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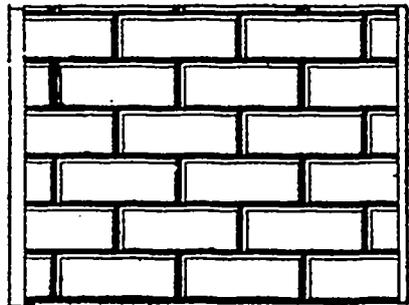
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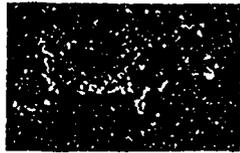
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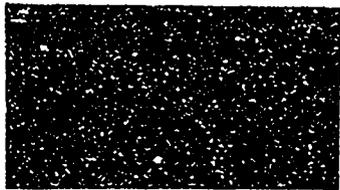
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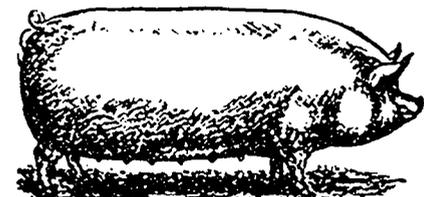
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The Largest Herd of Pure-Bred Yorkshire in America.

This herd has won the best prizes offered for the breed during the last ten years. Only one breed kept, but the choicest of its kind. Three imported stock boars and several sows that have all been winners at the largest shows in England, also winners at prominent Canadian and United States shows. Pigs of all ages for sale.

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The Lengthy English Type

Largest herd of imported Yorkshires in America. Purchased from the most noted breeders in England. Also 400 Canadian-bred pigs of all ages for sale. Stock guaranteed as described. All trains met at Hamilton by appointment.

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Receipts are only sent upon request. The date opposite the name on the address label indicates the time up to which the subscription is paid, and the change of date is sufficient acknowledgment of payment. When this change is not made promptly notify us.

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Publishers' Desk.

At the Royal Show of England last year sheep which had been dipped in the Cooper Sheep Dip captured over eighty per cent. of all the premiums, a record which speaks volumes for the popularity of that dip among the leading breeders of Great Britain.

Hog Cholera.—For pamphlets giving the diagnosis and instructions for the treatment of this disease and of contagious abortion in cows, write the Wm. Chemical Co., Department F, 15 Queen street east, Toronto. There are valuable suggestions in these pamphlets, and they will be sent free on application.

Our readers' attention is directed to Messrs. A. E. Osler & Co's advertisement which appears in another column, offering special inducements in the way of cheap money to those who wish to improve their farms, to purchase stock, or to reduce the rate of interest on existing mortgages. Messrs. A. E. Osler & Co. are well-known and an old established firm, and we are satisfied that business entrusted to them will receive prompt and satisfactory attention.

Expansion.—Expansion is a word much in use. It is a word which expresses the new political atmosphere. Breathing this new political atmosphere men argue and parties divide, but there is neither arguing nor division about one kind of expansion which has been going along in agricultural circles for nearly seventy years. It is the greatest expansion for their benefit which the farmers have ever known. It is the expansion of the sales of the McCormick. Last season the McCormick Company built and sold 189,760 machines. This kind of expansion dwarfs every other achievement American history records in favor of the well-being of the farmers. Buy McCormick machines and you get your money's worth.

The Threshing Problem.—It is important that every thresherman who wishes to obtain the latest improved and up-to-date machinery should keep himself well informed as to what the leading manufacturers have to offer in this line. Farmers are wide awake, and must have their threshing done by machines that will do it quickly, without wasting grain. All machines will not do this, and those that will are sure to be in great demand. This is why the Hamilton Engine and Thresher Works are obliged to make additions to their buildings and plant, which are now in course of construction, and the numerous orders coming in will be attended to. Their machines are grand workers, and great favorites with threshers. See advertisement in this issue

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Invariably goes to the one with best brain—one who has education, special training. Why not qualify for one of the best places going? You have the chance. The

CENTRAL BUSINESS COLLEGE, TORONTO opens the door to success for many young Men and Women each year. It offers splendid equipment, thorough work, a strong staff and good results. You may enter at any time. Write for prospectus. **W. H. SHAW, Principal.** Yonge and Gerrard Sts., TORONTO.

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Book-keeping, stenography, type-writing and business law are our specialties. Subjects taught by experienced business men, taught in a way to conform with business ideas. Now is the time to enter the College and get yourself in readiness or the business prosperity Canada is commencing to enjoy.

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Ulrich's Ensilage Corn

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E. R. Ulrich & Sons
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WEDNESDAY, MAY 10th, AT 11 A.M.

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3	Heatherbloom	bay	5	Van Buren	Wild Daisy
4	Irish Queen	ch	5	Pat Malloy	Queencraft
5	Chedoke	bay	5	Deceiver	Omco
6	Frauten	blk	5	Van Buren	Beautiful Star
7	Awendohue	bay	5	King Galop	Carrie Phillips
8	Cannobie Lee	bay	5	Springbok	Leena
9	Eliza III.	br	6	Elias Lawrence	Queen Bay
10	Whistling Girl	ch	4	Whistlejacket	Ayrshire Lass
11	Belle of Stockwood	ch	4	Rossington	Belle of Nantura
12	Grebe	br	3	Pillarist	Sea Lark
13	Surplice	bay	3	Candlemas	Miss Ransom
14	Tansy	bay	7	Stripling	Genipa
15	White Heather	ch. f.	3	Pillarist	Heatherbloom
16	Braeside	ch. g.	5	Strathspey	Beautiful Star
17	Caedon	ch. g.	6	Strathspey	Beautiful Star
18	Bonnie Dundee	ch. g.	5	Strathspey	Bonnie Bird
19	Blue Fish	b. m.	5	Strathspey	Finnan Haddie
20	Strathblane	b. g.	4	Strathspey	Sunbonnet
21	Royal Spey	b. m.	5	Strathspey	Royal Bess
22	Disorder	b. g.	4	Order	Irish Queen
23	Bugler	b. g.	6	Strathspey	Banjo
24	Grey Steel	gr. g.	5	Stripling	d. by War Cry
25	Rosa	b. m.	7	Strathspey	d. by Ryshawk
26	Highlander	b. g.	4	Stripling	d. by Ryshawk
27	The Ghost	gr. m.	5	Strathspey	d. by War Cry

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J. E. Richardson's Selected Seeds

Special Choice List of Vegetable, Field and Flower Seeds
These are not cheap seeds, but the best that money can buy

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VEGETABLE SEEDS

Tomato—Richardson's Creekside Glory, 15c. pkt.
Sweet Corn—Kendal's Early Giant, 5c. pkt.
Potatoes—Carman, No. 3, \$1.25 per bus.
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FIELD SEEDS

Sugar Beet—Danish Improved, 50c. lb., 5 lbs. \$2.25
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Barley—Success Beardless, \$1.00 per bus., 5 bus. and over, 90c. per bus.
Oats—The New Black Merday (all sold).
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Pansies—Richardson's Giant Mixture, 10c. pkt.
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Morning Glory—Japanese Imperial, 10c. pkt.
Carnation—Extra Choice Double, 25c. pkt.
Phlox Drummondii—Mixed large flowering, 5c.
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FARMING

VOL. XVI.

MAY 2nd, 1899.

No 35

Winter Wheat Prospects

Somewhat varying reports are coming in in regard to the condition of winter wheat. While in some sections the crop is reported as doing well and the outlook good, the very opposite condition is reported from other sections. In fact, summarizing the various reports that have appeared in the daily press and elsewhere, we are safe in stating that the majority of them are unfavorable rather than favorable. In many sections farmers are reported as ploughing up fields of wheat for other crops. A correspondent in Friday's *Globe* reports the fall wheat in a large part of Simcoe County to be greatly damaged and fully 50 per cent. of it injured. Reports also from points farther west are of a similar character, though there are many from other parts of the province showing the crop to be doing well. It is, therefore, difficult to form any definite estimate regarding the crop, though we are safe in stating that there is considerable of it winter killed, more particularly the late sown and that grown on light or low-lying lands.

The reports of the condition of winter wheat in the Western States, including Ohio, are equally varying. Nearly all the special correspondents of the *Cincinnati Price Current* in Ohio, Illinois, Indiana, Iowa, Missouri and Kansas report about all the late sown wheat as being badly winter killed. Estimates are made regarding the crop at from 30 to 40 and 50 per cent. injured. In some sections the warmer weather of the past week or two is making the outlook more favorable. The above journal sums up the situation as follows:

"For the entire winter crop area the average condition at this time is about 72 per cent. of a full promise, which, if maintained, should imply a basis of approximately eleven bushels per acre as the general average. This points to a decrease of fully 50,000,000 bushels compared with last year, notwithstanding the greatly increased area seeded."

The Farm Separator

One feature of dairying that has come into prominence in Canada during the past year or two is the use of the farm separator. There is perhaps no other branch of the business arousing greater interest at the present time than this. Dairymen everywhere are making inquiries regarding the small farm separator as to its cost and the work it will do. And there is every reason for believing that the demand for this valuable piece of machinery will be almost trebled during the next five years.

It has been clearly demonstrated that, taking the average results year in and year out, the separator plan of extracting the cream will give fully 20 per cent. more butter than the gravitation method of allowing the cream to rise. Besides this a more uniform and better quality of butter can be made, as the maker has full control of the cream in the process of ripening.

While the value of separators in creameries, where the milk is delivered, is fully recognized, it is only within the past year or two that its value for the average farmer has been given any special attention. There is no doubt that it will pay every farmer who has ten or twelve cows and is not sending his milk to a cheese factory or creamery, to purchase a hand separator for his own use. It will pay him to do so for more reasons than one. He is sure of

getting more butter from the milk; he will have a better and sweeter quality of skim-milk for his young calves, and, all things considered, will be able to make a more uniform and better quality of butter, that will command a higher price on the market.

One of the things that many farmers complain of when they enquire about farm separators is the price. A separator that would give the best satisfaction where there are ten or twelve cows should have a capacity of 300 to 500 lbs. of milk per hour. But these cost about \$100 or over, a price that many consider to be too high. Of course there are cheaper separators with a smaller capacity that would do the work for eight or ten cows, but they leave no room for the extension of the business if it is successful. And the farmer would like to get a machine that would serve for some time, and if at any time he wished to increase his number of cows would do the work. With the increased competition there is in the separator business surely it is within the power of someone in the trade to evolve a separator that will do the work and that will sell for considerably less than present prices. If this can be done we think we are safe in stating that he will find his trade doubled in a very short time.

A Butter-making Contest

As announced elsewhere the Toronto Industrial Fair Association has decided to have a butter-making competition at the coming show. This is a very prominent feature of the leading fairs in England and Scotland and has proven to be one of the most interesting attractions of the shows. People come from far and near to watch the contest and to learn something about the improved methods of making that are to be seen at such competitions. The Toronto Industrial is to be congratulated in taking the initiative in this matter, and we are certain that if dairymen take the interest in it they should it will prove to be one of the most important features of the show. During the contest competent persons will be on hand to deliver lectures on dairy topics.

It has been decided this year to have two classes, one for students and ex students of any dairy school in Canada and the United States and one for makers at any farm dairy. The competitions will extend over four days, and in addition to the interest in the contests themselves they will serve all the purposes of a working dairy. This is the first time, as far as we can learn, that a contest of this kind has taken place on this continent, and we would bespeak for it the active co-operation of dairymen in making it a great educational feature of the show.

Sugar Beet Industry

A renewed interest has been aroused in the growing of sugar beets by the reports that factories for the manufacturing of sugar from beets are talked of for Dunnville and Aylmer in Western Ontario. About a year ago this question was pretty freely discussed and we published several articles on the subject. At that time the sugar beet industry was being promoted in several localities, but nothing definite seems to have been done in the way of establishing factories and getting the business under way. And it may be that the movements at Dunnville and Aylmer

will not be any more successful. They certainly will not be so unless the promoters have a large amount of capital at their back and are prepared to experiment for a year or two till the farmers are in a position to grow the kind and the quantity of beets required.

The beet sugar industry has made remarkable progress in some of the States of the Union during recent years. In New York, Illinois, Kansas, Nebraska, and other States the making of beet sugar has so developed that it is now looked upon as one of the important industries. Up to June, 1897, over one third of all the sugar imported into the United States was beet sugar, and the people of that country decided to make an effort to produce this quantity at home. The estimated value of the beet sugar annually imported was \$35,000,000. This amount of money if kept in the country would mean quite an addition to the wealth of the country.

As is well known, the beet sugar industry has had its greatest development in Germany, where a liberal bonus is paid by the Government on all sugar exported. It is this bonused sugar that will be the greatest drawback to the starting of the industry in this country. At present the tariff on sugars is so arranged that the duty on raw sugar is very much higher in proportion than on the manufactured article, with the result that a larger amount than usual of this German sugar is coming in at the present time.

The cost of a plant for working 350 tons of beets per day is given by experts as varying from \$250,000 to \$400,000. This practically bars out any small concern with little capital. The requisites for a beet sugar factory are given by a New York journal as follows: Plenty of beets containing 12 per cent. sugar and 80 per cent purity; plenty of pure water; limestone, with a high percentage of pure carbonate of lime and a little silica; cheap fuel; good facilities for transportation; plenty of room and plenty of capital." At the New York factories the regular price paid farmers is about \$4 per ton, and 15 ton per acre should be raised with good seed and proper care. It is estimated that it costs the farmer in that State from \$25 to \$30 per acre to produce the beets, which should leave him a good profit.

Some years ago Dr. Saunders, of the Central Experimental Farm, made an investigation of this question and came to the conclusion that owing to the bonus on German sugars and climatic conditions it would not be a profitable business for either the farmer or the manufacturer in Canada to engage in. It may be probable, however, that in the sections referred to, which are in about the same latitude as New York State, sugar beets can be successfully grown. In fact, they have been grown with success in the locality of Owen Sound. Experts state that any soil that will produce a good crop of wheat, oats or potatoes will produce good sugar beets. A heavy, clay soil is one of the most satisfactory for the culture of sugar beets. In addition to this they require a rich land and plenty of cultivation and care. Sugar beets are of value for feeding stock, and it might be a good plan for some of the farmers in the sections where sugar beet factories are being agitated to grow some this year. There would certainly be no loss in doing so even if the factory were not in operation, and the experiment would go to show whether they could be grown successfully or not.

How to Farm Fifty Acres of Land

By Wm. Rennie, Farm Supt., O. A. C., Guelph

In a letter received from one of our subscribers a short time ago he asks for information as to how a fifty acre farm could be managed, the different crops and how much of each kind could be grown so as to give the best results. He also wishes to know the number of horses, cattle, sheep and swine that could be fed and kept in good up to date style.

We submitted the letter to Mr. Wm. Rennie, Farm Superintendent, Ontario Agricultural College, Guelph, Ont., than whom there is no one in the country more capable of giving practical information on the questions asked, and we are pleased to be able to give our readers his reply which is as follows:

In reply to the questions of B.H.B., Brantford, Ont., in regard to farming fifty acres of land, the different crops and how much of each, and the amount of stock, including horses, cattle, sheep and pigs, it will support, I have this to say. This subject covers a wide field, and much will depend on circumstances. The first thing to decide is what line of farming would be most agreeable to the taste of B.H.B. After having fully decided this question, never look back, but go ahead with a determination to make a success of it.

On a fifty-acre farm, situated near a city like Brantford, a home dairy might with advantage be adopted. Whether it would be a success or a failure will depend on the management in working out the details. First, as to rotation of crops, I would suggest a four-years' course, dividing the farm into four sections, viz., first year, pasture, second year, meadow; third year, corn and roots (six acres of corn and four of roots); and fourth year, grain (barley and oats) for feed, and seeding down with the following mixture: 7 lbs. red clover, 3 lbs. alsike, and 4 lbs. timothy. This should provide sufficient food for twenty cows, excepting bran to mix with the chopped grain, equal quantities in bulk. In selecting cows for butter it is advisable to have a number of Jerseys or Jersey grades to improve the quality of the milk. The aim should be to supply the very best article and cultivate a special trade.

To obtain the best results cows should have succulent food during the whole year: In the spring about three-quarters of an acre (mixed peas and oats) to cut when the pasture becomes dry in July. After this an early variety of sweet corn will keep the cows in full flow. In winter succulent food can be provided by mixing cut clover, chaff, ensilage and pulped roots, and leaving in a heap for a few days before using. Milch cows should have a supply of pure water in the stable, so that they will not require to be turned out in cold weather for water.

There are an innumerable number of details that tend to make the difference between success and failure in the management of a dairy farm. Some of the essentials are kind treatment to the animals, warm and well-lighted, and well-ventilated stables, and regularity in feeding, milking, etc. The skim-milk can be utilized to good advantage in feeding pigs. Two or three brood sows might be kept and the produce, say 30 or 40 pigs per annum, fed and sold when weighing about 200 lbs. each.

Thirty or forty hens properly cared for will prove a paying investment to supply the special butter customers with absolutely fresh eggs. Another department in connection with the home dairy is the rearing of young ducks and selling them during the season of green peas. Eight or ten ducks might be kept to supply eggs which may be hatched with either an incubator or hens. They can be reared successfully as follows:

Enclose a sod paddock, say half an acre, with wide boards set on edge. Place three or four coops in the paddock with a hen in each. It is amusing to see the old creatures spread themselves trying to cover about fifty young ducks each. Sink a large trough in the ground and keep filled with water for young ducks to swim in. Also several small troughs for feed, which may be composed of skim milk and middlings, adding chopped grain later. Early young ducks raised in this way are in demand at from 50 to 60c. each.

I submit the above system for the approval of P.H.B. or his fifty acre farm near Brantford, and which should give satisfactory returns with proper management.

There are other systems which might be more advisable under certain conditions, which I shall be pleased to give in a later paper.

Growing Potatoes

The Practice Followed by Successful Growers in Great Britain and Elsewhere

Though potato growing is largely a side issue on the part of the majority of Canadian farmers, it is nevertheless an important part of the farm work. To be without potatoes for dinner is a hardship that no one who works all day in the fields should be called upon to endure. With comparatively little effort, if the season be favorable, every farmer can grow enough potatoes for his home use. But should he stop at that? Might it not be possible, if a little more care and attention were given to the subject, to produce a better quality of product that would fetch the top price on the market after the home demand has been supplied? The general complaint is that if the crop is good the price is so low that the potatoes are hardly worth the trouble of

potato very extensively, and as is well known, it forms a very large part of the Green Isle's export trade. In England, Scotland and the Isle of Jersey potato growing is perhaps made more of a business by many large farmers. Frequently from 100 to 300 acres on one farm are devoted to potato growing.

SELECTING SEED.

The common plan in securing seed in Great Britain, as elsewhere, is to select from the tubers. By this plan the life of the plant may be prolonged year after year, until, through weakness or deterioration, it comes to an end. For this reason Mr. Sutton concludes that improvement of the quality of the potato is impracticable by the selection of the tubers. It is, therefore, not surprising that a constant repetition of growth from the tuber should, sooner or later, bring with it a loss of vigor resulting in diminished productiveness and a greater susceptibility to the attacks of disease. If the soils are very heavy or very light and sandy a judicious change of seed will help to postpone the evil day, but in a sandy loam, which is considered the best



A WESTERN FARM HOME.

digging. While there may be exceptionable years when this is the case, there are oftener seasons when potatoes are a comparatively scarce article, and bring a good price in our cities. At least those who have to buy think so. But aside from all this every farmer grows potatoes, and why should he not do his best to grow the very best and latest kinds of potatoes?

Though the potato is a native of America, there is no place where the culture of this useful tuber is given so much attention as in Great Britain and the Channel Islands. In the Journal of the Royal Agricultural Society of England for the last quarter of 1898 a very interesting treatise on the potato is given by A. W. Sutton.

The writer traces the history of the potato and its introduction into England in the sixteenth century. From that time on the development of potato growing has been marvellous. In Ireland, which may be termed the real home of the modern potato, the individual who is unable to grow enough potatoes to thicken his butter milk is in very hard straits indeed. The small farmers there cultivate the

for potato growing, a change of seed is not considered so beneficial. The writer advises that when a change of seed does not help matters the substituting of some other and newer variety than the one that has been grown should be made. Whether it is wise to attempt to grow one variety in the same district for many successive years will depend entirely on local and personal considerations. Recorded lists of potatoes for the past century show that, one after another, favorite potatoes cease to be grown. But there are always new varieties coming forward raised from robust stock. These new varieties are raised from the potato seed, a plan which Mr. Sutton advises following in order to get vigorous growth. It takes time to grow potatoes from the seed, and perhaps farmers in this country will prefer to leave that task to experimenters and seedsmen. However this may be, it is necessary that the farmer should change his seed potatoes frequently, and not only that, but he should introduce new varieties. The introduction of new and constitutionally strong potatoes makes the ravages of diseases common to potatoes less effective.

DISEASES.

A considerable portion of the article is devoted to the diseases of potatoes. The diseases mentioned as prevailing to a more or less extent in the old lands are dry rot, which is more prevalent in America than in England; internal disease; potato scab and potato fungus (*Phytophthora infestans*). Dry rot is more prevalent in very dry seasons and on very light soils than when the atmosphere is moist and the land retentive. It is stated that no preventive is known where potatoes of American origin are planted. What is known as internal disease is due to bacterial growth, and is frequently seen in poor soil deficient in phosphates, potash, and lime. The writer states that he has never seen this disease in potatoes grown on strong and heavy soils, and that it has been suggested that highly nitrogenous manures may produce it. The only safe practice to follow is to avoid planting potatoes in fields which have produced affected crops. With reference to potato scab, we quote as follows: "In certain seasons this disease seriously lessens the value of a potato crop. Instead of the tubers having a clear, bright skin, a great part, or the whole crop, may consist of tubers covered with scab. Much has been written as to the origin of the disease and its remedy, but at present comparatively little is known about it. I believe that scab is seldom seen in a season when the crop has had a sufficiency of moisture throughout its entire period of growth, but that after tubers are formed a dry period of several weeks is often followed by the appearance of scab. No remedies that have been suggested are, in my opinion, either efficacious or likely to repay the grower for the outlay involved. . . . It is safe and economical to conclude that the growth of potatoes should be discontinued on soils where crops have been scabbed." The last named disease or potato fungus is the most serious to contend with and is more widespread than any. It is a parasite, taking for the support of its own life the starch made by the potato plant for itself. The small spores attack the leaves and send fine threads down through the stem and stalk to the tuber in the ground, where it preys upon the starch and destroys the potato. Crops are smitten with this disease very quickly, and the time of the year will depend upon the locality, the variety, and the general conditions of culture. The disease is seldom or never virulent unless the weather be wet and close. The disease is fought chiefly by spraying and by the raising of disease-resisting seedling potatoes. A spraying mixture for this purpose can be made from 20 lbs. sulphate of copper, 10 lbs. of lime, and 100 gallons of water.

(To be continued.)

Feeding Young Chickens

An English View of the Subject

(London Rural World.)

The question of feeding the young chickens is all important, for upon the food must depend whether the bird will thrive well or whether it will die a premature death or be stunted in its growth. It may be well to say here that more harm is done by over than by under feeding, especially amongst small amateurs. They like to give the chicks dainty bits, to be continually feeding them on rich morsels, with the result that they are often killed by kindness. The plainer the diet the better, and anything in the shape of forcing is sure to cause harm. Thousands of chicks die every year from no other cause than that they are over fed on too rich food. Where death does not result the seeds of disease are sown, and sooner or later these seeds are developed and trouble is the result. The breeder is often deceived because the chicks appear to thrive so well at first, but this is only a temporary matter, and the effect of the forcing soon begins to be seen in the development of disease in one form or another. We do not say that chicks ought to be fed in exactly the same manner as they would be reared under perfectly natural conditions, for do-

mestication has changed the nature to some extent, and this change must be provided for, but we must be careful not to go to the other extreme, which is the danger, especially with those who are novices in the work of rearing chickens. We do not wish to be ungallant, but our experience is that ladies are responsible for the great increase of disease amongst domestic fowls far more than men, due to the tenderness of their hearts, which leads them to over feed.

As soon as possible we believe in making hard grain the staple food when it is intended to rear the fowls and not kill them at an early age. But judgment is needed to decide when this can be easily done. We have found that most chickens cannot take the whole grain until they have turned three weeks old, and up to that time it is necessary to give them soft food. There is nothing better than the foods we mentioned in our last article, which have all the elements for successful chicken rearing. When the birds are about sixteen or eighteen days old they may have a little dari or crushed buckwheat, which may be gradually increased until the soft food is only given once a day. Occasionally in cold or wet weather a little hempseed may be given, but this is a very rich seed and should be used very sparingly. Of course, when the chicks reach six weeks old, they may have small wheat and other grains that are not too large for them to swallow.

The true secret of feeding young chickens is to give a little plain food and often. All young life needs its nourishment to be frequently given, and chicks are like babies, they must be fed at short intervals. Unless this is done they are very apt to suffer and be stunted through hunger, and also to gorge themselves when the food is placed before them, the latter a state of things very likely to induce disease. The best chicken raiser is the man or woman who will get up early in the morning, for the birds require to have an early feed, as soon after daylight as possible. This feed should be a warm one, and, to prevent the delay which often arises from the want of fires at which to prepare it, we recommend the following arrangement: Get a square wooden box, strongly made of thick wood, and line this out with felt or felt carpeting—sides, bottom, and lid, so that the centre compartment may be only one-fourth the size of the box itself, the dimensions of which must be regulated by the requirements of the owner. Last thing at night half cook some food in a tin kettle or pan with a lid, made to fit the centre of the box, and put the kettle and food into it. Then close the box, and next morning the food will be found perfectly cooked and quite hot when ever opened. By this means all the trouble consequent upon lighting a fire and waiting for water to boil will be obviated, and the chicks can be fed as soon as any one is astir, at least half an hour before food could be prepared for them. When they are a month old it will not be necessary to take all this trouble, for it will be enough if a little grain is placed where they can get it first thing in the morning. Young chickens under a month old should have a feed last thing at night, say about ten o'clock. This will, of course, have to be given by candlelight, for it would only be in the height of the summer that there would be any daylight for the purpose. When the birds are over a month old it will be sufficient if they are fed about half an hour before sunset.

(To be continued.)

Farming on Manitoulin Island

A few days ago we had a very pleasant call from Mr. E. Battye, of Gore Bay, Manitoulin Island, who has been in this part of the province making purchases of pure-bred stock, a detailed account of which was given in last week's issue. Mr. Battye is very optimistic in regard to the future of that somewhat isolated part of Ontario. The good land on the island is pretty well taken up, business is

good and the farmers are doing well. A proof of this is the number of new barns and good houses that are being built. There is a lot of timber taken out every winter which makes things lively during that season. There is one creamery and two cheese factories on the island which appear to be doing fairly well. No cattle are finished for beef, but are sold when about two years old as stockers at from \$20 to \$25 a head. There are very few pure-bred males, but the quality of the grade cattle is very good. With commendable enterprise Mr. Battye is endeavoring to improve the quality of the cattle by introducing some pure blood. No fall wheat is grown to any great extent, but spring wheat and peas do well, frequently yielding thirty to thirty-five bushels per acre. But strange to say oats never give a big crop, and it is difficult to get any satisfaction from growing them.

Summer Butter-Making

A Paper Read by Mr. Fred. Dean, St. Marys, at the Cheese and Butter Makers' Convention, 1899

A butter-maker cannot have any fixed rules for manufacturing first class butter. Each day brings him new experiences and trials which can only be overcome by using that which is most essential yet too often lacking in a butter-maker, common sense. We are so often irritated by the little things and mistakes in our business, that if a little of the aforesaid substance had been used we would have fewer troubles. The main essential in securing a first-class article of butter in the summer time, and the keynote, is "cleanliness" from the food and water given to the cow, until the butter is placed in the hands of the consumer. So much has been said and written on this point that you really would think there was nothing more to say, but it is only by nagging away from time to time that perhaps at last our object will be accomplished, that is, educating the farmer to co-operate with you in this industry by feeding his cows such food as will not taint the milk, by keeping her healthy, by letting her have abundance of good pure water, and not drinking out of any mud hole in some corner of the pasture field or alongside of the road, by showing him how he can best aerate his milk by running it over an aerator or using a solid handled dipper to stir it thoroughly, by letting the animal odors off and having the milk purified by coming into contact with the atmosphere out of doors and then by cooling it down so that fermentation will not take place, and by taking into consideration that it has been strained and put into vessels that have been thoroughly washed, scalded and steamed. If you have educated the farmer up to this point your butter is half made, for it is this fighting filth and carelessness on the part of the patron that keeps summer-makers continually in hot water.

The best of butter-makers fail now and again to make an even quality of butter, even when they have educated the patron and receive a first-class lot of milk. This, no doubt, is owing to the different changes and conditions of the milk and weather, and cannot be placed to the discredit of either. But we are in an age now when nothing seems too great for man and machinery to overcome, and to overcome this point we must pasteurize our milk or cream every day to get this even quality and to be able to compete with foreign countries in obtaining a high price in the old country market. This is what we are making preparations for during the coming season.

At each of the skimming stations connected with our creamery at St. Marys a pasteurizer will be placed to pasteurize the cream only. The cream drawer will then bring it to the Central Station, where it will be run over the cooler at a temperature of sixty degrees. A skim-milk starter is used, being made of a half can of good, pure skim milk. This is pasteurized by heating to 160 degrees, and letting it stand for twenty minutes, then adding as much good spring water

as milk, which cools it down to ninety-eight degrees. Stir it well, and add one dipper full of the old starter, changing once in two weeks by letting the skim-milk stand two days without adding the ferment, and use buttermilk that day, or, if your buttermilk is of an even flavor and good use it right along. The starter is put in the vat before the cream, so that the fermentation takes place immediately. When about 28° or 30° of the acid is shown by the acid test, cool down quickly as possible to 48° to 50°, stirring it every half hour or so with a common hay rake, which has given me the best of satisfaction. After the cream is all pumped up and strained the pipes are all thoroughly flushed with luke warm water, then steamed, followed with boiling water pumped through them each day.

The cream should be kept at churning temperature from ten to twelve hours before churning, and be well stirred before putting into the churn, and should not show any more than 60% of acid or less than 50%. If too much acid has developed the casein coagulates firmly during the churning and breaks up into small white specks, which are incorporated into the butter, giving the butter a bad appearance, and when a few weeks old a very disagreeable flavor. When the cream has not sufficient acid it lacks in flavor, will not keep so long, and a larger percentage of fat will be found in the buttermilk. When the churn has been scalded and cooled strain the cream through a zinc strainer, filling the churn one-half full or a little over, revolving from fifty-five to sixty revolutions per minute, taking from thirty-five to forty-five minutes to churn at a temperature of 50°. When the cream begins to swish in the churn, which is a sign that it has broken, showing minute specks of butter, stop the churn and add a pail of water at the temperature of the cream with a handful of salt. This will give the butter a better chance to separate from the buttermilk, and hardens the globules. Let the churn revolve again until the butter shows the size of wheat grains. When the buttermilk is drawn off, and after draining for five minutes let water at a temperature of 48° run through until it is clear, then close the tap and fill the churn two-thirds full and revolve for half a minute, draw off water, rinsing down with the same.

After the butter has drained for 15 or 20 minutes it is shoveled into 80-lb. tubs and weighed, putting the worker full into two tubs, then sprinkling on 5 lbs. of salt, again adding two more tubs, finishing salting at $\frac{1}{2}$ to $\frac{3}{8}$ of an oz. to 1 lb. of butter. We use the National worker with an indicator, letting it work for about four minutes, then drain five minutes, and finish working it from six to seven minutes according to the texture, which is shown by breaking over the butter slowly, and when pressed by the fingers gives a velvety and waxy feel. The butter is only worked once, and during last summer we never had a mottled or greasy package. When ready for packing the butter is put on a long table, with scales on one end and another smaller table used for boxes, which are 12 $\frac{1}{4}$ inches square, made of spruce, paraffined on the inside and lined with very heavy parchment paper 52 inches long and 12 $\frac{1}{2}$ inches wide, two strips in each box soaked in strong brine from 12 to 15 hours before using.

Butter that is to be packed for future consumption should be a great deal drier than that intended for immediate use. It should be also packed solidly, so that when turned out of the box it will not show any crevices for brine to lodge, giving it an unsightly appearance. When the box is filled full, put it on the scales and scrape off butter with a stick of wood 20 inches long having 4 inches grooved off each end, with a movable strip fastened with a screw, letting it raise or lower according to the amount you wish to take off, allowing 1-12 lbs. for shrinkage. A weak brine is now poured over the butter to prevent moulding and to prevent the butter from sticking to the paper. Fold the four ends over and put on a heavy paste of water and salt about $\frac{1}{4}$ of an inch thick, fastening on the lid with screw nails. Put the butter in a room the first day with a temperature between 40 and 50 degrees so that it will have a chance to cool gradually before putting it into the refrigerating room, which should be at a temperature of 30 to 35

degrees, and if kept for any length of time below 30 degrees.

After the day's make is over, wash all wooden ware in boiling water, steam thoroughly, and give a light sprinkling of salt over everything. Scrub the floors, which should be of cement, with boiling water; and then pour a dozen or so pails of the same down each waste pipe and gutter, accompanied every two weeks with a solution of copperas.

Mr. T. C. Rogers Resigns His Position at the Ontario Agricultural College

Dairymen and others interested in the advancement of dairy education in this province, though wishing him every success in his new field of work, will regret to learn that Mr. T. C. Rogers has resigned his position as experimentalist and instructor in butter-making at the Ontario Agricultural College, Guelph. Mr. Rogers has been instructor in the Dairy Department for eight years, and during that time has rendered valuable services as a teacher and exponent of up-to-date and practical dairying. Mr. Rogers has accepted the position of general agent for the National Cream Separators, a line of work for which his practical knowledge of dairy matters should specially qualify him.

Green Fodder for Summer Feeding

It is to be hoped that every farmer will as early as possible, if he has not already done so, sow some peas and oats or grains to supply green feed for his cows and stock when the pastures become dry and withered in July and August. If two or three different plots are sown at different times; one lot as soon as the ground can be worked and another a week or two later, and so on, the farmer can have a good supply of succulent feed for his milking cows to tide them over the dry season and until the corn is ready for use. The best mixture for this purpose is two bushels of oats and one bushel of peas. Prussian blue peas and Siberian oats and mixed in the above proportions give excellent results, though some other varieties might give an earlier yield with a smaller yield.

We do not think there is anything the dairyman can do that will pay him better at this season of the year than this. In fact, if he does not make some provision for his cows during the dry season, which is a usual occurrence in this country, he will find a great shrinkage in the returns from them and a loss of milk flow that cannot be wholly recovered during the remainder of the season. To give a good flow of milk in summer a cow must have supplementary green fodder which the dried up pasture cannot supply.

Spring Work in Scotland

A correspondent in Aberdeenshire, Scotland, sends us the following regarding spring prospects for farmers in that section of the Empire:

"This has been a very backward spring. We have had an open sort of winter and work was well forward, and about the beginning of March we had a lot of very dry weather, which tempted a number of farmers to sow rather earlier than usual, the ground being so dry. But the storm came on, and for about three weeks nothing of any advantage at all hardly was done. Since then it has been very changeable weather with occasional days for sowing, but in some districts the land is hardly in order yet. The season, however, is wearing on and farmers are getting anxious about the seed being in, although a week or so would see the most of it in except in very late places.

"This stormy sort of weather is keeping back the grass, which farmers would like to see, as in a number of places fodder is getting scarce. Shepherds have been finding a difficulty in getting turnips for their flocks. Grain is offering to rise a little in price, but there is little difference in the price of fat cattle. Last year's grain crop is turning out pretty well, and most of it 44 lbs. per bushel and a good deal over that."

Tuberculosis Legislation in England

Mr. Walter Long, M.P., President of the Board of Agriculture for Great Britain, in an address delivered at Newcastle some weeks ago, had the following to say in regard to legislation re tuberculosis:

"He had been asked to deal also with the difficult subject of tuberculosis, but he would like everybody who was interested in the solution of this question, which applied not only to the health of animals, but also the health of human beings, to consider whether the Government was not right in believing that the data were still too indefinite and wanting in preciseness to justify them in asking Parliament for great votes of public money, or to impose upon stock-keepers compulsory measures entailing great loss. They were not yet sure that these measures would be effectual. They wanted to know more than they know at the present time. It had already been discovered that the tuberculin test might be so administered as to render it incapable of reaction on a second application, and that, therefore, it might be productive of fraud. Besides, the people who had studied the question most closely were not agreed as to the conditions under which the tests should be applied. The disease was difficult of detection unless they could rely on some such discovery as the tuberculin test. At present too little was known, and too much was doubted, for Parliament to be justified in imposing upon the country heavy expenditure or wholesale restrictions which would be strongly resisted in many quarters, and which might not do anything effectual for the extinction of disease. It was for those reasons that he was not at present prepared to make proposals on the subject to the country or to Parliament."

CORRESPONDENCE

Albert's Thomas-Phosphate Mr. Wright Replies to Mr. Wallace

To the Editor of FARMING:

Referring to my letter appearing in FARMING of April 17th, I thank you for your note attached, and hope, now that FARMING is offered for the purpose, our farmers will avail themselves of the opportunity to discuss the question of commercial fertilizers in your columns. I have also read with much interest the courteous reply of Mr. Wallace, and would crave space to correct some of his statements. I did not misunderstand the bearing of this fertilizer as described by the representatives of the firm when making the sale. Neither did I publish the failure for the purpose of eliciting private correspondence of the nature of Mr. Wallace's letters to me, but to obtain results of practical tests by farmers, as being, to my mind, both valuable and reliable.

The phosphate was applied at the time, and to the crops for which it was recommended by said representative. The season of 1898 was very early, but, in this locality, not dreadfully dry, as all our crops were excellent, including the plots where phosphate was applied. I quite agree with Mr. Wallace's statement, that "Thomas-Phosphate is not a special fertilizer," and join with him in looking for some satisfactory results in the future, and in turn assure him that it will afford me great pleasure to report the same in your columns. Thanking you for space,

Elora, April 22nd.

GEO. WRIGHT.

Pig Feeding and Rheumatism

To the Editor of FARMING:

Although rather a long time has elapsed since Mr. Hughes asked for information in respect to crippled pigs, the subject unfortunately has not become a thing of the past, and, therefore, a little further discussion of it may yet be admissible. The question on page 421 of FARMING is accompanied by a tentative reply from Professor Day. The Professor suggests that damp pens may be the cause of the ailment, but adds: "Possibly the pigs have been overfed. The food should be restricted in quantity." On page 477, Mr. Davies recommends dosing the pigs with hyposulphite of soda as an effective remedy. I do not doubt but that this medicine might do good in such a case, but it is far better, if possible, to remove the cause of trouble in the first instance than to partially buttress it up afterwards.

From what Mr. Hughes says and my own experience under similar circumstances, I am pretty well assured that the trouble arises from a defective diet, and that with a reorganized ration the difficulties would disappear. Probably Professor Day and myself mean the same thing in reality, but when he speaks of the pigs being overfed and recommends a reduction in quantity, it is suggestive of his referring to quantity rather than quality, whereas I refer to *quality* without regard to quantity: trusting the latter to the animal's natural discretion and appetite. Indeed your own supplementary remark; "*Too high feeding is frequently the cause of such a condition as is here described,*" is precisely what I would say, but as this question of "high feeding" is variously interpreted and not always understood, a little further elucidation may be useful.

Chemical analysis shows that all feeding stuffs contain more or less of three principal constituents, viz., the muscle or lean flesh formers—called albuminoids; heat and fat producers—called carbo-hydrates and fat; and bone makers (phosphate of lime, etc.)—called ash. The proportion of these essential feeding constituents—particularly the flesh and fat producers—vary immensely in the different feeding stuffs. Beans and peas, for instance, being particularly rich in nitrogenous matter, or lean-meat-producing albuminoids; while Indian corn and potatoes have an excess of the fat forming element, with but very little capacity for growing lean meat.

Special scientific experiments and general practical experience prove that efficient feeding and profitable results depend on all the factors being present in the food in sufficiency, and also upon their being in some rational proportion to each other.

The following standard table shows the proportion or ratio in which the nitrogenous flesh-forming albuminoids should be to the heat and fat producing materials, to produce the most economical and profitable results in pig feeding:

Age in Months.	Nutritive Ratio.
2 to 3.....	As 1 to 4.
3 " 5.....	" 1 " 5.
5 " 6.....	" 1 " 5.5
6 " 8.....	" 1 " 6.
8 " 12.....	" 1 " 6.5

It will be seen that the young growing pig requires more flesh-forming food in proportion than does a more matured animal.

The nutritive ratio, or relative proportions of flesh-forming constituents to heat and fat producers in ordinary pig feeding stuffs, is shown in the following table:

	Albuminoids to Non-Albuminoids.
Barley.....	As 1 to 8.
Indian corn.....	" 1 " 9.9
Potatoes.....	" 1 " 23.5
Mangolds.....	" 1 " 24.1
Wheat.....	" 1 " 7.5
Sharps.....	" 1 " 5.
Whey.....	" 1 " 7.
Skim-milk and buttermilk.....	" 1 " 2

It will be seen how immensely the nutritive proportions vary in the different feeding stuffs; yet, the pig is a very cosmopolitan animal and can adapt itself to a wider range of dietary than any other of our domestic animals, that it would be presumptive dogmatism to lay down any arbitrary feeding restrictions; yet I venture to assert that in general ordinary practice the nearer the rations can be combined to approximate to the above standards the more profitable will be the result. For instance, sharps or milk is a valuable adjunct to roots, helping each other and supplying mutual deficiencies; but it will readily be seen that Indian corn is not capable of supporting roots in the same way; indeed Indian corn in itself needs the assistance of some factor stronger in albuminoids; and this is proved by our everyday experience.

On the other hand shorts and buttermilk are each already above normal strength in flesh formers, that to combine them is like adding fire to fire, and results such as Mr. Hughes' is the natural consequence.

It may be that oil or hyposulphite would cool the blood, but it is not nearly so sound or economical a method as the bringing of the diet into equilibrium by an admixture of root or oatmeal. And this because the flesh-producing albuminoids form the most expensive portion of the pork-producing food, that we desire to use them economically and get the greatest feeding value out of them. This we do by combining them with the less expensive roots and cornmeal, as we then give a greater value to each; and produce an increased quantity of pork and of better quality. I may say generally—other things being equal—that profitable results will be in ratio with the economic use of the available albuminoids.

Disastrous results may also ensue from *too low* feeding, as we may gather from consideration of the results at the Purdue University, as noted on page 422 of FARMING. We there see that pigs fed on a mixture of shorts and cornmeal did much better than those fed on cornmeal only, the latter "did not always eat with so good an appetite as those in lot one." This law was proved by Sir J. B. Lawes more than fifty years ago at that premier experimental station—Rothamsted. In that famous series of experiments one pen of three pigs was fed on Indian corn only, and Sir John reports: "One of the pigs on this food gained more than two pounds a day during the first fortnight of the experiment; but the other two only about half as much. Before the end of the first period, however, it was observed that this fast gaining pig and one of the others had large swellings on the side of their necks; and at the same time their breathing had become much labored. It was obvious that the Indian cornmeal alone was in some way a defective diet; and it occurred to us that it was comparatively poor both in nitrogen and in mineral matter."

I may here remark that while it may be possible, although uneconomical, to physic a high diet down to a passable equilibrium, it is not possible to physic a *too weak* diet into a thrifty one.

Pigs running in the open will instinctively strike some sort of working digestive balance; in confinement they have not this chance, but have to be subjected to the discretion or caprice of the attendant. If that attendant will have due regard to nature's laws and requirements both he and his pig will prosper, and it is with the hope of promoting that end that I have penned this article, the teachings of which are fully corroborated by the findings of the various pig-feeding experiments recorded in your columns.

Lincoln, England.

FRANK WALLIS.

The highest-priced calf on both sides of the Atlantic in 1898 was the Shorthorn bull calf, Scottish Champion. This calf was bred by W. S. Marr, Uppermill, Tarnes, Aberdeenshire, Scotland, and bought at auction for Wm. Duthie, of Collynie, at \$1,650.

A new invention by a citizen of Chicago is likely to result in a profitable manufacture of linen, which may lead to a more extensive culture of flax.

The Farm Home

This Department is Devoted to the Farm Home and to the moving spirits thereof—the Farmer's Wife and Daughters, and their active co-operation is asked in making it as useful and interesting as possible.

T Hired Man in the Home.

About a year ago we discussed very fully the question of "Hired help on the Farm." In that discussion considerable attention was given to the relation of the hired man to the farmer's home and it was pointed out by more than one who took part that his presence there was not conducive to that privacy and seclusion so requisite in every home.

We are not entering upon this subject again because we have any animosity towards the person who figures as the hired man. He is a necessity on nearly every farm, and far be it from us to lessen his value or to detract from his usefulness in aiding the farmer to perform his duties properly. But in relation to the help employed the farm home is differently situated from that of any other home in the country. The manufacturer or business man in the city does not have the help employed in his factory or place of business board in his house. And what we would like to see is a somewhat similar system adopted in rural districts whereby the women of the farmer's household would not have to board and lodge the help employed on the farm.

The amount of extra work entailed, though it is sometimes more than should be placed upon some of the women on the farm, is not the most objectionable feature of the practice of having the hired man in the home. We think that most of the women of the farm will agree with us that the really objectionable part of the plan is the fact that the presence of the hired man, no matter how good he may be in character and otherwise, renders in complete that sanctity and privacy which a home should have. Nothing is so conducive to a happy and contented home as the pleasant intercourse of father, mother, and children untrammelled by any foreign element that is not a part and parcel of the family.

One of the remedies suggested for this difficulty is for every farmer as far as possible to employ a married man, and have him live by himself either in a second house on the farm or elsewhere. This question is well worth discussing, and we would like to have the views of some of the farmers' wives who are the most directly interested.

Some House-Cleaning Hints.

House-cleaning is a trying time in every home. When it is done it should be done thoroughly. Our advice would be to do a little at a time, and do it well, rather than attempt to

do the whole house in a hurry in a day or two. Of course, it will not do to prolong the agony any more than is necessary, but, if the work is well planned, and a portion, no more than can be done easily by the help at hand, allotted for each day, it will surprise one how quickly and yet how easily the house can be thoroughly cleaned from top to bottom.

An American writer on this subject gives the following advice in regard to

monia, and will freshen the colors equally well. Use in the proportion of one heaping teaspoonful to a gallon of hot water.

Borax is also unequalled for washing lace curtains. Very much of the strain which ordinarily comes on long lace curtains in washing can be avoided by doubling each curtain at the middle lengthwise and tying a strip of old muslin loosely around it at two points between the fold and the ends. Soak



A Good Spring Crop.

carpet-cleaning and handling lace curtains:

Hanging carpets over a line, and then beating hard to remove the dust, will shorten their lives more than a month of ordinary wear, and the same is true of rugs, or of taking hold of one end and whipping them. Lay them on the ground (wrong side upward at first), and beat and sweep thoroughly on both sides. Borax is less likely to fade carpets than am-

fifteen minutes at a time in warm water to which borax has been added in the proportion named above, squeeze and press down with the hands, and, in raising, always take hold of the muslin tie-string and wring gently through a wringer. Repeat this as many times as necessary, and do not remove the ties until you are ready to pin the curtains out. Never shake out a lace curtain when wet, for it is sure to make havoc with the finer meshes.

Questions and Answers.

Oil Cake and Flax Seed Meal.

To the Editor of FARMING:

I would like to have some information regarding oil cake meal or flax seed ground with some barley oats or small wheat. I think either of the above meals to be very good and would not like to be without some for calves and other stock.

Why is oil cake meal so high in price? It is 40 cts. or more per cwt. above old prices and I am afraid it is too high. I have grown some flax seed for myself and intend to grow more and get it ground with a little more than equal parts of two rowed barley and a little oats. If you or some of your correspondents would give me and the public some light on this subject I shall be pleased.

FARMER W.

Solina, Ont., April 24th, 1899.

Flax grain contains a considerable quantity of protein, with an excess of oil. There is no starch in well-matured flax-seed. On account of the high commercial value of the oil flax-seed is not much used for feed. Some feeders claim that flax-seed itself should only be fed in limited quantities, since it acts largely as a purgative. Ground flax-seed has been fed with skim-milk to calves with very good results, but

the more common practice among feeders is to use the oil cake or oil meal in preference. Oil cake or meal is made from the refuse after the oil has been extracted. There are two processes of extracting the oil, but it is not necessary to describe them here, only to say that one is known as the "old process" and the other as the "new process" meal. In the new process there is a more complete extraction of the oil, leaving the meal with a larger proportion of protein. The old process meal is poorer in carbohydrates, but considerably richer in oil than the new process. The latter is not quite as digestible as the former. Prof. Henry, in "Feeds and Feeding," says: "There is no more healthful feed than oil meal or oil cake. Its general effect is to place the animal in fine condition, with a pliable skin, an oily, sleek coat, and a good quality of flesh upon handling. No other farm feed has such a general beneficial effect on the digestive tract as has oil meal, and the feeder should always have a quantity on hand to deal out to his stock whenever judgment directs its use."

The practice of grinding flax-seed meal with other feeds is a somewhat new one. We fancy it would be better to have the flax-seed ground by itself and mixed with the other grains afterwards. As to such a mixture for

feeding purposes it would probably give good results if the proportion of flax-seed was not too large. Barley meal would tend to counteract the laxative tendency of the flax-seed. This grinding mixture is worth considering, and we would be pleased to hear from those who have tried it.

The higher price of oil cake meal may probably be due to a shortness of supply or an extra demand for feeding purposes.

SEEDING WITH ALFALFA.

A Subscriber writes: "I have a piece of clover sod that was pastured with hogs last summer and plowed down in the fall. I want to seed it with alfalfa. What is the best kind of grain to sow in order to get a good catch? Will the ground be suitable? It is rolling and dry, and is heavy clay."

Answered by Dr. Fletcher, entomologist, Central Experimental Farm, Ottawa.

In reply to the question asked by your correspondent, I would say that alfalfa may be sown with any kind of grain that ordinary clovers are seeded with; but Mr. Fixture, our farm foreman, prefers to sow it alone, thinking that a surer catch is secured in this way, and that the returns in crop are much quicker. He advises sowing it as early as possible in the spring, about 16 lbs. to the acre, if alone, or what he

Tested Seed Corns

FARMERS—Is there any fun in plowing, harrowing, rolling and planting your land to corn that won't grow? Or, if it does grow, and you spend a hard summer's work on it, have it killed by an early frost? No, there is no fun about either one, but, on the contrary, it is humiliation and financial disaster. You should avoid being caught either way. Remember this: When you buy seed corn of us you get seed that has been THOROUGHLY TESTED as to germination, and you take no chance whatever on it not growing. When you can get tested seed at a cost of 25c. per acre, what more do you want? Farmers, don't fool yourself out of a crop by planting seed that has lain out in the field after the snow came, as it will be damaged and not fit for seed at all. Take no chances, but send to us direct and get seed THAT WILL GROW.

- IOWA SILVER MINE, DENT** The only early white dent corn grown. First-class fodder, 7 to 8 feet high, ears 10 to 12 inches in length, 16 to 20-rowed, and will ripen in from 95 to 100 days. A first-class variety. Peck, 50c.; bush., \$1.50.
- EARLY BUTLER, YELLOW DENT** Early, immense yielding; 70 pounds of ears will shell over 6½ pounds shelled corn. One of the best. Peck, 25c.; Bush., 90c.
- CLARK'S EARLY MASTODON, YELLOW DENT** One of the best varieties for ensilage. A strong grower, immense straw and ear, but unless in the best corn sections of Ontario it will not ripen. Peck, 25c.; bushel, 90c.
- STAR LEAMING, YELLOW DENT** A great improvement on the old Leaming, and one of the best for ensilage purposes. Peck, 30c.; bush., \$1.
- WHITE CAP, YELLOW DENT** A strong, rank grower, and for shallow clay and sandy land one of the best varieties to grow. Stalks 7 to 8 feet high and a good yielder. Ripens in from 100 to 110 days. Peck, 25c.; bush., 90c.
- GENUINE MAMMOTH SOUTHERN SWEET** For fodder and silo purposes only. Grows immense fodder, which is sweet and rich, syrup having been made from it; of the best germinating quality. Will grow more tons of fodder to the acre than any other known variety. Bush., 70c.; sacks, 2½ bush., \$1.65. Sacks free.
- MAMMOTH 8-ROWED YELLOW, FLINT** As a corn for shelling there is none to beat this. Long ears, 12 to 15 inches, with very small cob, and stalks to 8 to 10 feet high. We recommend this variety as the best flint, corn grown. Peck, 40c.; bush., \$1.25.
- LONGFELLOW, FLINT** Stalks 8 to 10 feet, ears 10 to 12 inches, 8-rowed broad kernel, will ripen in about 100 days. Peck, 25c.; bush., 90c.
- 100-DAY, OR ANGEL OF MIDNIGHT** The earliest yellow flint corn in cultivation; broad kernel, long cob, 8-rowed; a sure cropper. Peck, 25c.; bush., 90c.
- EVERGREEN SUGAR CORN** (For Green Fodder). Very leafy, succulent and sweet, and said to be better for fodder than any other variety grown. Peck, 40 cents. Bushel, \$1.50.
- IOWA GOLD MINE** Grain very deep, cob small, an immense yielding, 70 pounds of ears makes 60 to 62 pounds of shelled corn. Peck, 25 cents. Bush., 90 cents.
- CUBAN WHITE GIANT, DENT** For ensilage purposes. It yields fodder in great quantity and of finest flavor. Peck, 25 cents; Bush., 90 cents.
- CLOUD'S EARLY YELLOW, DENT** Grows a good height; taller and better than the Rural Thoroughbred. Peck, 25 cents, Bush., 90 cents. **CASH WITH ORDERS.**

Don't Forget to Remit for Bags, Jute, 8c., Cotton, 15c.

JOHN S. PEARCE & CO., London

ONT.

"SEEDSMEN TO THE CANADIAN PEOPLE."

prefers better, 12 lbs. of alfalfa and 3 or 4 lbs. of alsike, or common red clover. As soon as the alfalfa is about a foot high he cuts it the first time. This induces a rapid second growth, after which the field may be used as a hog pasture. The land in which alfalfa does best is a rolling, dry, sandy loam—the heavy clay land described may be found unsuitable. It would, therefore, be wise for your correspondent to try part only of his land the first year and see how it answers.

Toronto Industrial Fair.

This well-known fair will be held this year from August 28th to September 9th. The active manager and directors, with their accustomed energy and zeal, are diligently at work preparing for this great annual event, which is looked forward to each year with keen interest by all classes of the community throughout this country and by large numbers in the adjoining States of the Union.

LARGE PRIZES FOR SHORTHORNS.

The committees in most departments have carefully revised the prize list for this year's fair, adding new classes where the public interest suggests them and eliminating out-of-date features. The largest amount of prizes probably ever offered at any annual fair on this continent for Shorthorn cattle will be offered at this fair this year. The prizes in this class have always amounted to \$850, but this year the Dominion Shorthorn Breeders' Association have decided to add to this amount \$750, and the Industrial Fair directors have in consequence agreed to add \$150 to the amount previously given, making the total to be awarded \$1,750. This should bring out one of the greatest exhibits of Shorthorns ever seen in the Dominion.

BUTTER-MAKING CONTESTS.

It is also the intention of the Exhibition Association to offer some handsome prizes for competitions in butter-making at the fair during its progress and to have practical illustrative lectures given at certain hours each day. A building will be specially provided for this purpose.

\$300 will also be added to the list as special prizes for export bacon hogs. All entries in the live stock classes have to be made by the 5th of August.

THE POTATO EXHIBIT.

The prize list for the Toronto Industrial Fair this year for the potato exhibit has undergone quite a change from previous years. Prizes are offered this year for the different types, such as Rose-type, to include the five or six varieties of that type, the Hebron type, the Ohio type, Belle type, Long White type, Oblong or Medium-White type, Round White type and any other variety not named. Each type includes from three to six varieties. Half bushel of each variety to be shown to compete for the prizes.

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Save Money
by Saving
Interest

Do you want to reduce the rate of interest on the mortgage? Do you want money to buy stock, or to improve the farm? Write us, we will lend you up to one-half the value of your farm at 4½ per cent., or will lend you 60 per cent. of the value at 5 per cent. All correspondence strictly confidential.

A. E. OSLER & Co. 35 Adelaide Street East.
TORONTO

d-5-4

MONEY!

Farmers in Ontario having first-class security to offer, can secure Money at Low Rates and on Favorable Terms, by applying to

W. E. LONG, Manager,

CREDIT FONCIER F. C.

Wellington Street East, Toronto

Honest Advice Free to Men.

The following has been sent to us for publication All men who are nervous and debilitated or who are suffering from any of the various troubles resulting from overwork, excess or youthful errors, are aware that most medical firms advertising to cure these conditions cannot be relied upon. Mr. Graham, a resident of London, Ont., living at 437½ Richmond St., was for a long time a sufferer from above troubles, and after trying in vain many advertised remedies, electric belts, etc., became almost entirely discouraged and hopeless. Finally he confided in an old Clergy man who directed him to an eminent and reliable physician, through whose skilful treatment a speedy and perfect cure was obtained.

Knowing to his own sorrow that so many poor sufferers are being imposed upon by unscrupulous quacks, Mr. Graham considers it his duty to give his fellow-men the benefit of his experience and assist them to a cure by informing anyone who will write to him in strict confidence where to be cured. No attention can be given to those writing out of mere curiosity, but any one who really needs a cure is advised to address Mr. Graham as above. [d-5-2]

Binder Twine

Agents Wanted. Ontario Binder Twine Co., 124 Front St. West, Toronto, Ont.

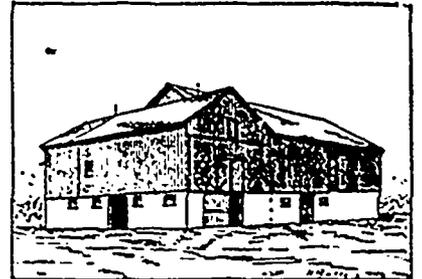
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WORK DONE WITH

Thorold Cement

SPEAKS FOR ITSELF



ILDERTON, ONT., MARCH 9th, 1899.

ESTATE JOHN BATTLE, Manufacturers Thorold Cement, Thorold, Ont.

DEAR SIRS,—I have much pleasure in testifying to the excellence of your Thorold Cement for building purposes. In June last year I built under my barn a concrete wall of your Thorold Cement. It turned out a splendid job, and I have no hesitation in recommending your Cement to those requiring its use. Your traveler called here and gave me instructions for a few hours as to the proper method of using it. I then completed the wall myself. Yours truly, R. W. JACKSON, County Councillor, Middlesex Co.

E.S.—It is with pleasure I give you my testimonial, as your Thorold Cement is all you represent it to be R.W.J.

Our Thorold Cement is the best and cheapest for Silos, Barn Walls, Floors for Horses and Cattle, Pig Pens, etc. Write us for free pamphlet and full particulars.

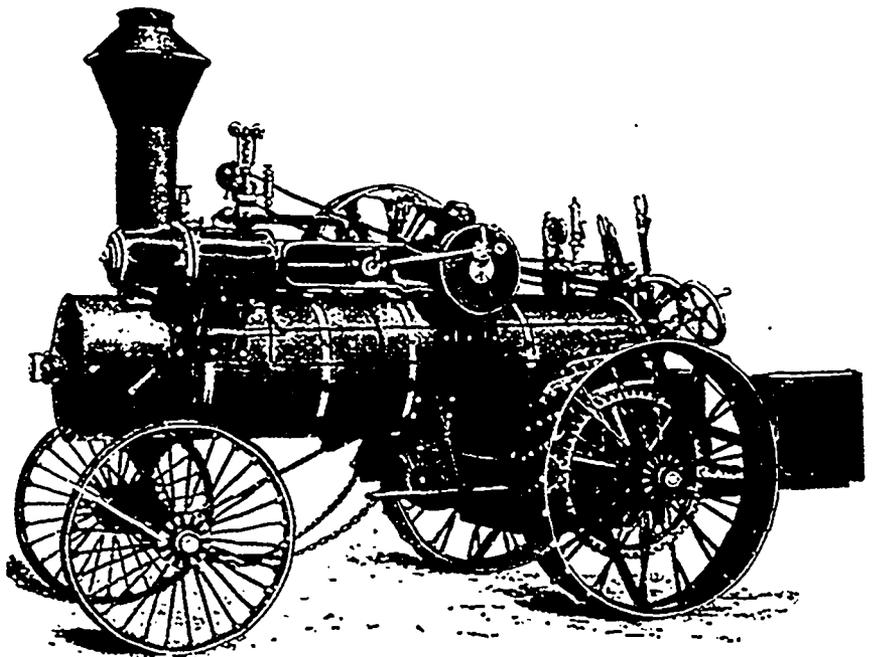
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ESTATE OF JOHN BATTLE

Mention this paper. If. THOROLD, ONT

Hamilton Engine & Thresher Works

FIRST IN THE FIELD—Established 1836—STILL IN THE LEAD



OUR NEW COMPOUND TRACTION ENGINE

Light Weight, Powerful, Economical. Fitted with Single or Double Speed. Adjustable Gear, and Friction Clutch if desired.

Peerless, Daisy and Eclipse Separators, all fast and clean threshers. Illustrated Catalogue on application.

SAWYER & MASSEY Co., Limited

HAMILTON, Canada.

d-5-30

NEW BUILDINGS.

The directors are endeavoring to arrange with the City Council for the erection of a new Dairy Building, a new Art Gallery, and the completion of the new pig pens.

BREEDERS' MEETINGS.

The importance which stock breeders attach to the Toronto Exhibition as a time for meeting together is shown by the number of such meetings which usually take place on the grounds during the holding of the fair, and this year for the first time some of the American breeders are going to meet there. The American Shropshire Sheep Breeders' Association and the American Dorset Horn Sheep Breeders' Associations have decided to hold their annual meetings at Toronto during the second week of the fair. Several of the American Breeders' Association have also been very liberal in their offers of special prizes this year.

List of Prizes for Shorthorn Cattle

AS ARRANGED FOR BETWEEN THE INDUSTRIAL FAIR BOARD AND THE SHORTHORN BREEDERS' ASSOCIATION FOR 1899.

At the annual meeting of the Dominion Shorthorn Breeders' Association last February it was decided to supplement by the sum of \$750 the prizes given for Shorthorns by the Canadian fair giving the largest sum from its own funds for the same purpose. As the following will show, this sum has been granted to the Toronto Industrial Fair.

	1st	2nd	3rd	4th	5th
Bull 4 years old and over.	\$50	\$35	\$25		
Bull 3 years and under 4.	50	35	25		
Bull 2 years and under 3.	50	35	25		
Bull 1 year and under 2.	50	35	25		
Bull calf under 1 year.	40	30	20	\$15	\$10
Bull of any age, gold medal, value.			25		
Total.					\$550
Cow 4 years old and over	40	30	20		
Cow 3 years and under 4	40	30	20		
Heifer 2 years and under 3	35	25	20		
Heifer 1 year and under 2	35	25	20		
Heifer calf under 1 year.	30	25	20	\$15	\$10
Female, of any age, gold medal, value.			\$25		
Total.					\$465
Four calves bred and owned by exhibitor.	50	35	25		
Five females bred and owned by exhibitor, any age.	50	35			
Bull and 4 of his get, owned by exhibitor.	50	35			
Bull and 4 females under 2 years, owned by exhibitor.	60	45	30		
Herd bull and 4 females, owned by exhibitor.	100	75	30		
Total, specials.					\$620
Grand total.					\$1,665
Original grant of Industrial Exhibition.					\$767
Advanced grant by " "					150
Dominion Shorthorn Breeders' Association grant.					750
					\$1,667

GOOD FARM FENCE

should turn all kinds of live stock and even tramps; should expand and contract according to the weather so as always to be tight; should stand all storms—even fire and last indefinitely.

The Coiled Spring Page

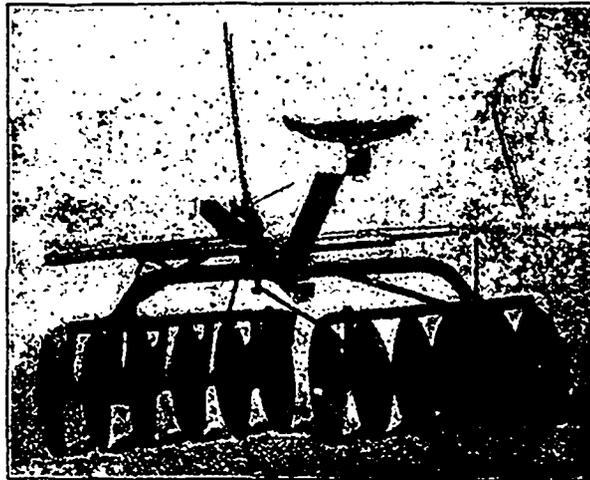
Is just such a fence.

Its virtue is attested by the fact that there is more of it in use than all other makes combined. Prices lower than ever this year.

THE PAGE WIRE FENCE CO., (Ltd.)
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The Cossitt Bros. Co., LIMITED

A Record of Over 50 Years as Manufacturers of Farm Implements.



To see means to buy
COSSITT'S
All-Steel
Ball-Bearing
Disc Harrow
with Patent Lock
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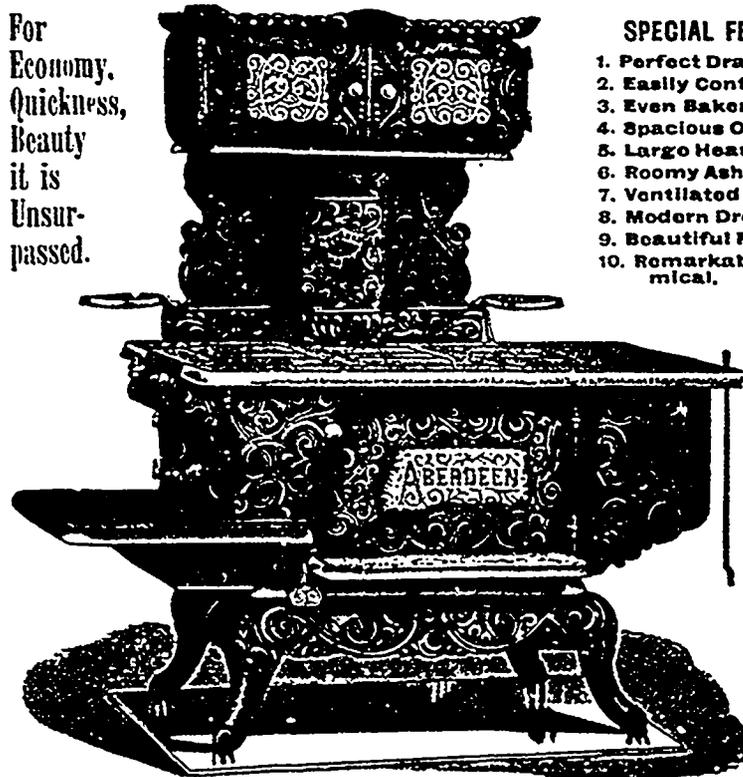
Without a doubt the best
Harrow in the market

Send for catalogue describing our Ball-Bearing Mowers; Tiger and Ithaca Horse Rakes; Reapers; Harrows; Scufflers; Corn Shellers; Root Pulpers, Etc.

Our Machines will speak for themselves when put in operation.
Head Office and Works: **BROCKVILLE, ONT.**

ABERDEEN RANGE.

For Economy, Quickness, Beauty it is Unsurpassed.



SPECIAL FEATURES.

1. Perfect Draft.
2. Easily Controlled.
3. Even Baker.
4. Spacious Oven.
5. Large Hearth.
6. Roomy Ashpan.
7. Ventilated Oven.
8. Modern Dress.
9. Beautiful Finish
10. Remarkably Economical.

Our Range has been an unqualified success. It has never failed, a remarkable record in itself. Buy it in preference to any other.

The COPP BROS. COMPANY, Limited, Hamilton.

Of Special Interest to Sheepmen.— Judging from appearances and reports from different parts we are going to be scourged again with ticks this year. These insects are a source of much annoyance on the farm; they are very hard to kill, being covered with a hard, bony shell, which is very little affected by ordinary remedies. The great trouble with many preparations on the market is that they do not kill the eggs, and, although some of them seem to do the work well at the time, yet, when the warm weather comes you find the fleece full again. On another page of this issue appears an advertisement of Miller's Tick Destroyer. This preparation is well worthy of a place in this journal, as it is an exterminator, and really does kill ticks, eggs and all. It is also the best scab cure and wool tonic obtainable. It is made by the old firm of Hugh Miller & Co., Toronto.

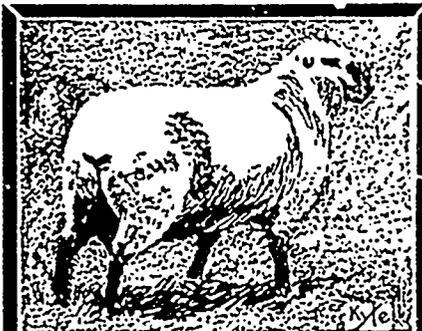
Stock Notes

MR. D. C. FLATT, of Millgrove, and the proprietor of the now celebrated Summer Hill herd of purebred Yorkshires, is an instance of what pluck, perseverance and enthusiasm will accomplish in the live-stock industry. It is only a comparatively short time since Mr. Flatt's herd was established and it is now one of the best known as well as one of the largest and best in the country. He has recently landed without accident or the loss of a single pig an importation of thirty Yorkshire sows and boars selected from



GOLD PLATED. Cut this out to us with your name and address, and we will forward this watch to you by express for examination. It is a snap-back and bezel dust-proof open face, stem wind and set, gold plated, handwoven engraved. It looks like a solid gold watch, is fitted with a jewelled American Model Movement that we warrant to give good satisfaction, and is just the watch for trading purposes. If after careful examination you find this watch to be exactly as represented, pay the express agent \$2.95 and charges, and it is yours.

Terry Watch Co., Toronto, Ont.



Persiate Sheep and Animal Wash

For the complete and effectual removal of all insects or vermin peculiar to sheep and cattle. Powerful, without being harsh; immediate in effect, without any irritating effects; it leaves the animal refreshed and in good spirits after use; does more than destroy the pests, it completely removes all traces of their attacks—healing sores or boils, curing open sores and leaving the skin whole and sound. Mr. G. A. Brodie, a prominent stock-raiser of Bethesda, Ont., used it with great success in castrating lambs, the wash healing the wounds rapidly and keeping the maggots away. He considers it the most effectual wash in the market, and heartily recommends it to farmers generally.

If your dealer hasn't it, write us for it, and tell us of anything special in the ailments of your flocks for birds and we'll advise you how best to use it.

The Pickhardt Renfrew Co.

(LIMITED)

STOUFFVILLE, ONT.



The Pickhardt Renfrew Co. Mark

ROOFS FOR THE HOUSES

32 Years Ago

We started the manufacture of sheet metal building materials, and this long experience enables us to offer intending builders all that is desirable in Steel Roofing, Steel Siding, Steel Ceilings, etc.

We Prefer

That you purchase through the trade, still if your dealer cannot give the information you desire, or offers a substitute "just as good," write us.

"The Pedlar Patent Shingles" are the best, and the best cost no more than the poorest.

**Pedlar Metal Roofing Co.
OSHAWA, CANADA.**

SALT

WE ARE GOING TO HAVE A LATE SPRING

This means a press of work and backward crops. Nothing brings on any crop quicker, causing plump, full, early-ripening grain, with the straw strong and bright, than a liberal dressing of salt. Sow 300 to 400 lbs. per acre as a top dressing. Try it and be convinced. Send for prices.

**R. & J. RANSFORD
CLINTON, ONT.**

COLOR and flavor of fruits, size, quality and appearance of vegetables, weight and plumpness of grain, are all produced by Potash.

Potash,

properly combined with Phosphoric Acid and Nitrogen, and liberally applied, will improve every soil and increase yield and quality of any crop.

Write and get Free our pamphlets, which tell how to buy and use fertilizers with greatest economy and profit.

GERMAN KALI WORKS,
93 Nassau St., New York.

**THE
BEST
RESULTS**

in making Butter or Cheese can be obtained only by using the best ingredients.

That is why

so many good butter and cheese makers always insist on having

RICE'S PURE SALT

Every Package Guaranteed.

Sole Makers:

The North American
Chemical Co., Limited

Goderich, Ont.

BUTTER WRAPPERS

THE SENTINEL-REVIEW WOODSTOCK, ONT., imports Genuine VEGETABLE PARCHMENT for butter wrappers. It is the largest house in Canada selling and printing butter wrappers. This paper is not an imitation. It is the GENUINE VEGETABLE PARCHMENT, made to our order in Germany, especially for the Canadian market, and its purity and sanitary qualities are guaranteed. It is very strong, has a nice, silky finish, fine fibre, and will not taint the butter like cheap imitations. Highest testimonials from dairymen all over Canada. We sell these butter wrappers, 7 1/2 x 11 inches, cheaper than any house in Canada, and large dealers who have wrappers printed should get our samples and quotations. Free samples sent anywhere. Address,

**SENTINEL-REVIEW,
WOODSTOCK, ONT.**

the best herds in England, including that of Mr. Sanders Spencer, the leading breeder of Yorkshires in the world. Mr. Flatt's importation is a grand one and places his herd in the very front rank of those owned by Canadian breeders. As an instance of the high appreciation of Mr. Flatt's stock by competent judges a number of first-class animals have been recently purchased from him for the farm of the Hon. Thomas Greenway, Premier of Manitoba, and will be used by him this year for show purposes. Amongst them was a very handsome sow weighing 800 lbs., for which a large price was paid, and Mr. Yule, who represents Mr. Greenway in Ontario, after inspecting a large number of the best herds in Canada, expressed the opinion that this sow was the best animal of the breed he had ever seen. As a further evidence of the popularity of Mr. Flatt's stock he reports the sale of more than 100 young pigs for spring delivery, besides numerous other sales. It is safe to say that Mr. Flatt will not allow the Summer Hill herd to be outclassed by any other herd in America.

MR. JOHN J. TANNAHILL, of Trout River, Ont., writes: Our Holsteins have wintered in fine shape. We have made a few additions to our herd at the sale of Neil Sangster, Ormstown, on March 22nd, we purchased the fine six-year old cow, Amelia. I think this is one of the most perfect cows of the breed I have ever seen. She has the fine head and neck, immense paunch, enormous udder, with well-placed teats and large and crooked veins, which stamp her as a great producer. We also purchased the cow, Lily Dale, bred by John McGregor, Constance, a right good one. We also purchased Artis Peers Poet, the bull that has stood at the head of Mr. Sangster's herd for two years. This bull has for dam Artis Peers Poem, who was the sweepstakes female at Toronto as a yearling. This bull has for sire Sir Pietestje Josephine Mechthilde, who has probably more large records in his pedigree than any other bull in Canada. This bull was bred by G. W. Clemens. We have lately sold to J. W. Purse, of Herdman, an extra fine bull calf. This calf was sired by our old stock bull, Advance, of good old Netherland Aaggie breeding, and has for dam one of our best young cows, Baroness Mercedes, whose dam, Emery Beauty, won the milk test at Gananoque in 1895, and Toronto in 1896.

MR. W. D. FLATT, of Trout Creek Stock Farm, Hamilton, Ont., writes: I beg to report some of my recent sales as follows: To A. C. Pettit, Freeman, Ont., Miss Mary, imported. This is a cow of remarkable scale, very large, and well finished. She was 1st prize cow at the Marr Agricultural Society in Scotland, 1898; also Miss Mary 2nd, imported in dam, a very promising red heifer calf. Mr. Pettit is starting a herd and has made a very wise selection. To F. Brown, manager for Chas. E. Ladd, North Yamhill, Oregon, U.S., Missie of Needpath 22nd, a grand four-year-old cow. To Jas. Yule, manager for the Hon. Thos. Greenway, Crystal City, Man., Elvira 21, a beautiful young cow; Golden Fame's Hero, a young bull calf of rare promise; Lady Jane (imported), it is safe to say that this young cow ranks amongst the choicest in the Dominion; Isabella Stanley, a heifer of wonderful substance and quality. To Gavin Barbour, Crosshill, Ont., Lourille Lady, a very large young cow of fine form, and an exceedingly good milker; also Trout Creek Baron, a promising young bull. To J. E. Rowland, Newry, Ont., Nora and Waterdown Queen, a good pair of heifers with strong individual merit. To T. E. Bowman, Berlin, a two-year-old heifer, Bill Duchess 4th. Mr. Bowman made no mistake in selecting this heifer. She is a true type of modern Shorthorn.

Farms for Sale

In Ontario. Prices Low. Terms of Payment Easy.
For Lists and particulars apply to

J. L. SCARTH

11 York Chambers

Toronto, Ont.

SEED PREMIUMS!

Field, Garden and Flower Seeds as Premiums for New Subscribers

NEW VARIETIES SEED GRAIN

New Zealand Oats.—Yielded 100 bush. to the acre last season. Price, 25c. per lb., \$2.50 per bush. Three lbs. free with one new yearly subscription at \$1. Half bushel free with three new yearly subscriptions at \$1 each.

Danish Island Oats.—Very productive. Yielded 900 bush for every 56½ lbs. seed. Price, 15c. per lb., 4 lbs. for 50c. Four lbs. free with one new yearly subscription at \$1.

White Hull-less Barley.—Of inestimable value to stock keepers as feed. Price, 25c. per lb. Two lbs. free with one new yearly subscription at \$1.

Mandescheuri Barley.—Price, 75c. per

bush. One bushel free with two new yearly subscriptions at \$1 each.

Prussian Blue Peas.—Price, \$1.25 per bush. One bushel free with two new yearly subscriptions at \$1 each.

Canadian Beauty Peas.—Entirely new variety. Leads all field peas in point of productiveness. A beautiful pea. Price, \$1.25 per bush. One bushel free with two new yearly subscriptions at \$1 each.

Hungarian Bromo Grass.—The great forage grass of Russia. Price, per lb., 20c. Two lbs. free with one new yearly subscription at \$1.

In ordering bushel or half-bushel lots enclose 20c. extra to pay for bag.

POTATOES

The Pearce Potato.—An entirely new variety. A great yielder, cooker and keeper. Flesh white, dry and mealy. Growth strong and appearance very fine. Price, 50c. per lb. One lb. free with one new yearly subscription at \$1. One peck free with three new yearly subscriptions at \$1 each.

The Great Divide Potato.—A fine variety for main crop. Price, 50c. per peck.

\$1.25 per bush. One peck free with one new yearly subscription at \$1.

Carman No. 3 Potato.—Large, handsome and remarkably productive. Price, 50c. per peck, \$1.25 per bush. One peck free for one new yearly subscription at \$1. One bushel free for three new yearly subscriptions at \$1 each.

GARDEN AND FLOWER SEEDS

Collection A.—Price, 50c. Free with one yearly new subscription at \$1.

Pkts.	Pkts.
1 Beet.	1 Lettuce.
1 Carrot.	1 Radish.
1 Celery.	1 Parsnip.
1 Cucumber.	1 Squash.
1 Cabbage.	1 Tomato.

Collection B.—Price, 50c. Free with one new yearly subscription at \$1.

Pkts.	Pkts.
1 Sweet Pea.	1 Nasturtium.
1 Pansy.	1 Wild Flower (gar.)
1 Phlox.	1 Stocks.
1 Dianthus Pinks.	1 Asters.
1 Balsam.	1 Mignonette.

Collection C.—Price, \$1. Free with two new yearly subscriptions at \$1 each.

Pkts.	Pkts.
1 Alyssum.	1 Beet.
1 Aster.	1 Cabbage.
1 Phlox.	1 Cauliflower.
1 Sweet Pea.	1 Cucumber.
1 Mignonette.	1 Lettuce.
1 Dianthus.	1 Celery.
1 Water Melon.	1 Carrot.
1 Musk Melon.	1 Radish.
1 Tomato.	1 Mango Melon.
1 Onion.	1 Parsnip.

Collection D.—Price, \$1. Free with two new yearly subscriptions at \$1 each.

Pkts.	Pkts.
1 Beet.	1 Onion.
1 Brussels Sprouts.	1 Parsley.
1 Cabbage.	1 Parsnip.
1 Red Cabbage.	1 Tomato.
1 Carrot.	1 Squash.
1 Celery.	1 Radish.
1 Cucumber.	1 Salsify.
1 Lettuce.	1 Sage.
1 Musk Melon.	1 S. Savory.
1 Water Melon.	1 Thyme.

SPECIAL OFFER.

Fourteen packets of the best selected garden and flower seeds. Price, \$1. Free with one new yearly subscription at \$1.

Pkts.

- 1 Beet, Flat Egyptian.
- 1 Cabbage, Early Winningstadt.
- 1 Cabbage, Autumn King.
- 1 Carrot, Scarlet Intermediate.
- 1 Cucumber, Long Green.
- 1 Lettuce, Curled Silesian.
- 1 Onion, Prize-Taker.
- 1 Parsnip, Hollow Crown.
- 1 Radish, Scarlet Olive.
- 1 Squash, Hubbard.
- 1 Tomato, Richardson's Creekside Glory.
- 1 Sweet Pea, Richardson's Princeton Mixture.
- 1 Pansy, Richardson's Giant Mixture.
- 1 Mignonette.

These seeds are selected from the very best stock, and are guaranteed by the grower to give satisfaction. Address

FARMING

Confederation Life Bldg.,

TORONTO, CANADA

BARRED PLYMOUTH ROCKS are the best all-round fowl. Eggs from large, vigorous stock of good layers, \$1.00 per dozen.
H. D. SINCLAIR, 161 Lansdowne Ave., TORONTO.
d-8-27

Oshawa Poultry Yards.—Eggs \$1.00 per 15, from High-Class, Pure-Bred, Rose Comb Black Minorcas, Silver Laced Wyandottes and Snow White Plymouth Rocks. W. H. KIRBY, Oshawa, Ont. d-5-9

W. R. VANDERVOORT, Sidney Crossing, Ont. Eggs for hatching from pure-bred Barred Plymouth Rocks, Buff Cochins, Black Minorcas and S. W. White Leghorns, at \$1 per 13; also Pekin Duck eggs at \$1 per 11. [d4-25]

MAPLE CITY POULTRY YARDS—W. A. WITSON, Proprietor, Box 551, Chatham, Ont. Eggs for hatching from birds imported from the best English and American breeders. Black Minorcas, Single Comb White Leghorns, Pekin Ducks, \$2 per 13. A limited number of Rose Comb Black Orpingtons Eggs, \$3.00 per 13

Many Farmers and Other People **LOSE MONEY ON POULTRY** Because they keep poor stock. Every Farmer knows that **POULTRY PAYS BIG PROFITS** if rightly managed and the birds are from good strains. Our yards are filled with the best laying strains of Black Minorcas, White Wyandottes, Light Brahmas (extra large birds). Our Rose-Comb White Leghorns are egg machines. Eggs for hatching from these reliable strains, per 13, \$1.50; per 26, \$2.50. Good hatch guaranteed regardless of distance.
Jas. McIntosh, 23 Essex St. Toronto.

HATCH CHICKENS BY STEAM—with the 4 simple, perfect, self-regulating **EXCELSIOR INCUBATOR**. Thousands in successful operation. Lowest priced 100-egg hatcher made. **Geo. E. Stahl**, 114 to 120 E. 6th St., Quincy, Ill. Circulars free. Send 5c. for illus. Catalog.

LUCKNOW POULTRY YARDS
Our matings for '99 are the best we ever owned in Buff and White Cochins, L. Brahmas, Buff Leghorns, Red Caps, S. L. Wyandottes, Black Minorcas, Langshans, Spanish and Javas. **EGGS, \$1.50 per 13.** Try our Barred Rock (imported strains), White and Brown Leghorns. Eggs, \$1 per 13. Pekin and Rouen Ducks. Eggs, \$1 per 11. We guarantee a good hatch, and safe arrival of eggs.
d 1-25 Won 300 prizes the past season
J. C. LYONS, Lucknow, Ont.

Des Moines THE BEST AND THE CHEAPEST **Incubator**
SURE TO GIVE SATISFACTION.

Rock Roy Farm Sole Agent for the Dominion. Send 2 cent stamps for Illustrated Catalogue of Poultry and Poultry Supplies. Poulter's Guide, New Edition, 15 cts. per mail. P.O. Address, 24 St. Sulpice St., Montreal.

HATCHED 90 to 100 per cent. of the **FERTILE EGGS** in the **TORONTO INCUBATOR**
You can do as well. Write us for particulars. Address, A WILLITS, 514 Dundas St., Toronto.

THE CO-OPERATIVE FARMER
SUSSEX, N. B., reaches the farmers of the Maritime Provinces. Get a sample copy—you'll be sure to like it. Ad. rates on application. Address: **CO-OPERATIVE FARMER, Sussex, N. B.**

Testing the Farmers' Company's Make of Pure Manila Twine



The Farmers' Binder Twine Co., LIMITED
OF BRANTFORD, sold you last year their entire mill's output at about half what others were charging. See their agents before buying for the harvest of 1899. d-6-20

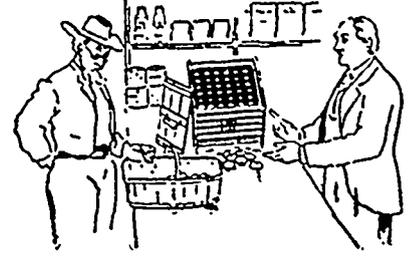
FOR FATTER SHEEP AND MORE WOOL
DIP YOUR SHEEP IN COOPER DIP
BENEFITS THE FLOCK ERADICATES INSECTS AND DISEASE

Used and endorsed by Hon. John Dryden, Minister of Agriculture, Toronto, and leading breeders everywhere.
SUPERIOR TO ALL LIQUID DIPS
25-Gal. Packet, 50c.; 100-Gal., \$2.00
If drugglets cannot supply, send \$1.75 for 100-gallon packet to Evans & Sons, Montreal Toronto.
Book premiums on application to Cooper Dip, Galveston, Texas.

D. G. HANMER & SONS
MOUNT VERNON, ONT.
Importers and Breeders of **PURE-BRED**.....

Shropshire Sheep
Offer for sale 60 head choice Shearling Rams; also 15 shearing ewes and 20 Shearling Rams, which are now being fitted for coming fairs. Expect to leave for England last week in May to select ewes and stock rams to increase present flock. Orders for all kinds of stock will be executed for intending purchasers at a moderate commission. Will attend the Royal Show.
Address—
D. G. HANMER & SONS
16-5 MOUNT VERNON, ONT.

Humpty-Dumpty Egg Crates



See what loss might have been prevented if the new Egg Crates were used by all farmers. They are exceedingly cheap and very strong and durable.
Be Sure You See Them.
If your dealer has not got them send to us for Circulars.
THE DOWSWELL MAN'F'G CO LIMITED ...Hamilton

BINDER TWINE

FARMER'S

PURE MANILA, 850 FT. TO LB.
SPECIAL MANILLA,
TIGER, STANDARD.

Farmers! Don't be taken in. There is none "just as good." These twines will not bunch at the knotter, and a Binder will run all day without stoppage, thus saving time, annoyance and a "lot o' cussin'."

We pack our twine in bags of the size of ordinary grain bags, and we are not ashamed to put our name upon it. Don't take any other.

CONSUMERS' CORDAGE CO. LIMITED, MONTREAL.

The Ontario Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep, and Swine Breeders' Associations, and of the Farmers' Institute System of the Province of Ontario.

THE DOMINION CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

Annual Membership Fees:—Cattle Breeders' \$1; Sheep Breeders', \$1; Swine Breeders', \$2.

BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs, during the year in which he is a member. In the case of the Swine Breeders' Association this includes a copy of the Swine Record.

A member of the Swine Breeders' Association is allowed to register pigs at 50c. per head; non-members are charged \$1.00 per head.

A member of the Sheep Breeders' Association is allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale, are published once a month. Over 6,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

A member of an Association will only be allowed to advertise stock corresponding to the Association to which he belongs; that is, to advertise cattle he must be a member of the Dominion Cattle Breeders' Association, to advertise sheep he must be a member of the Dominion Sheep Breeders' Association, and to advertise swine he must be a member of the Dominion Swine Breeders' Association.

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 9th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

J. W. HOSKIN, Secretary,
Parliament Buildings, Toronto, Ont.

Annual Meetings of Farmers' Institutes.

To the Officers and Directors of Each Farmers' Institute in the Province of Ontario.

The annual meetings of the various Farmers' Institutes will be held on the dates given below. Each officer of each institute should feel it his special duty to see that the meeting in his district is as successful as energy, enthusiasm, and an interest in the welfare of the farming community can make it.

Read carefully the rules and regulations relating to the annual meeting. They are as follows:

OFFICERS.

8. The officers shall consist of a president, vice-president, and secretary-treasurer, and one or more directors from each municipality included in the institute district, except in new or thinly settled districts, when directors may be elected irrespective of the municipalities. The president, vice-president and directors shall be elected annually, and together with the secretary-treasurer shall constitute a board of directors, the majority of whom shall be practical farmers.

9. There shall be an executive committee composed of the president, the vice-president, and the secretary-treasurer.

10. There shall be elected annually two auditors, to audit the accounts of the institute.

ANNUAL MEETING.

13. The institute year shall begin June 1st, and end May 31st.

14. The annual meeting of each institute shall be held on some date to be selected between the 1st and 20th of June of each and every year.

15. The newly-elected board of directors shall take office at the close of the annual meeting. The old board shall remain in office until this time.

Business at Annual Meeting.

20. At the annual meeting the directors and auditors shall be elected for the ensuing year. (See Clauses 8 and 10.)

21. At the annual meeting the method of election shall be by ballot or otherwise, as decided by the members present. No person shall be eligible for office, or be entitled to vote at the annual or any other meeting, who has not paid his fees in full for the current membership year.

22. At the annual meeting members may suggest points in the district where institute meetings may be held during the succeeding institute year, first as to regular and secondly as to supplementary meetings.

23. At the annual meeting the executive officers for the past institute year shall, through the secretary-treasurer, present to the meeting in writing a carefully prepared report of the proceedings of the year, in which shall be stated the number of institute meetings held since the last annual report, the attendance at each session, the total number of papers read and addresses delivered, and a statement of the financial condition of the institute. The financial statement shall first be audited and certified thereto by the auditors.

24. The annual meeting shall be devoted to the business of the institute, as specified in clauses 20, 21, 22 and 23, and in carrying out the "Programme of the Annual Meeting," and in considering ways and means whereby the institute can be improved.

25. The annual meeting shall be advertised by mailing to each member, at least ten days before the date thereof, an announcement calling the members together. Said announcement shall specify the date, place, and hour of meeting, and shall contain a programme of said meeting. If the

executive deem it in the interest of the institute, posters and newspaper advertising may also be employed to make this meeting publicly known.

Order of Business for Annual Meeting.

26. (1) President's report.

(2) Discussion thereon.

(3) Report of the executive presented in writing by the secretary-treasurer.

(4) Auditors' report presented in writing.

(5) Suggestion of points at which to hold regular meetings.

(6) Suggestion of points at which to hold supplementary meetings.

(7) Election of directors; election of auditors.

(8) Suggestions as to how the institute can be improved or made more useful, if this has not already been considered by the president in his opening address and in the discussion following.

(9) Addresses, etc.

27. At the close of the annual meeting the new board of directors shall meet and elect from among themselves a president and a vice-president, and shall finally decide at what points in the district regular and supplementary meetings shall be held during the current institute year. The points selected shall be entered on page C of the secretary's minute book, and a copy of this page shall be sent to the Superintendent and shall be considered as part of the report of the annual meeting.

28. The board of directors shall, at the close of the first annual meeting, and when afterwards necessary, appoint from among themselves or otherwise a secretary-treasurer, who shall remain in office during pleasure.

29. In case an institute shall, through any cause, fail to hold its annual meeting within the time specified, the Superintendent may appoint a date for holding same, the meeting to be called as provided for the regular annual meeting, and this meeting shall, in all particulars, be taken as the annual meeting of the institute.

OTHER GENERAL MEETINGS.

30. In addition to the annual meeting, each institute shall hold at least four meetings each year, at which papers shall be read or addresses delivered on topics relating to agriculture, horticulture, dairying, or kindred subjects. Free discussion shall be encouraged. (See Explanation following, clause 70.)

33. The regular delegation shall visit two points only in one year in each institute district, or when said

delegation spends two days at one place, that point only shall be visited. The Government will defray the cost of sending these delegates, but officers and members of institutes are expected to lighten as far as possible the expenses of delegates while in their district.

34. Should any institute require a speaker or speakers at any other period during the year to assist in holding supplementary meetings, application for assistance shall be made to the superintendent at the time of reporting the annual meeting. The department will pay for the services of such supplementary speaker or speakers for four days in each year for each institute district, but the institute requiring the services of said speaker or speakers shall pay all legitimate expenses from the time said person or persons leave home until they return thereto. When a delegate or delegates address meetings in more than one district, the expenses will be equitably divided between said institutes and collected from the institute or deducted from their grant.

35. If an institute decides to hold supplementary meetings other than those asked for at the time of reporting the annual meeting, or for more than four days during one year, said institute shall pay all expenses and wages. This clause shall not apply to the annual meeting.

QUORUM.

71. At all meetings of the institute or of the officers, if duly advertised as set forth in these rules, ten members shall form a quorum to do business at an annual or other general meeting.

EXPENDITURE OF INSTITUTE FUNDS.

70. All money received, whether as members' fees, legislative grant, grant from the county councils or from municipalities, or otherwise, shall be spent within the district in which the institute operates: (1) To defray actual expenses of meetings such as are heretofore described. (2) To employ suitable persons to address said meetings. (3) To assist in circulating agricultural, horticultural, live stock, and dairy literature or periodicals among the members, or to establish a circulating agricultural library for the use of members. (4) To remunerate the secretary and others for services rendered. (5) To make an annual grant (not exceeding ten dollars) to the woman's institute in the district.

EXPLANATION.

See Clause 30. The four meetings referred to in Clause 30 may include the regular and supplementary meetings of the institute, picnics, if addresses on agricultural subjects are given, or if the point visited is one of agricultural interest, such as an experiment station, a noted farm, etc., also official meetings called to meet the Superintendent. A meeting continuing

two days may be counted as two meetings."

MEMBERSHIP.

The regular and supplementary meetings held during the past season have been very successful. As an evidence of the increasing interest taken in the work of the Farmers' Institutes, the memberships for the past and present years are given:

December 31st, 1895.....	11,020
June 30th, 1896.....	12,384
May 1st, 1897.....	14,228
May 10th, 1898.....	15,597
April 25th, 1899.....	15,627

N.B.—The number of the membership of each institute will be published in the GAZETTE on May 9th.

The success of each institute during the coming year will depend on the result of the annual meeting. A successful annual meeting, however, is not necessarily a large one. The work done by the institute during the year will depend upon the directors—more particularly the executive officers—the president, vice-president and the secretary-treasurer, and one of the chief objects of the annual meeting is to appoint men for the various offices who will enthusiastically perform all the work in connection with the Institute during the year. At any annual meeting where the right men have been chosen for office, no matter what the number in attendance may have been, a successful annual meeting has been held and one that will bear fruit during the coming year. The officer upon whom the success of the institute will to the greatest extent depend, is the secretary-treasurer, and the most suitable man should in each case be chosen for this position, and he should be treated as liberally as the funds of the institute will allow. His position should be permanent so long as he does his work satisfactorily.

Special attention is directed to Clause 8, which states that "the officers shall consist of a president, a vice-president and a *secretary-treasurer*," not a secretary and a treasurer. It has been found to be more satisfactory when the secretary of any Institute is also the treasurer.

A number of the Institutes have this year availed themselves of the opportunity of having a speaker in attendance at their annual meeting; other Institutes have made arrangements for local speakers, and did not consider it advisable to go to the expense which would be necessitated by procuring the services of an outside speaker.

WOMEN'S INSTITUTES.

The rules governing Women's Institutes may be found on page 39 of the pamphlet entitled Act, Rules and Regulations Governing Farmers' Institutes, a copy of which may be obtained upon application to the Superintendent. Each Institute should consider, at its annual meeting,

whether or not it is advisable that a Women's Institute be organized. After hearing the views of members, if thought well, the matter might be left in the hands of the executive to confer with the ladies in the district. The Superintendent will give any assistance in his power.

SPECIAL TO THE SECRETARY-TREASURER.

55. It shall be the duty of the secretary to prepare and submit to the executive the annual report as set forth in clause 23, and to present the final report to the annual meeting.

56. Not later than the *first day of July* of each and every year, he shall forward to the Superintendent by registered mail, or otherwise, copy of said report, together with a copy of the financial statement, and the name and address of each officer and director elected for the ensuing Institute year.

Read over carefully the whole of this announcement. Make yourself thoroughly familiar with it. In a number of cases last year if this had been done the local officers and the Superintendent would each have been saved considerable inconvenience. When sending in your annual report see that all necessary blanks are filled in properly, and that each blank is included when forwarding the report. Each column on each blank has been placed there for some purpose, the information asked for being required either for the preparation of the annual report of the Superintendent, or for the preparation and advertising of the list of meetings for the following season.

Each Institute is required to hold at least five meetings each year, of which the annual meeting may be counted as one. The annual meeting, then, should be reported on Form B the same as other meetings held during the year are reported on this blank. There is also a column on Form B headed as follows: "Membership for year ending December, 189—." What is asked for is the membership up to the end of the year preceding that in which the report is made. For instance, in sending in the annual report for the year ending the 31st of May, 1899, what is desired is the membership to the 31st of December, 1898, and it is simply the total membership, not the number of membership received at each meeting, that should be reported on the blank.

On form C care should be taken to make the report as complete as possible. If the local officers, who have probably lived in the district all their lives, cannot or will not give the exact location of any place, how can we who are two or three hundred miles distant arrange the meetings so that they will be most convenient for all concerned? On this blank (C) there is also a column for "days' duration" (of the meeting). It is very important that this information should be given, as

some institutes wish for one-half-day meetings (one session), others one-day meetings (two session), while still others wish their meetings to last for two days, or four sessions.

Form D is almost invariably correct.

Financial Statement.

In making out the financial statement it should be carefully noted that the cash on hand corresponds with the balance on hand from the previous year. Miscellaneous items on this blank should be specified in detail.

In conclusion, see that the various blanks are properly filled in at the top with the name of the Institute and the date of the annual report; also that each blank is properly dated at the end and receives the signatures of the persons indicated thereon; and finally, *send your report on time*. No more time is required to complete and mail it than two or three weeks later. While the 1st of July is the last day on which reports may be received, the report should be forwarded as early as possible after the meeting is held.

If the above points are noted and acted upon by secretary-treasurers when sending in their annual reports this year, they will find that there is considerably less trouble in connection with the annual report than they have hitherto believed. Try it.

F. W. HODSON, Secretary.

Names of Delegates, Titles of Addresses, and Meetings to be Attended by Each Delegate.

The delegate whose name is at the head of each section will address the meetings in that section, and on such subject or subjects as may be selected by the local Institute from among the list submitted.

In order that the speaker may arrive at the various places in time, the list of meetings has been arranged on the basis of an afternoon meeting only, commencing at 1.30 p.m., and ending at 6 p.m. In case an evening meeting can be held and the delegate arrive at the next place of meeting before 1.30 p.m. on the day advertised, an evening meeting may be arranged for if desired.

SECTION 1.

DELEGATE—Miss Laura Rose, Lady Instructor in Dairying, O. A. C., Guelph.

SUBJECTS—"The Making of Prize Bread and Butter"; "The Properties and Care of Milk"; "One Eye in the Fields, the Other in the Town."

1. Drayton (Whyte's Hall); Wellington West, June 1st.
2. Warton; Bruce North, June 2nd.
3. Paisley; Bruce Centre, June 3rd.
4. Teeswater (Town Hall); Bruce South, June 5th.
5. Kenilworth; Wellington East, June 6th.
6. Flesherton; Grey Centre, June 7th.
7. Owen Sound (Y.M.C.A. Hall); Grey North, June 8th.

SECTION 2.

DELEGATE—G. E. Day, B.S.A., Agriculturist, O.A.C., Guelph.



FREE! This lovely Little Lady's Watch, with guard or chatelaine for selling 3 doz. of our full-sized Linen Doilies at 10c. each; Lady's Sterling Silver Watch for selling 6 doz. Doilies in latest and prettiest design. They sell at sight. Write and we send them postpaid. Sell them, return our money and we promptly forward your watch free. Unsold doilies returnable. **LINEN DOY-YCO., Dept., 143 Toronto.**



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To Dairymen of Manitoba and N. W. T. Districts:

We beg to call your attention to our having opened a Branch of our business at Winnipeg, where we will carry a complete line of all articles required in the manufacturing of Butter and Cheese, for either Creamery or Dairy, and at such prices as will enable you to save money.

Heading lists of goods stands the full line of "De Laval," "Alpha" Power and Hand Separators, which are to-day conceded by our leading Experiment Stations and Dairy Schools, as well as advanced Creamery and Dairymen, to be the best cream separators on the market to-day, and other goods of the same standard of merit, which will appeal to all dairymen as worthy of their consideration before purchasing elsewhere.

Our object in opening this branch is to be near the dairymen of Manitoba and the N.W.T., so as to better serve those who have favored us with their patronage in the past, either direct or through local agents, and to acquaint ourselves with new customers. All of which will result to our mutual interest.

The users of any style of "De Laval" separators, who are not fully posted on operating same to best advantage, or those desiring any more information on the Separator question, we shall be pleased to hear from, assuring them that such enquiries will have prompt and satisfactory attention. Any who contemplate the purchase of a cream separator this spring, we should be pleased to hear from, so as to send them reading matter that will prove of much interest and benefit, giving experience of dairy authorities on cream separators, showing first cost is not the only consideration in a separator purchase. If what facts we produce are not convincing enough to any intending buyer that the "De Laval" "Alpha" Separators are the best, we will be pleased to place one of such separators in any dairy on a 15 or 30 days' trial, against any cheap infringing separator, to prove by practical results that the "DE LAVAL" is not only the Best but also the Cheapest. Let us hear from those in any way interested.

For further information or particulars, address

THE CANADIAN DAIRY SUPPLY CO.,
236 King St., Winnipeg, Man.

We want local agents in every Dairy District. tf

SUBJECTS — "Feeding Standard and Economical Feeding of Live Stock"; "Our Export Bacon Trade"; "Conservation of Soil Moisture"; "Agricultural Education."

1. New Dundee (Hotel Hall); Waterloo South, June 1st.
2. Mountain View Hotel Hall (near Hamilton); Wentworth South, June 2nd.
3. Milton (Town Hall); Halton, June 3rd.
4. Shelburne (Town Hall); Dufferin, June 5th.
5. Cookstown; Simcoe South, June 6th.
6. Orillia; Simcoe East, June 7th.
7. Bracebridge (Town Hall); Muskoka South, June 8th.

SECTION 3.

DELEGATE—J. Hugo Reed, V.S., Professor of Veterinary Science, O.A.C., Guelph.

SUBJECTS—"Breeding Horses for Profit"; "The Ordinary Diseases of the Stomach of the Ox Which a Farmer Should Understand"; "The Prevention of Parturient Apoplexy. Commonly Called Milk Fever, in Cows." Any subject relating to Veterinary Science.

1. Hensall; Huron South, June 1st.
2. Chatham (Old Town Hall); Kent West, June 2nd.
3. Kingsville (Town Hall); Essex South, June 3rd.
4. Oldcastle; Essex North, June 5th.
5. Aylmer (Town Hall); Elgin East, June 6th.
6. Delhi; Norfolk North, June 7th.
7. St. George (Public Library Hall); Brant North, June 8th.

SECTION 4.

DELEGATE—A. E. Shuttleworth, B.A.Sc., Ph.D., Professor of Chemistry, O.A.C., Guelph.

SUBJECTS — "Forest Influences"; "Soil and Tillage."

1. Brampton (Concert Hall); Peel, June 1st.
2. Weston; York West, June 2nd.
3. Newmarket (Temperance Hall); York North, 3rd.
4. Agincourt; York East, June 5th.
5. Lindsay; Victoria West, June 6th.
6. Fenelon Falls (Dickson's Hall); Victoria East, June 7th.

SECTION 5.

DELEGATE—J. B. Reynolds, Lecturer in Agricultural Physics, O.A.C., Guelph.

SUBJECTS—"Surface Cultivation"; "Leisure Hours on the Farm."

1. Brooklin; Ontario South, June 1st.
2. *Madoc; Hastings North, June 2nd.
3. Almonte (Town Hall); Lanark North, June 5th.
4. Spencerville (Town Hall); Grenville South, June 6th.
5. Stella (Town Hall); Amherst Island, June 7th.

* Meeting will commence at 2 p.m.

Alphabetical List of Institutes, giving Date and Place of Holding each Annual Meeting

Addington—Centreville, Town Hall.....	June 17th.
Algoma, Centre—Sault Ste. Marie, Council Chamber.....	" 17th.
Algoma, East—Sowerby, Macabees' Hall.....	" 10th.
Amherst Island—Stella, Town Hall.....	" 7th.
Brant, North—St. George, Public Library Hall.....	" 8th.

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CHEAPEST PAINT ON EARTH

For farmers' use—for Barns, Shingle Roofs (old or new) where cheapness and durability are desirable. Used and highly recommended by the Councils of Toronto and Montreal, Toronto Board of Education, the Industrial Exhibition and the Ontario Government. Write for Circulars. Agents wanted. d-5-23



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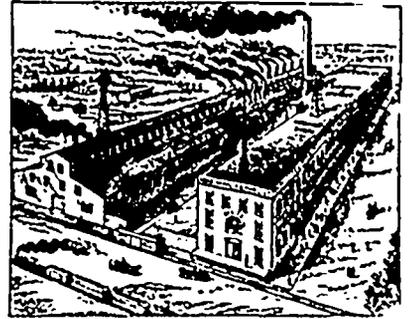
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Send for price list and catalogue. Dealers will find it to their interest to correspond at once with

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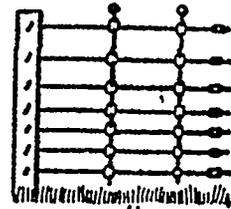
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With 100 Rods. Gold Stem-Wind Watch Free.



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We heartily thank you for the liberal and increased patronage which has made the past year a record-breaker in our business. Remember, we do not class our

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with the Water-Limes and Hydraulic Cements now on the market, but guarantee it equal to the Imported or Domestic Portlands for all farm structures, such as Basement Walls for Stables, House or Cellar Walls, Cisterns, Hog Pens, Poultry Houses, and for all kinds of Stabling.

Kindly investigate our System of Ventilation. This system is fully covered by letters patent, but to our patrons we make no charge.

Write for our New Pamphlet for 1899, containing valuable information, prices, etc.

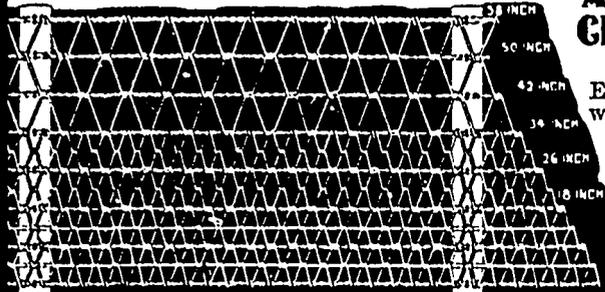
Isaac Usher & Son, Queenston, Ont.

Brant, South—Brantford.....	10th.
Brockville—Lyn.....	20th.
Bruce, Centre—Paisley.....	3rd.
Bruce, North—Warton.....	2nd.
Bruce, South—Teeswater, Town Hall.....	5th.
Bruce, West—Burgoyne, Temperance Hall.....	10th.
Carleton—Stittsville.....	13th.
Cornwall—Cornwall Centre.....	5th.
Dufferin—Shelburne, Town Hall.....	6th.
Dundas—Winchester Springs.....	2nd.
Durham, East—Milbrook, Town Hall.....	13th.
Durham, West—Bowmanville, Council Chamber.....	6th.
Elgin, East—Aylmer, Town Hall.....	6th.
Elgin, West—Dutton.....	5th.
Essex, North—Oldcastle.....	3rd.
Essex, South—Kingsville, Town Hall.....	6th.
Frontenac—Kingston, Court House.....	16th.
Glengarry—Alexandria, Queen's Hall.....	6th.
Grenville, South—Spencerville, Town Hall.....	7th.
Grey, Centre—Flesherton.....	8th.
Grey, North—Owen Sound, Y.M.C.A. Hall.....	10th.
Grey, South—Durham, Town Hall.....	6th.
Haldimand—Cayuga, Court House.....	3rd.
Halton—Milton, Town Hall.....	14th.
Hastings, East—Plainfield.....	2nd.
Hastings, North—Madoc.....	10th.
Hastings, West—Belleville, City Hall.....	13th.
Huron, East—Brussels, Council Chamber.....	1st.
Huron, South—Hensall.....	20th.
Huron, West—Nile.....	17th.
Kent, East—Thamesville.....	2nd.
Kent, West—Chatham, Old Town Hall.....	15th.
Lambton, East—Warwick.....	1st.
Lambton, West—Brigden, Haynes Hall.....	5th.
Lanark, North—Almonte, Town Hall.....	5th.
Lanark, South.....	3rd.
Leeds, North and Grenville North—Merrickville, Town Hall.....	6th.
Leeds, South—Landsdowne, Town Hall.....	10th.
Lennox.....	9th.
Lincoln—St. Catharines, Grand Jury Room.....	3rd.
Manitoulin, East—Manitowaning.....	1st.
Manitoulin, West.....	15th.
Middlesex, East—London, Court House.....	9th.
Middlesex, North—Ailsa Craig.....	3rd.
Middlesex, West—Appin.....	14th.
Monck—Wellandport, Misener's Hall.....	8th.
Muskoka, Centre—Utterson, Town Hall.....	7th.
Muskoka, North—Huntsville, Court House.....	1st.
Port Carling and Bala.....	10th.
Muskoka, South—Bracebridge, Town Hall.....	7th.
* Meeting will commence at 2 p.m.	
Norfolk, North—Delhi.....	2nd.
Norfolk, South—St. Williams.....	1st.
Northumberland, East—Warkworth, Council Chamber.....	1st.
Northumberland, West—Cobourg.....	6th.
Ontario, North—Uxbridge, Market Hall.....	6th.
Ontario, South—Brooklin.....	6th.
Oxford, North—Embrow, Town Hall.....	6th.
Oxford, South—Norwich.....	10th.
Parry Sound, East—Sundridge, Orange Hall.....	1st.
Parry Sound, West—Parry Sound.....	6th.
Peel—Brampton, Concert Hall.....	10th.
Perth, North—Milverton, Groche's Hall.....	1st.
Perth, South—St. Mary's, Council Chamber.....	2nd.
	6th.

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WOVEN WIRE FENCE is only one of the 10 styles we make. We call it our standard because it is designed to meet nearly every requirement of the fence user.

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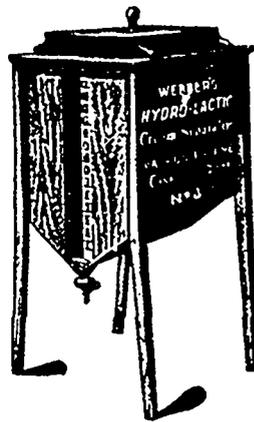


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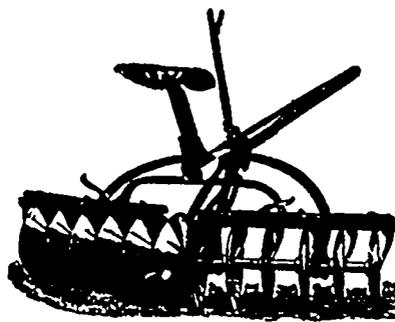
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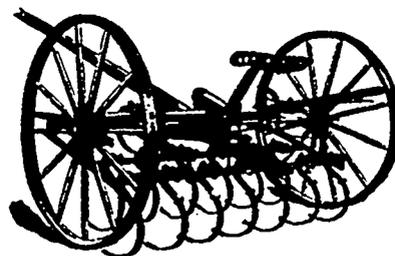
The Buffalo All-Steel Disc Harrow.



NOXON NEW BUFFALO PATENT ALL-STEEL DISC HARROW.

This is the only Disc Harrow made or sold in Canada, having independent, adjustable spring pressure upon the inner ends of the gang disc, allowing any amount of pressure to be thrown upon the inner ends of the gangs, by the foot of the operator. By this means a perfectly flexible action is secured and the ground can be worked to a uniform depth. Examine this machine carefully and compare with others.

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NOXON NO. 12 SECTIONAL SPRING TOOTH CULTIVATOR

IS A MARVEL OF SUCCESS. The only Cultivator made that both lines of teeth will cut an even depth in the ground. Examine it and you will see why. The only Cultivator with a movable tooth set so that the angle of the teeth can be regulated to suit any condition of soil. Pressure can be regulated to act differently on every section requiring it. The teeth are carried between the wheels instead of trailing behind, as in other machines, thus securing lighter draft. This machine is furnished with grain and grass seed box when required. It has reversible diamond steel points for the teeth; also extra wide-thistle-cutting points can be furnished. Examine it and you will buy no other.

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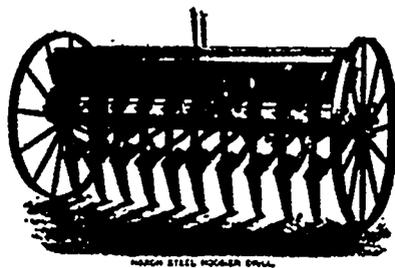
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HOOSIER STEEL HOOSIER DRILL

Peterborough, East—Norwood, Town Hall.....	5th.
Peterborough, West—Peterborough, Council Chamber.....	17th.
Prescott—Plantagenet.....	8th.
Prince Edward—Picton, Shire Hall.....	10th.
Renfrew, North—Beachburg... Temperance Hall.....	10th.
Russell—Russell.....	20th.
Simcoe, Centre—Elmvale, Drysdale's Hall.....	10th.
Simcoe, East—Orillia.....	19th.
Simcoe, South—Cookstown....	7th.
Simcoe, West—Stayner.....	6th.
Stormont—Newington.....	13th.
St. Joseph Island—Marksville, Town Hall.....	6th.
Union—Clifford.....	12th.
Victoria, East—Fenelon Falls, Dickson's Hall.....	17th.
Victoria, West—Lindsay.....	7th.
Waterloo, North—Waterloo, Zimmerman's Hall.....	6th.
Waterloo, South—New Dundee, Hotel Hall.....	6th.
Welland—Welland, Court House	1st.
Wellington, Centre—Elora, Town Hall.....	6th.
Wellington, East—Kenilworth	6th.
Wellington, South—Guelph, Township Council Room.....	3rd.
Wellington, West—Drayton, Whyte's Hall.....	1st.
Wentworth, North—Freelton, McFarland's Hall.....	6th.
Wentworth, South—Mountain View Hotel Hall.....	2nd.
York, East—Agincourt.....	5th.
York, North—Newmarket, Temperance Hall.....	3rd.
York, West—Weston.....	2nd.

Removing Wool from Sheepskins.

Having got the skins in the yard, they are first beaten on a wooden block with a mallet to bruise the congealed blood on the necks; they are then thrown into water to rinse the dirt and blood from the wool, and are then hung over trestles for the water to drain out. The skins are next lime-washed on the flesh-side, and folded down the back so as to make the bellies match together. They are then left for an hour or two, so that the lime will set a bit. They are then hung by the thick part of the back of the head upon tenter hooks in large, dark closed sheds or rooms, and in about two days in the summer the wool will come off quite easily. The sheds have to be heated in the winter. —*Australian Agriculturist.*

Meaning of Scientific.

Canon MacColl tells an amusing story. "A friend of mine," says the canon, "once shared the box seat with the driver of the stage coach in Yorkshire, and being a lover of horses he talked with the coachman about his team, admiring one horse in particular. 'Ah,' said the coachman, 'but that 'oss ain't as good as he looks, he's a scientific 'oss.' 'A scientific horse,' exclaimed my friend. 'What on earth do you mean by that?' 'I mean,' replied Jehu, 'a 'oss as thinks he knows a deal more nor he does.'"

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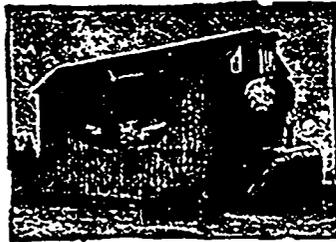


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that ticks are hard to kill? Then why use dips and washes which only do for the time being?

Miller's Tick Destroyer

is a preparation with nearly 30 years' reputation.

KILLS Ticks, Eggs and ALL

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E. MORDEN, NIAGARA FALLS SOUTH,

for his Price List. Stock reliable and cheap and can be shipped to any point in Ontario in good order and season if order arrives early enough.

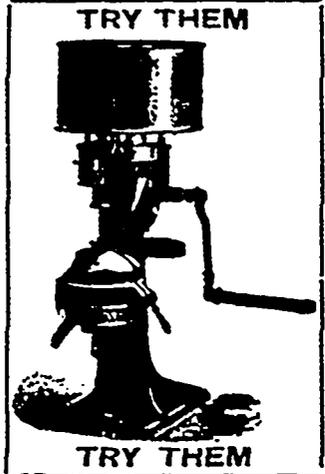
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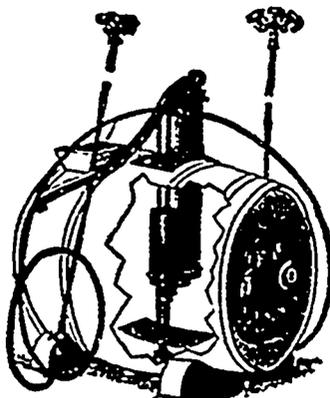
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THE SPRAMOTOR FIRST



A TRIAL of Appliances when conducted by a BRITISH GOVERNMENT is sure to prove a valuable asset to the WINNER.

Rival manufacturers would gladly have us let the result of the Contest of Spraying Apparatus die, but how would this suit the purchasers of this kind of apparatus, who have been buying apparatus that has not been satisfactory in use and has caused more people to delay the practice of spraying than all other causes combined?

Send for full particulars in our copyrighted catalogue on the diseases affecting fruit trees, vegetables etc., and their remedies.

Over 100 GOLD MEDALS AND THE HIGHEST AWARDS have been granted the Spramotor in three years.

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Certificate of Judges' Award:

THIS IS TO CERTIFY that at the Contest of Spraying Apparatus held at Grimsby, under the auspices of the Board of Control of the fruit experimental stations of Ontario, in which there were eleven contestants, the Spramotor, made by the Spramotor Co. of London, Ont., was awarded First Place.

Agents Wanted. H. L. HURT, H. PATTIN, Judges.

SPRAMOTOR CO., 357 Richmond St., LONDON, ONT.

Market Review and Forecast.

Office of FARMING,
Confederation Life Building,
Toronto, May 1st, 1899.

The improved condition of the roads in the country and the opening of navigation have caused a more active trade in wholesale lines. Remittances also show a marked improvement, and money is steady at 5 per cent. on call, and discounts range from 6 to 7 per cent. The general trend of trade is good and the outlook bright.

Wheat.

Irregular is the word that best describes the leading wheat markets. This has been characteristic of the Chicago market, which virtually rules the other markets of the world, during the past week. The cause of this irregularity is the varying reports regarding the winter wheat crop. Early in the week the Chicago market rallied on the better export demand, and a large decrease in the visible supply, with estimates that placed the damage to the winter wheat crop of the United States at 50,000,000 to 75,000,000. Later in the week the market was easier but was irregular with frequent ups and downs in prices. In addition to information given elsewhere regarding the outlook for winter wheat a later report from Kansas states that 28 per cent. of the wheat has been plowed up and the estimated crop of fall wheat for that state is placed at 28 million bushels as against 65 millions last year. It is reports like this that are causing the excitement in the market. There is a disposition on the part of farmers everywhere to hold their wheat.

Cable reports during the week indicate a firmer feeling in European markets. The *Trade Bulletin's* London cable of April 27 reads in part as follows: "The market is firmer and higher under light stocks and discouraging reports of crop damage from your side, and prices are 3d. higher." The markets here show an easier feeling. There is very little doing in wheat at Montreal. On this market prices are about the same as a week ago and are 68 to 69c. for red and white west and north; goose at 65 to 66c. north and west and No. 1 Manitoba hard at 81c. and No. 1 Northern at 77c. Toronto. On the Toronto farmers' market red and white is worth 71½c.; spring fls, 67 to 69c., and goose 65½c. per bushel.

Oats and Barley.

The English oat markets are steady with a good demand for Canadian. There has been considerable trading on this side during the week, and it is estimated that sales to the amount of 200,000 bushels have been made in Ontario at 31½ to 32c. f.o.b., or 37c. afloat at Montreal. The market here is firm at 31½ to 32c. west. On the Toronto farmers' market oats are quoted at 38½ to 40c. per bus.

The Montreal barley market is quiet, malted barley being quoted at 50 to 52c., and feeding at 44 to 46c. Barley is dull here at 40 to 43c. west.

Peas and Corn.

The English markets for peas are quiet, but steady. Stocks are light, but high prices are checking the demand. There is not much doing on this side, and prices are 74 to 74½c. afloat at Montreal and 64 to 65c. at Ontario points. Peas are in demand here for export at 64 to 65c. north and west. 62½ to 63½c. per bushel are the quotations on the farmers' market.

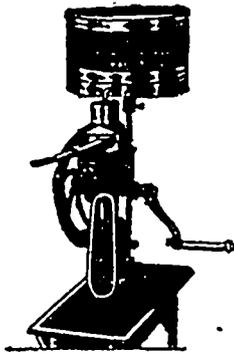
Corn is quiet at Montreal at 43 to 44c. in car lots. American is quoted here at 41 to 42c. on track.

Bran and Shorts.

Ontario bran is quoted at \$16 to \$17 and shorts at \$18 to \$18.50 in car lots at Montreal. City mills here are selling bran at \$14.50 and shorts at \$15.50 in car lots f.o.b. Toronto.

Clover and Timothy Seeds.

There is a fair inquiry at Montreal for timothy and red clover, and prices are the same as given in last week's issue. The offerings here are small, the jobbing demand is steady and the market is steady. Red clover is quoted \$3 to \$3.30 at outside points, and alsike at \$3 to \$4, and local dealers here quote 40 to 50c. in advance of these figures. On the Toronto



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farmers' market red clover is quoted at \$3 to \$3.50, white clover, \$5 to \$8, alsike, \$3 to \$4.20, timothy, \$1.20 to \$1.35, and white beans at 80 to 90c. per bushel.

Eggs and Poultry.

The London, England, market for eggs is steady but quiet. The excessive supplies which usually come on the market at this season of the year have not yet been experienced. The Montreal market is easier under more liberal supplies and prices have dropped 1½ and 2c. during the week. 11 to 11½c. are the quotations for 25 case lots. Though receipts are increasing, they are very much below those of last year at this time. At present prices packers are not doing much in the way of pickling for the English market. The market here is steady at 11 to 12c. wholesale, on the farmers' market 11 to 13c. are the prices for new laid.

Potatoes.

The Montreal market is steady at 70c. in car lots for good sound quality. There are more liberal receipts here, but quotations are the same, at 75 to 80c. per bag in car lots, and 85 to 90c. out of store. On the farmers' market they bring 80 to 90c. per bag.

Fruit.

There has been a much better demand at Montreal for all kinds of fruit, and the apple market is firm at \$3 to \$5 per bbl., as to quality. On the local market here apples bring from \$2.50 to \$4 per bbl.

Hay and Straw.

The Montreal hay market has ruled quieter during the week, the Ontario demand having been supplied, and the English demand for Canadian hay is not as brisk as it was. Farmers are busy with seeding operations, and are not likely to deliver much hay till they are over. Choice No. 2 baled hay is firm at Montreal at \$6.50 to \$7, and ordinary No. 2, \$5 to \$5.50; clover and mixture, \$4.25 to \$5 per ton. There is a good demand here for hay, and the offerings are light and the market firmer. Baled hay is quoted at \$7.50 to \$8.50 for c.a.s. on track. On the Toronto farmers' market timothy brings \$11 to \$13; clover, \$9 to \$10; straw sheaf, \$6 to \$7; and loose straw, \$4 to \$5 per ton.

Cheese.

To-day is the beginning of a new season in the butter and cheese trade. The winding up of the cheese season shows a strange contrast to that of a year ago, when almost every one in the trade lost money. A year ago old cheese was worth from 8½ to 9c., while to-day it is worth 11c. Last year at this time sales of fodder cheese were made at 8 to 8½c. at Montreal, while to-day they are about 2c. higher, and in England they are about 10c. higher than they were a year ago. The total exports from Canada for the season show a decrease of 230,000 boxes as compared with the previous season, and the exports from the United States about 316,000 boxes, making a total deficit of 546,000 boxes. The cheese exports of the season just closed brought in between \$14,000,000 and \$15,000,000, which, added to the \$4,500,000 for butter exports, made a total of nearly \$20,000,000.

The English markets are quiet and easy, owing to stocks of old goods in some places being somewhat larger than was expected, and the public cable has dropped a shilling

during the week. What little old stock there is on this side is held on English account. Prices for old goods at Montreal range from 10½ to 11c., and for new cheese 10 to 10½c. per lb. The warm weather has brought an increased supply of milk to the factories that are making early goods, so that the make of fodder cheese is likely to be very large. It is reported that the bulk of this early cheese in Eastern Ontario has been contracted for at 9 to 9½c. At one local market new cheese sold at 9½c.

Butter.

The wind-up of the creamery butter season as regards prices does not show the gains in the cheese trade. But on the whole the showing is satisfactory. The exports increased by over 100,000 packages, and there has been a steady export demand nearly the whole season at reasonable prices. The prices at Montreal to-day are about where they were a year ago, namely, 16½ to 17c. for choice creamery. The British demand for the new season is likely to be good, as there are indications that the English make is gradually decreasing. The exports from the United States fell off 50,000 packages during the year.

Under liberal Danish and home supplies the English markets have shown considerable weakness, and holders are accepting from 4s. to 5s. lower per cwt. in order to clear out stocks. Finest Canadian is quoted at 86s. to 88s. The Montreal market is quiet with prices ruling somewhat in favor of buyers. Sales of fresh made creamery at 16½ to 16¾c. Factorymen have been offering freely at 16c. Dairy butter is in good supply and dealers find difficulty in disposing of their hold-over stock. 11½c. to 12½c. are the quotations for roll butter. The supply of dairy butter here is large and the market weaker. Choice dairy tubs are quoted at 12c. to 13c. and large rolls at 12c. to 13c. Creamery prints are quoted at 17½c. to 18½c. and tubs at 17c. to 18c. On the Toronto farmers' market large rolls fetch 13c. to 14c. and 1b. rolls 14c. to 18c. per lb.

Cattle.

While the Western markets as a rule opened up well at the beginning of the week there was an easier feeling in some lines as the week advanced, and beef cattle were lower at one or two places. The demand for stockers and feeders keeps up well and the market continues firm for these. On the Toronto market prices have been well maintained, and on Friday a better feeling existed than for several days past. The receipts were light, the quality of the fat cattle being generally good, there being only a few lots of exporters. Prices run about the same for exporters with butcher cattle a shade higher than last week. As navigation by the Canadian route opens this week it is expected that shippers will do more business.

Export Cattle.—Choice heavy export cattle sold at \$4.75 to \$5, with a few well-finished picked lots fetching \$5.12½ per cwt., the bulk going at \$4.75 to \$4.85. Light exporters bring \$4.40 to \$4.60 per cwt., heavy export bulls \$3.85 to \$4.25, and light ones \$3.40 to \$3.65 per cwt.

Butcher's Cattle.—Choice picked lots of these equal in quality to the best exporters, and weighing 1,000 to 1,150 lbs., sold at \$4.50 to \$4.60, good butchers' cattle at \$4.37½ to

\$4.50, and medium, which were scarcer and firmer, \$4.20 to \$4.30 per cwt. Other quality is worth from \$3.25 to \$3.85 per cwt.

Stockers and Feeders - Buffalo stockers continue in good demand, and reports published during the week would indicate that cattle are very scarce in this country. Good stockers bring from \$3.50 to \$4.25 per cwt., the latter being for well-bred steers only. Stock heifers are worth \$3 and stock bulls \$2.50 per cwt. Heavy choice feeders, weighing 1,000 to 1,100 lbs. each, are scarce, and sell at \$4.25 to \$4.40 per cwt. Feeding bulls are worth from \$3 to \$3.50 per cwt.

Calves - There is a good demand for these at Buffalo, and the market is stronger. On this market they bring from \$2 to \$8 each, the bulk going at \$3 to \$5 each.

Milk Cows and Springers - Really good cows are wanted. The bulk of those offered on Friday sold at \$28 to \$45 each.

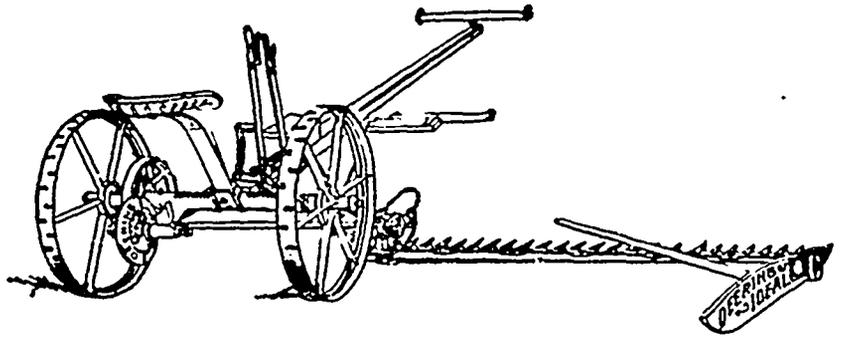
Sheep and Lambs.

Most of the American markets have been strong and steady during the week, with higher prices for both sheep and lambs in some places. The Buffalo market has been steady, with a good demand for wool stock, though this line is about out for the season. The run of sheep on Toronto market was light on Friday, with ewes selling at \$3.50 to \$3.75, and bucks at \$3 to \$3.25 per cwt. Yearling lambs were firm at \$5.50 per cwt. for first-class grain fed, with heavy lambs, weighing 100 to 110 lbs., 5 to 10c. per cwt. more. Common barnyard lambs bring from \$4 to \$4.50 per cwt. Spring lambs are worth from \$2 to \$5 each.

Hogs.

According to reports things are not smooth sailing in the export bacon line. *The Trade Bulletin* states that trade in Canadian bacon has been very discouraging. The 36s. quoted for Canadian lean bacon means 7c. to 7½c. per lb. net at Montreal, while local prices there range from 10c. to 12c. There are immense quantities of hogs in Denmark and Holland to be marketed, which fact is causing a depression in the English market. This same journal's special cable of April 27th is, however, more reassuring, and reads thus: "The market has shown some improvement from the late depression and under a good demand Canadian best brands of lean sides have advanced 2s. per cwt." Prices have been fairly well maintained at Montreal during the week, the bulk of the offerings being taken by packers at \$4.60 per cwt. There is no change in prices on this market, which are \$4.50 for choice bacon hogs, \$4 for light hogs and \$3.75 for thick fair.

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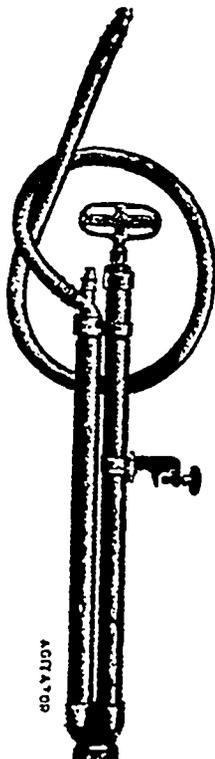
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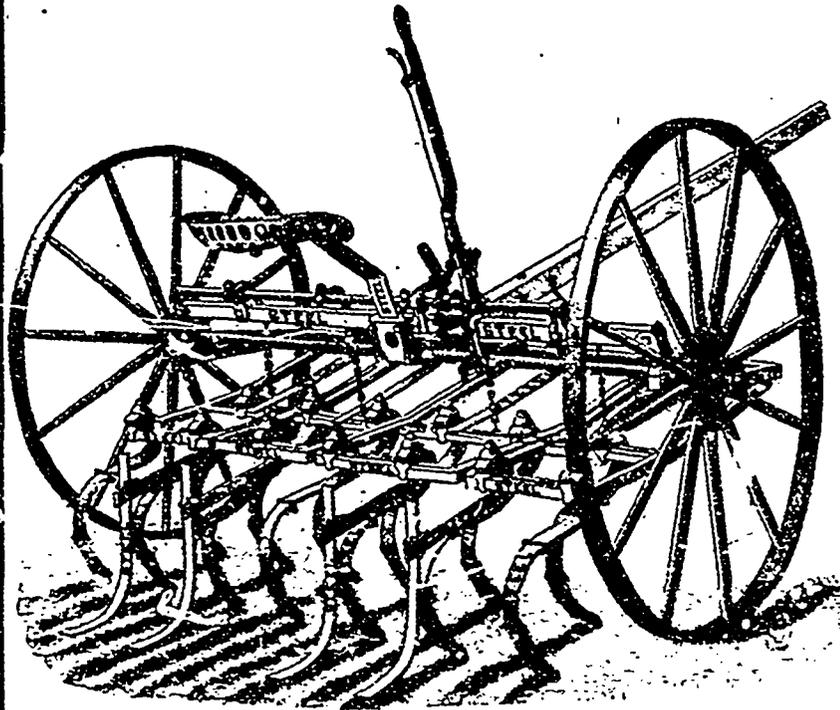
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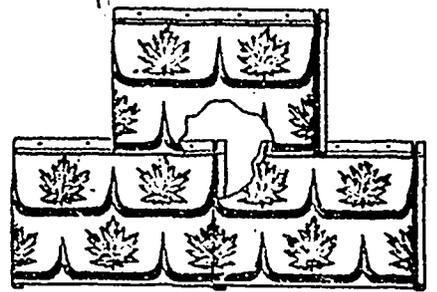
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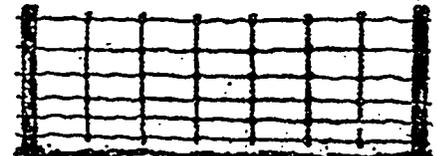


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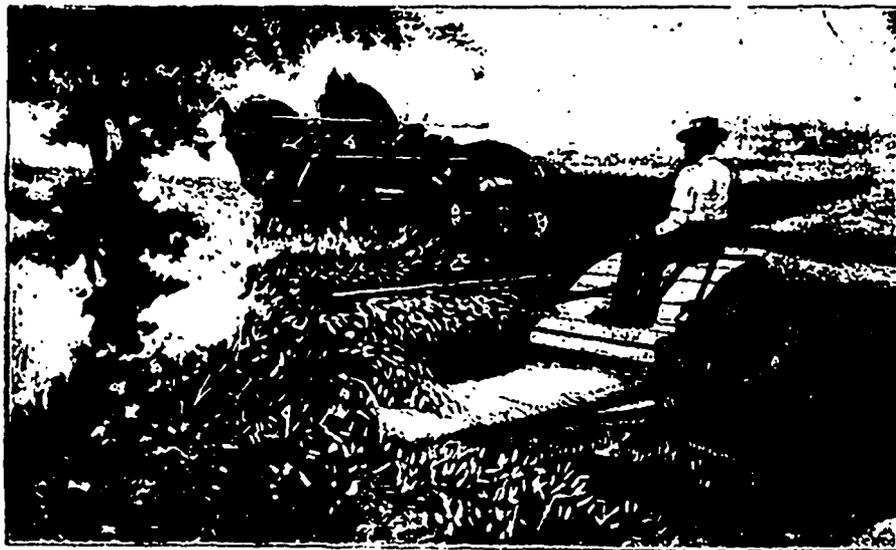
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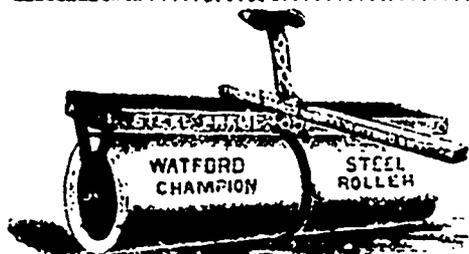
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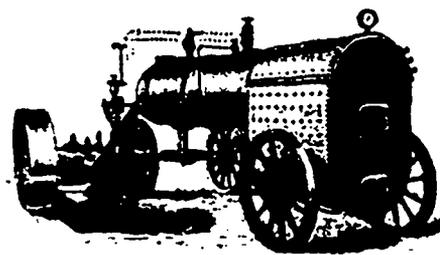
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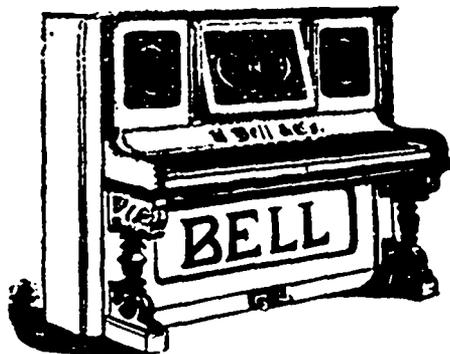
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