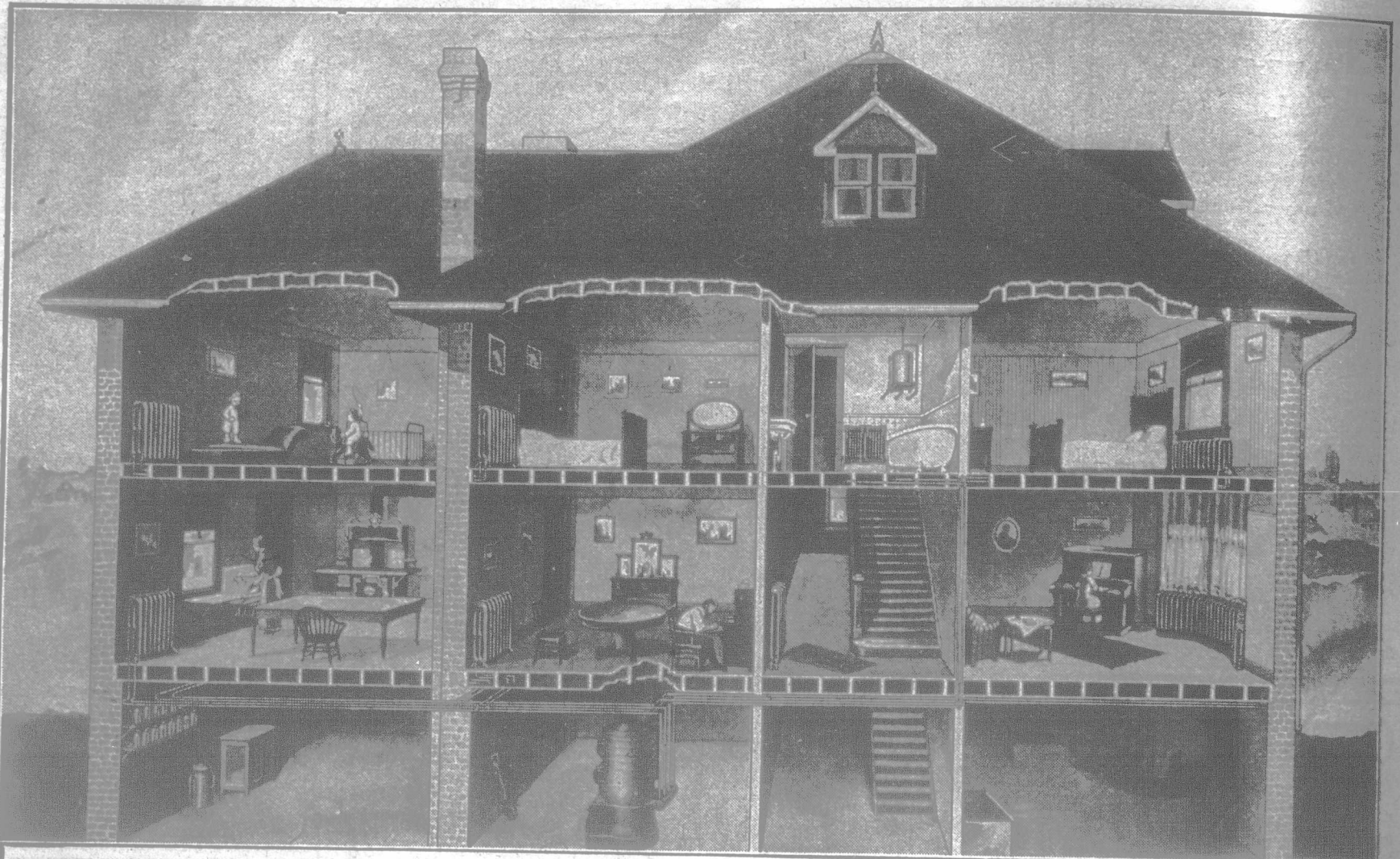
## Use Agricultural Lime

MANUFACTURED BY

**Beachville White Lime Co.**  
Limited

BEACHVILLE, ONTARIO.  
Our lime stone is highest grade in Canada

Mention this Paper



## Do you realize what a difference a Gurney-Oxford Hot Water System will make in YOUR Home?

**F**OR seven months in the year it means all the difference between rooms that are cold, miserable, damp, bleak and desolate; and rooms and hallways that are comfortable, warm and liveable every hour of the twenty-four. It means the danger of Rheumatism, Lumbago and Sciatica to yourself and your wife, and Bronchitis, Colds, Pneumonia to your children reduced to a minimum.

**T**HE picture shows a house equipped with Gurney-Oxford Hot Water Heating. It is absolutely comfortable every day of the winter, no matter how cold it gets or how bitter cold the winds may blow. Every room, every hall, from cellar to attic, is filled with a natural, balmy warmth, just exactly the amount of heat the owner wants. You can have this, too, without waiting to build. Your present house can be made as comfortable as the finest city home, at small cost and little bother.

A system of pipes leads from the Boiler all through the house, and back to the boiler. These pipes are full of hot water, which is kept in circulation by the heat in the boiler.

The hot water runs through radiators in the various rooms, and these give off just the desired amount of heat. No "water system" is required, a few buckets of water placed in the system in the fall last all through until spring. No trouble at all.

Hot water heating warms the air just as it is found inside the house—no air-shafts or cold-air ducts needed. Heats the air without changing it, without adding gases, without using it up. It's the latest and most scientific way of heating. Every city home has hot water heating. Generally Gurney-Oxford Hot Water Heating, the tried and proven fact.

It means that instead of the winter months being a period of dreadful days and dreary nights, they will become a period of comfortable rest and preparation for next seed-time and harvest. It means longer life to you.

It means that you and your wife and children will be healthier and happier. It means that the children will not be anxious to run away from the farm to the city as soon as they can paddle their own canoe.

It means that your help will be more likely to stay with you. It means that your home will be the admiration and envy of your neighbors.

It means the warm, comfortable home in winter time that the city man has come to regard as his right. A right which is equally your right.

You say "What does it cost?" We reply "It costs little, very little." A small outlay at first, yes, but in the long run nothing. You will save on fuel and doctor's bills in seven to ten years what the whole heating system costs. The heating system will last you a life time and return you and your family dividends of health and pleasure. Not only so, but a heating system on your farm will make the property much more attractive and easier to sell if ever you have reason to sell it.

Don't put the matter off another moment. Send for a copy of our booklet "City Comfort for Country Homes." It will give you a lot of information and some ideas as to cost. When you have received it and read it you will be in a position to get down to brass tacks and find out just what it costs to put a hot-water system in your home. Write us to-day, postal will do and your inquiry will get special attention.

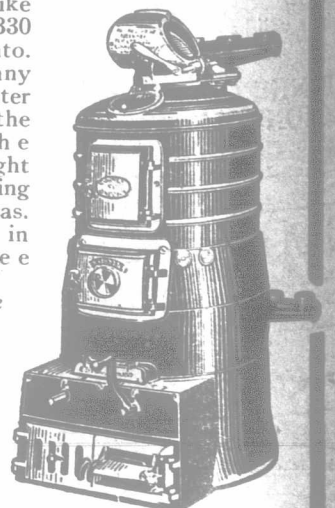
It means one fire only, to heat the whole house. No stove needed except for cooking. No carrying fuel into and ashes out of two or three rooms, no bother or danger from two or three fires in the house. Just comfort, absolute comfort every hour of the 24—warm floors, halls and rooms.

The Gurney-Oxford boiler is the best in the market. One feature alone, the exclusive Gurney-Oxford Economizer, has been revolutionary—this Economizer enables you to gauge your heat to suit exactly the weather conditions outside. A turn up or down modifies or increases the heat just as you wish.

The Boiler itself burns either coal, or up to 40-in. wood, depending on the boiler you select.

The cost of the Boiler, radiators (including 442 feet of radiation) pipes, valves, fittings, etc., necessary for a house like the above is \$330 F.O.B. Toronto. At this price any reputable fitter can supply the materials, the cost of freight and labor being moderate extras. Read more in our new free booklet.

h7e



### The Gurney Foundry Co., Limited

Dept. 27, 474-536 West King Street, Toronto

Also at Montreal, Hamilton, Winnipeg, Calgary, Edmonton, Vancouver