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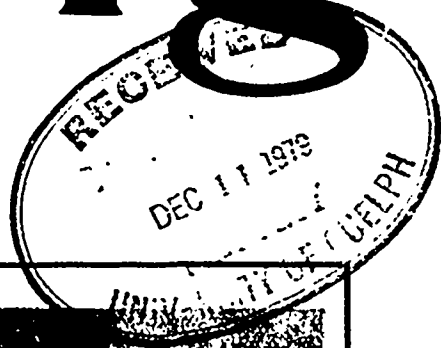
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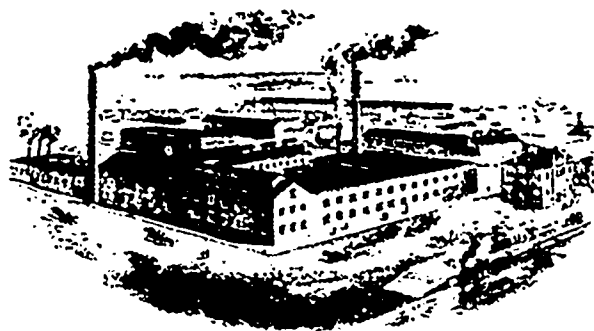
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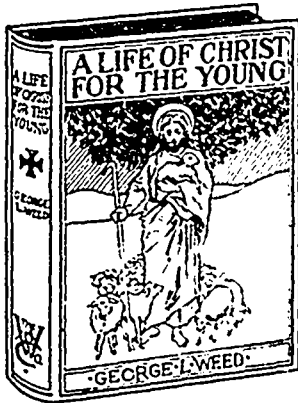
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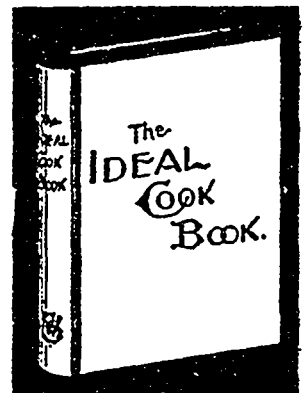
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# FARMING

VOL. XVII.

DECEMBER 19th, 1899.

No. 16

## A Merry Christmas

Once more we have the pleasure of extending to the readers of FARMING our best wishes for a joyous and merry Christmas. May all the pleasures of this festive season be yours. We have provided for this occasion several pages of special matter suitable for Christmas reading, which we trust you will enjoy to the fullest extent. Let us, in enjoying ourselves, not forget that there may be others not so fortunately situated as we are, and be willing to lend a helping hand in bringing some spark of joy into their lives.

## Christmas Presents.

Farming Makes it Easy for any Reader to secure one or more.

The two-page announcement of FARMING in our advertising columns should be gone over carefully by every reader. It tells with completeness the story of our premium offers. With a little exertion one may secure a good book that will serve as a Christmas present, or a bible, or a reading glass or a watch. One subscription alone is sufficient to give you a handsome dollar book. A comparatively small club will give you a solid silver watch.

## The Farmer's Ideal

In speaking at the great public meeting held at London during the winter show, the Hon. John Dryden laid special stress upon the fact that the breeder or the farmer should have an ideal before him when raising and fitting animals for market. We would like to emphasize this fact. No hap-hazard or careless methods of breeding or feeding will suffice if the farmer wishes to make a success of his calling. He must have an ideal before him and that a pretty high one too, before he can hope to produce the fine quality of product required by the market of to-day. What then should be the farmer's ideal? In beef cattle, the kind that will bring the highest price on the market; in the dairy cow the one that will produce the most butter during the year, over and above her cost of keep; in sheep the kind that will produce the finest quality and the largest quantity of mutton and wool, and in the hog, the one that will give the finest quality of bacon. These ideals are the ones the farmer should constantly have in mind, and he should not stop short of turning out any one of them. It will not do to cease one's efforts when a cow that will produce 250 lbs. of butter a year is secured. There is the 300 lb. cow ideal to be reached, and when she is secured a still higher ideal should be aimed at. By having these ideals constantly before him an improvement in the quality of the product a farmer turns out is bound to come. Keep pressing onward towards the goal of perfection, and when it is reached the highest possible success, financially and otherwise will be your reward.

## Government Assistance to the Poultry Industry

In the premium list of the Ontario Poultry Show, to be held at Peterborough in January, a notice appears calling a meeting to discuss the appointment of delegates from every local poultry association to wait upon the Ontario Government to ask for affiliation of all local associations with the Agricultural and Arts Association, and for an annual grant for each on the same principle that grants are given to branch agricultural and horticultural societies. A movement of this kind cannot be allowed to pass by entirely unnoticed. Where public money is asked for, to carry on any line of work or to promote any industry, we naturally inquire if the cause is a worthy one and deserving of Government assistance. Judging of the work of the Ontario Poultry Association for several years back, and also of some of the local associations from the standpoint of practical benefit to the farmer, we have no hesitation in saying that these organizations do not merit any assistance from the Government. Until they can show that they are working for the best interests of the farmer in teaching him how to breed, feed and raise the kind of poultry required for the export trade in dressed poultry or for the production of eggs, we say emphatically, that it would only be a waste of money to make them any further grants.

The Ontario Poultry Association has held a show and its general meeting annually for a number of years, and we would like to know wherein it has succeeded in materially benefitting the poultry industry of this country as carried on by the average farmer. The show has been largely under the control of breeders of the "fancy" who bring their bantams and dainty, useless birds to the show every year, draw their prize money, and that is about all we hear of them till the next show arrives.

Take the Provincial Show held at Toronto last January as an example. There were only at most three breeders who showed in the purely fancy classes and the list of awards appeared something like this: Class 5, section 1. 1st prize, Mr. A.; 2nd prize, Mr. B.; 3rd prize, Mr. C. Section 2. 1st prize, Mr. B.; 2nd prize, Mr. C.; 3rd prize, Mr. A. Section 3. 1st prize, Mr. C.; 2nd prize, Mr. A.; 3rd prize, Mr. B.; and so on till all the sections in the class were gone through with. These three individuals went home thinking the show a great success and with their pockets well lined with prize money. True, at last year's show there was a large and very creditable exhibit of what are known as the utility breeds, the kind that our farmers should raise, but in awarding the prizes more attention was paid to fancy points than to the bird's adaptability for roasting or broiling purposes.

The Ontario Poultry Association receives annually a large grant from the Government, and while a portion of it goes towards prizes for the utility class of fowls, too great a share goes out in prize money for fancy birds and pet stock that are of no more practical use to the farmers of this country than so many sparrows. We say then that it is time for a change, and instead of increasing the grants to these organizations they might better be discontinued altogether, or a stipulation made that all Government money given in prizes be devoted to practical and useful purposes. A leading breeder of utility poultry writes us

of recent date as follows: "The Government now gives the association \$900 annually to assist in developing the poultry industry, but it might as well throw that amount in the lake for all the good the farmers receive from it." And this is the opinion of a great many who know the working of the Ontario Poultry Association. Last year at their annual meeting, Prof. Robertson and Mr. Gilbert were present to address the gathering, but so much time was spent in bickerings and petty talk that there was no opportunity for these gentlemen to address the meeting.

We have no wish to unduly criticize the provincial association or any of the local organizations, but until they show that they are more deserving of public assistance we are decidedly opposed to any further money being granted. The poultry industry of this country is an important one, and is capable of immense development, but any Government assistance rendered it must be through such channels as will bring in the best returns. If the local organizations that intend asking for public money will undertake to expend such money in the way of prizes for poultry suitable for the export trade or for egg layers, or in some way that will be of assistance in helping the farmer, we have no objection to their receiving a grant. The work of these organizations in the past, however, does not justify us in expecting that such will be done, and unless some guarantee is given that the money will be expended for other than prizes for purely fancy stock there is no reason whatever why Government assistance should be extended to them.

## The Winter Show

The Provincial Fat Stock, Dairy and Dressed Poultry Show, a report of which appears elsewhere, has again proven itself to be one of the best educational factors we have in promoting the breeding and feeding of good stock. The display of fat stock was good, though not up to other years in the beef cattle classes. The block tests and the dressed poultry displays in themselves formed an exhibit that was worth any farmer's while to see. Then the addresses delivered by experts on the ideal bacon hog, the best mutton sheep and feeding, killing and dressing poultry for market, were among the most practical talks we have heard on these topics, and those who missed hearing them missed a great deal indeed. The milking competition also was an attraction for many. One Holstein cow is said to have made a world's record in so far as butter production is concerned. During the test she gave about 70 lbs. of milk a day, which averaged 4.5 per cent. of butter fat and would make upwards of 4 lbs. of butter. A cow that will produce this quantity per day, or 27 to 28 lb. of butter a week, is worth a small fortune to her owner.

The attendance at the show was smaller than it has been for several years back. Very few of the citizens of London turned out, and the percentage of farmers in the district who were conspicuous by their absence was very large. Why so few of the citizens and farmers in the district attended the show has not been fully explained. Quite a few who lived in the vicinity claimed that the show was not advertised locally, as it should have been in order to get the crowd out. As to the truth of this we are not prepared to say. We know, however, that it was well advertised throughout the Province.

The question of attendance is an important one; not so much for the revenue that it will bring in, but because the show is a great educational institution, and no effective teaching can be done unless there are pupils. The experience at London convinces us more than ever that the show should be placed in such a position financially that it could afford to allow admission, especially to farmers, free. The bulk of people are not so eager for education of the character that the show gives that they will journey a number of miles and then pay an admission fee to get it. The education and information to be obtained by a visit to the show is certainly worth ten times the admission fee to any farmer; but it is hard to convince him of the fact, and so we say, do

away with the admission fee and make all features of the show free to the public. The receipts from this source are so small that it is hardly worth while going to the expense of collecting it: at least, this must have been the case at London. What is wanted where so many educational advantages are to be had is not funds, but listeners. But, be this as it may, it is a matter of regret that there were not more farmers present to hear the addresses and to view the chief features of the show. We understand that the great International Live Stock Show to be held at Chicago next fall will charge no admission fee.

The arrangements for the block tests and lectures showed in several ways a great improvement over last year. The killing was accomplished more expeditiously and the finishing of the carcasses was much better done. In fact, there was not much room for complaint, so far as this feature was concerned. Much better arrangements might have been made for the accommodation of those who wished to hear the addresses. It was very difficult to hear what was being said unless one was quite close to the speaker. An allowance must be made, no doubt, for this being a new feature in shows of this character. But we trust that an improvement will be made another year. What is wanted is an amphitheatre or some building heated and fitted up for the occasion. The dressed carcasses, and for that matter, the live animals, could be brought into such a building and the audience could listen in comfort to what experts had to say regarding them.

While the buildings supplied for the purposes of the show furnished lots of accommodation for the exhibits, the fact that they were so much scattered detracted somewhat from the fine general view of the live stock exhibited, which shows of other years presented. The show has grown so of late years that it is difficult to secure one building large enough to accommodate it. But where this can be done the exhibits show off to much better advantage. The fact that the London show was held in buildings so far from the centre of the city may have prevented many of the citizens from attending.

The breeders' and other meetings held during the show were well attended, and great interest was shown in what was said. Nearly all the addresses delivered were of a practical nature, and important matters connected with Canadian live stock affairs received special attention. The importance of improving our stock and endeavoring to produce the quality of product that will meet the demands of the market were forcibly impressed upon those who attended by nearly every speaker. In a later issue we may discuss further some of the important matters touched upon.

## Farm Telephones in Canada

### An Elaborate System Working in Quebec

It has been generally believed that the United States was the only country in which the system of farm telephones was making any substantial progress. We find, however, on making enquiry that a system of farm telephones has been working in several parts of Canada for some time back. In last week's issue a short description of a system in use in the Niagara district appeared. Herewith will be found a description of a farm telephone system that has been developed and in regular use in the Province of Quebec for several years. The section of the province in which this system is working is near the southern boundary and bordering on the State of Maine. The system is a complete one in itself and is operated at country points, and has proven to be a great "boon" to the farmers of that portion of the Dominion.

The organization controlling the system is known as "The Canadian Telephone Company." In reply to an enquiry Mr. J. J. Bishop, local manager of the company at Bishop's Crossing, Quebec, sends us the following description of the system:

"The company was first started by a few men on the



Maine Central Railroad at Sawyerville, St. Malo, Paquetville, and Hereford to get connection with the Bell Company, but after they had a short line up with three switch-boards and about thirty subscribers the Bell Company refused them connection. They then formed a company with a capital of \$10,000, in shares of \$100 each, and gradually extended their work till now, or when their third annual report was issued May 31st, 1899, they had a connection of twelve switch-boards, 329 subscribers, 371 miles of wire, and 230 miles of poles, and an estimated value of \$16,894.64, with liabilities of about \$6,000. The company has a five years' contract with the People's Company of Sherbrooke City and vicinity, which gives subscribers of the Canadian Co. the use of the People's Co.'s connection on payment of a small toll, which varies from 10 cents for the nearest Canadian Co.'s centrals to 25 cents to Megantic, which is about seventy-five miles from Sherbrooke. Subscribers to the Canadian Co. pay \$10 a year rent for an instrument with a large tree territory. For instance, Bishop's Crossing subscribers get Scotstown, Bury, Cookshire, Sawyerville, East Angus, Marbleton, and Weedon free, but have to pay a small toll to the other centrals."

From this description it will be seen that the system covers a wide area and that farmers many miles apart are in direction communication with each other. This must be of immense advantage socially and every other way. The farm telephone system has evidently come to stay.

## A Beautiful Country Road

Among the illustrations received in response to our invitation a few weeks ago is the above view of "Maple Avenue" one mile in length. It is situated in the township of Scarborough and comprises the side line between lots



A Fine Country Road.

24 and 25, concession 4. The avenue is in front of the Macklin homestead, and Mr. J. A. Macklin in writing us in regard to it says: "The trees have been planted about twenty five years. The plantation was commenced about 1872 and since that time thousands of trees have been planted all over this section." The homestead consists of two hundred acres and about the same period another row was planted along the front of Alex. Macklin's place on the west side of the road. Since then the line on the west side has been continued to the south and the line fronting the original Macklin homestead has been extended to the north, with the result that for a mile there is a row of maples on both sides of the road forming a perfect avenue, while for a half-mile further there is a single row, the whole forming a most magnificent view from the roadway. This fine piece of tree planting has had its influence in the community, and the fronts of a number of farms in the same section are adorned with beautiful rows of trees, giving to the whole locality a most beautiful and thrifty appearance.

## British Columbia Notes.

(By our Regular Correspondent.)

During the month that is past the weather has been consistently mild and open. Torrents of warm rain have descended, and many farmers who were behindhand in lifting their roots now gaze in dismay upon miniature lakes where lie submerged their winter stock of turnips and



Farm Buildings, "West View Farm," Compton County, Quebec, the property of R. D. Cowan, Gould, P.O.

carrots. In other ways the warm rains have not been without advantage to the country. The grass has not ceased to grow, and cattle running out keep fat and in good condition. Fall sown grain could scarcely look more promising. With the exception of a little fall rye here and there for spring feed, the farmers on Vancouver Island do not sow much fall grain, nor I fear do they do a great deal of fall ploughing either. It would be a distinct advantage if more fall ploughing were done. The seeding is a matter upon which opinions are divided. Our long moist springs usually allow the planting of grain to extend from March to the middle of May on various soils. Whereas the fall-sown seed often suffers considerable damage from the action of the frost, especially in low-lying lands. Indeed it is not unknown for the "heaving" to be severe enough to snap the single roots of the clovers.

In spite of our recent rainy weather, agriculturists have no cause for much despondency. Prices for all farm produce rule high, and seem likely to remain so all through the winter. To quote the principal products:

Hay (baled), per ton.....	\$12.00 to \$16.00
Oats, per ton.....	26.00 " 30.00
Wheat, per ton.....	28.00 " 30.00
Potatoes, per 100 lbs.....	1.25
Eggs (fresh), per doz.....	50
Butter (Cowichan creamery) per lb.....	35
Cheese (Canadian) per lb.....	20

Meats and fruits are at proportionately big figures.

We are not to be without a little wholesome instruction in agricultural matters during the ensuing winter, for, as a result of certain representations made by Mr. G. H. Hadwen and others to the Hon. Sydney Fisher during his recent visit to the province, he has advised Mr. J. R. Anderson, Deputy Minister of Agriculture, that he will send two of his officers attached to his department at Ottawa to attend and give addresses at the annual meetings of the Fruit Growers' Association, the Dairymen's Association



Salting Cattle at "West View Farm," Compton County, Quebec.

and the newly-organized Central Farmers' Institute. Mr. Frank T. Shutt, chemist, experimental farms, is one of the gentlemen selected. The other has not yet been named, but the selection will be made public very soon.



The assertion has been often repeated, not altogether without some degree of justice, that this province is much neglected in the matter of assistance from the Dominion agricultural authorities. This act of courtesy on the part of the Minister of Agriculture has, therefore, proved very gratifying to farmers, both on the island and mainland. It is much to be hoped that successful and well attended meetings may be the result.

## Ontario Experimental Union

(Continued from last issue)

The following is a somewhat condensed report of the proceedings of the Union on the last day of the convention. The financial report showed a balance of \$235.21 in the treasury.

Prof. Doherty presented the report of the committee on economic botany. Very few had taken advantage of the committee's offer of plants. He had experimented during the year on spraying with potassium cyanide solution in killing mustard. This had not proven very effective. But spraying with a solution of iron and copper sulphate had

potatoes four or five days before planting, and planting at once. The results showed a decided gain in planting at once. An experiment on the difference in planting corn in squares or drills gave an increase of 1,000 lbs. ears per acre and 1.2 tons whole crop, in favor of planting in squares.

In the discussion which followed the conclusion was reached that the fumigation of the seed by carbon bisulphide or potassium cyanide helped to check the ravages of the pea-weevil.

Prof. Reynolds presented the report of the committee on soil physics. This was a new departure, and its work had hardly begun. One experiment had been carried on. Three kinds of treatment had been used: (1) drilling only; (2) drilling and rolling; (3) drilling, rolling, and harrowing with oats and barley. Results had shown that for these conditions most moisture and better results had come from drilling, rolling, and harrowing than from drilling only, and better from drilling only than from drilling and rolling.

This report was followed by an address by Mr. Powell, of New York State, who pointed out that this was one of the most vital questions to farmers. The real object of tillage was to prepare the seed-bed and to make available the plant food stored up in the soil. All our wealth comes from the soil, and the greatest question of agriculture is



Threshing in the Fields on Farm of J. B. McGugan, Aldboro, Elgin County, Ont.

had the desired result, all the plants being dead within five or six days after spraying. A report of these experiments appeared in *FARMING* a couple of months ago, so that it will not be necessary to refer to them at greater length here.

The introduction of nature study into rural schools was discussed by Prof. Lochhead, who strongly advised that something be done along this line. Mr. Zavitz continued his report on experiments. Varieties of peas, beans, soy-beans and roots were tested. Of two varieties of white peas the Early Britain had given better results than the Chancellor. The Prussian blue pea had also given good results. Soy-beans had been found to grow very successfully throughout the province. The Medina Green appears to be the best kind, with a yield of 22.4 bushels per acre. This variety was useful for green manure. They should be planted the latter half of May, when they would ripen early in September. In roots, mangels were very largely taking the place of turnips. Mangels thinned to about twelve inches gave the largest yields. Some tests were made of different sowings of peas on attacks of weevils. Early sown were much more attacked than later sown, but the yield from early sown was enough greater to make up the loss from the insect. He advised sowing about ten days after spring cultivation opens. Experiments were made on the effect of cutting

how to get at the great stores locked up in the soil.

In order to do this we must first understand the implements used. We must study the effects of plows and of all the other implements used on the soil. In a plow, the simple turning of the soil was not enough, but it must pulverize as well. All implements following the plow were for the purpose of pulverizing. In proportion to the amount of labor put on a soil is the amount of plant food liberated, and it is much cheaper to get plant food in this way than to buy it in the form of expensive commercial fertilizers.

The control of soil moisture was another important aim of tillage. The rainfall, during the season of growth, is not sufficient for the plants, and these must fail unless the moisture stored up in the sub-soil is husbanded. The sub-soil moisture moves to the surface best when the soil is compact, therefore rolling is useful in bringing moisture to the surface. The water of the sub-soil must be consumed so as to be used by the plants. Surface tillage effected this, by checking surface evaporation. Plants remove, through their leaves, an immense quantity of water from the soil, so it is important to keep the land free from weeds, so that the useful plants may not be robbed of moisture.

These principles of tillage applied to orchards as well as to fields. It was necessary to prevent loss of water by

evaporation, or weeds, in order that the trees might get enough. The growth of such plants as clover, which produced much humus in the soil, and thereby increased its water capacity helped to retain enough moisture for the needs of the plants.

In an orchard, where no crop was grown, and constant tillage was practised, there was a danger of losses of available plant-food by the beating of heavy rains late in the season. This could be prevented by any cover-crop grown late in the summer.

Clover had also another effect, in fixing the free nitrogen of the air, and thereby increasing the fertility of the soil. In a particular case cited, where three crops of crimson clover had been plowed under, and the soil analyzed before and after, a gain of 105 lbs. of nitrogen per acre was shown. If this had been bought, in the form of commercial fertilizers, it would have cost \$252.00. This shows that we can continue to enrich our soil and at the same time reap constantly improving crops from it.

## Good Roads Convention

A gathering fraught with the greatest importance to the welfare of this province took place in Toronto last week. It was a convention of municipal officers and county councillors, called upon the invitation of the York County Council for the discussion of the good roads problem. About fifty delegates from the municipalities of Ontario were present, besides a number of others prominently identified with road improvement, including A. W. Campbell, Provincial Road Instructor, Mr. A. F. Wood, ex-M.P.P., and Mr. A. Pattullo, M.P.P., organizer of the good roads movement. The important topics discussed were the assumption by counties of the construction and maintenance of certain main-travelled roads in the county, the funds to be raised by a general taxation or by debentures and securing government aid.

The convention opened on the afternoon of December 12th with Mr. C. E. Lundy as chairman and County Clerk



A Canadian Winter Scene. Where Christmas is thoroughly enjoyed.

The future, Mr. Powell believed, had much to promise to young men who take up the study of the science of agriculture, and endeavor to find out and practise the best methods of soil tillage.

In reply to a question as to why, in a particular locality, wheat would not grow now as it did in the past, Mr. Powell suggested that the land might have become sour, either through lack of underdraining or because it needed lime. He suggested that lime be tried.

Professors Day and Shuttleworth followed, the former showing the importance of humus in the soil, and the latter that of lime, in soils where the available lime was exhausted.

The officers of the Experimental Union for 1900 are: President, H. R. Ross; vice-president, Mr. Mason; secretary, C. A. Zavitz; treasurer, Prof. H. L. Hutt. Committee of management, H. R. Ross, Dr. Mills, B. Beckett, N. Monteith, M.P.P., and C. A. Zavitz.

Ramsden as secretary. The chairman in his opening remarks stated briefly the history of the road question in York County from the toll gate to the present day, when the municipalities charged with their maintenance have failed to keep them up. At the June session it had been proposed to take over some of the roads again. A committee was appointed to collect information, but so much had been received that it was felt advisable to hold a convention to discuss it.

### HASTINGS COUNTY ROADS.

Mr. A. F. Wood, ex-M.P.P., Madoc, Ont., addressed the meeting on the experience of Hastings county in dealing with the roads. This county has a reputation for good roads of a permanent character, especially the main-travelled ones. These were taken over some years ago by the county and the result has been a permanent system of roadways maintained at comparatively small cost to the

people. Mr. Wood sketched the history of the roads in that county for the past forty years, beginning with the toll-gate system, which was abandoned because of the abuses which accompanied it. After several plans had been tried the county undertook the construction and maintenance of a certain portion of the chief highway, constructing them of gravel and after a definite plan. A road committee and a road superintendent were appointed to look after the work, employ the necessary labor and purchase all material required. This had resulted in a great saving by reason of the scientific methods adopted and in the present satisfactory condition of the roads.

#### GOOD ROADS CHEAPER THAN BAD ONES.

This formed the keynote of a very stirring address by Mr. Pattulo. The fact that so many representatives of the people had gathered together, he said, was in itself a most hopeful sign for the success of the movement. The work of the Provincial Road Instructor was appreciated at home, and now his reports were read and appreciated all over the Dominion and several European countries. Good roads were cheaper at any cost than bad roads. The transportation problem was the greatest one in Canada, and our duty now was to pay attention to our rural highways. He knew of no service or direction in which the councils could do so much good as to take hold of the management of the leading roads in their respective counties and employ trained men to keep them in a proper state of repair. Their example would be followed by the township councils. The present Legislature was favorable to road improvement, and he suggested that the cause could be assisted by the Government guaranteeing the bonds by which the counties borrowed money for the purpose, whereby the latter could get funds at probably a half lower rate of interest. Statute labor ought to be abolished; it was a relic of barbarism. He favored optional legislation by which municipalities could, if they wished, abolish the system. In conclusion, Mr. Pattulo suggested that the convention adjourn instead of dissolving and that its recommendations be sent to the municipalities to be discussed in the coming elections and also at the January meetings of council, after which it would have greater effect.

#### TRANSPORTATION.

The Hon. E. J. Davis, Commissioner of Crown Lands, addressed the convention, making this his chief theme. The question of transportation was one of the greatest of the age, and the farmer who could get it the easiest and the cheapest from his barn door to the markets would come out best in the competition of to-day. This was especially the case since the development of the butter and cheese industries, which occasioned so much travelling upon the highways. In the United States rural mail delivery was being experimented upon successfully, and, if that is followed here the necessity of goods roads will be even greater. Coming to the question of cost, Mr. Davis said the expenditure of money was a matter that required very careful consideration. He ventured to say that the masses of the people would not readily approve of any scheme which would mean largely increased taxation upon them. He believed that the present expenditures could be put to a much better advantage than they were at present. In this connection Mr. Davis commended the scheme of Mr. Campbell to improve the present roads as a good one.

The proposal to take the control of roads from the smaller municipalities was one which might arouse some opposition from the latter in the country. Mr. Davis urged very careful consideration of any request which might be made to the Legislature, and concluded by saying that anything the Government could properly do in the interests of all the people of the province to aid them in the work, they were prepared to do.

#### A NATIONAL ISSUE.

On the last day Mr. Campbell gave a spirited address. He rejoiced that the present convention raised the Good Roads question from a purely local one to the importance

of a national issue. He referred to the magnificent roads of Hastings county, which were as smooth as billiard tables, while in many other districts, such as the "Metropolitan County of York," mud was ankle-deep on the highways. In Ontario we were spending annually 1,100,000 days of statute labor. Under this extravagant and inefficient system the roads were supposed to be kept up, but, in addition to this labor, every county expended from \$3,000 to \$6,000, or even \$10,000 a year, or in the whole province, \$3,500,000. In the last ten years, in labor and money, about \$42,000,000 had been expended on the roads of Ontario. He had no hesitation in saying that such an expenditure, properly used, would gravel and macadamize every road in the province, including back concessions. (Applause.)

Continuing, Mr. Campbell spoke of the statute labor law as having done excellent work in pioneer days in clearing the forests from the highways, but in its present form it had outlived its usefulness. It must be either commuted or abolished. It was disregarded by too many persons, and he urged that proper overseers take the work in hand and look after larger sections of the highway. Mr. Campbell then gave a series of hints for guidance in making roads and concluded by saying that the remarks of Hon. Mr. Davis almost looked as though some offer would be put forth in assisting the different counties in building the important roads.

A paper was read by Mr. J. F. Beam, Black Creek, Ont., on "Good Roads, Principles and Results," in which he expressed the strong conviction that the cities, which drew so much wealth from the country, should pay their share of the cost of country roads. Another interesting one, on "Reforestry," was made by Jno. A. Ramsden, who advocated the planting of trees, both in rows and in blocks and belts, which would have a very beneficial effect in protecting the roads. Each address was followed by a vigorous discussion, in which a desire was evinced by everyone present to get at the root of the matter and evolve some definite plan that would apply to every county in the province in improving the public highways.

Before the close of the convention some important resolutions were discussed and carried with but few dissenting voices. The general feeling indicated a desire for state aid, and this point almost overshadowed the main issue, that of county control of the roads. Some favored delaying action in reference to state aid, but the majority wanted their sentiments recorded, and finally a resolution was carried that the convention endorses the principle of provincial aid for highways assumed by counties, and referring the plan in which it should be presented to the Government to the committee subsequently provided for. A second resolution favored the assumption by the counties of the main roads within their borders.

A third resolution was carried referring to radial and electric railways in the country, and was as follows: "The time has arrived in the interests of good roads that the Provincial Legislature should intervene in cases where electrical railways fail to agree as to terms and conditions of ingress and egress of markets, and pass such legislation as shall impose such fair conditions as shall avert the present lock-out of radial railways seeking markets of this province."

The following were appointed a committee to lay before the Legislature the views of the convention, to forward the cause of good roads and make arrangements for another convention of municipal representatives at such time and place as may be deemed expedient: Messrs. C. E. Lundy, James Graham, M. Richardson, D. H. Moyer, J. F. Beam, W. H. Pugsley, M. P. Buchanan, and J. A. Ramsden. It was decided to ask the Department of Agriculture to have the report of the convention published. Mr. C. E. Lundy was elected chairman and Mr. J. F. Beam vice-chairman of the organization, which will meet again.

Lives there a man with soul so dead  
Who never to himself has said,  
As he aimed at the tack and missed the head—  
" — ! — ! ! — ! ! ! " — Puck.

## CORRESPONDENCE

## Prices for Bacon Hogs

## Toronto Market Unsatisfactory—Drovers Do Better at Buffalo

To the Editor of FARMING:

I have read several articles at different times in your valuable farming paper on the hog market, giving a great deal of advice to farmers on producing hogs, which I think is not necessary, as the farmers are well up to their business. They were advised that they could not over-stock the English market with Canadian bacon, as it sold so much better than the American. What are the farmers getting now? Why, the past year hogs in Buffalo have been selling higher than in Toronto. Those that are culled in Toronto are in Buffalo only a few cents per cwt. under the best. The fact is, four dollars per cwt. in Buffalo is as good as \$4.50 in Toronto, because of the way they are culled. In Buffalo hogs are always fed and watered in large closed-in buildings, as comfortable as the pen they left at home. How is it in Toronto? Why, they are left in the car freezing all night in winter, and crowding and suffocating each other in summer. It is really cruelty to animals. All other animals are unloaded and fed. Why should hogs not be? Just because the packers will it so. There is just one buyer in Toronto for hogs, and if a drover should feed his hogs it would be the worse for him.

There should be a law that all animals should be fed on arrival at the market. They certainly require it after the unmerciful pounding they get in the car, caused by the air-brakes now used or *misused*. There is no knowing how long the hogs have been on the way. There is another injustice. Some drovers travel 100 to 150 miles, others 10 or 20 miles. Some hogs will be over 30 hours and some three or four hours off feed, but both have to accept the same price, while if they were all fed it would make them equal. As to the remarks on the deterioration of the Canadian hog in your last paper, why, you should not print such stuff.

I have had a long experience in the matter, and say that there has been more improvement in Canadian hogs than any other animals. Think of the grand show of hogs in Toronto last fall. It could not be beaten in America. I know that farmers feed and attend better than ever before. Many have built splendid pig-pens. Years ago, any pen was thought good enough. If Canadian hogs are soft, why all the hogs in Buffalo are soft also; but they fetch more money. Besides, the Americans send three hogs to England to Canada's one.

A farmer said to me a few days ago: "We will have to say good-bye to Mr. Hog, as the average farmer cannot produce them less than \$4.50 per cwt." Though scientific gentlemen write that they can produce them for \$2.50, it is only on paper. If it could be done for that no other animals would be raised on the farm.

FARMER AND DROVER.

## The "Slump" in Hogs.

## Packers' Methods Criticized---Work for the New Commissioner.

To the Editor of FARMING:

The Canadian bacon business is certainly in a bad way. With hogs, general run, only \$3.90 at Toronto, and the best ideal bacon hogs only \$4, which means, probably \$3.75 for the feeders, there is little encouragement for swine-raisers. In Prince Edward Island prices for the last month, and up to this week were better than at Toronto, \$4.25 being the top price, but this week prices are down as low as \$3, and from that up to \$4. It is reported by the Charlottetown papers that there is a combine among the pork-packers here, and the prices at present look very like it, for even this week, dressed hogs are only worth here, 4c. to 4¾c. per lb.

What has become of our boasted Canadian bacon in-

dustry in the last three months? Since September the corn-fed hogs of the United States, which our Canadian packers speak of with such contempt, are fetching much better prices than our ideal pea-fed bacon hogs, and at this writing, prices in Chicago and Buffalo still continue to be better than those in the highest Canadian centres. In the last two weeks bacon has been steadily rising in Britain, and is now 4s. higher than two weeks ago, and yet Canadian prices are steadily declining.

Last year the decline in prices at this time took place, but not to such an extent as this year. Can the Canadian packers afford to pay better prices than they are now paying? Certainly, they can. Here is the case in a nutshell. For two or more years past the Canadian packers have forced prices up in the months of July and August when they know there are very few hogs then marketed. Last year the packers forced the prices in August up to \$6.12 per cwt. and this last August prices were forced up to \$5.50. This forced price was paid at a loss, for the British markets did not this year, as last, warrant the packers in paying such high prices. But the packers had a motive, and, while it may be a business motive, was certainly not an honest one. By paying high prices in July and August, when *few hogs were moving*, they encourage farmers to begin feeding and preparing their spring hogs for market; for who that has any spring pigs on hand will not begin feeding them for the market when hogs are selling for \$5 to \$6 per cwt.? The packers, having thus succeeded in fooling the farmers, and getting them started feeding their spring pigs, they now leisurely haul down the prices, so that before the time that the bulk of the spring pigs are ready for market the price is down to rock bottom as at present. The packers can very well afford to lose a few hundred in the summer months only to scoop in a few thousands in the fall months. It's a case of "throwing a sprat to catch a rat."

The present status of the Canadian swine industry is clearly a case where the Minister of Trade and Commerce should interfere and endeavour to regulate the business on an equitable basis. Sir Richard Cartwright has now an opportunity to do something for the farmers by coming to the assistance of the swine-raisers. It will not do Sir Richard to be a mere "looker-on," as he described himself at Toronto. Sir Richard's Department can be fraught with interminable good for the farmers of Canada, if that able and talented gentleman wills it. Surely the \$600,000,000 of the Canadian farmers' products is an important feature of Canadian trade and commerce!

No doubt, also, this is a case where the new Commissioner of Live Stock, Mr. F. W. Hodson, can do something to place the farmers' live hogs on an equitable basis, and protect the growers and feeders from a soulless and greedy market. Mr. Hodson begins work in his new sphere of labor the first of this month, and there is no question of his absolute fitness for the position, and no doubt of his perfect friendliness for the farmers. No one man probably has done more with his powerful pen and his business tact for the farmers of Ontario than Mr Hodson. Let us hope and trust that now, in his wider capacity, he will, if he possibly can, come to the rescue of the Canadian hog raiser.

J. A. MACDONALD.

King's Co., P.E.I., Dec. 4, 1899.

## Cause of Soft Pork

To the Editor of FARMING:

I saw in one of your late issues of FARMING a number of articles on feeding, and what was the cause of soft pork. One was a report of a lot killed by the Guelph Agricultural College some being soft and the others hard. I killed eight pigs last week all of the same litter, graded Berkshire, about seven months old. They averaged about 160 lbs. each and were fed on skim-milk, potatoes and Indian meal. One was quite soft, the other seven quite hard. How do you account for this? They were all fed together.

Should like to get a reply through some of your correspondents.

G. MACKINSON.

Cross Roads, Cochrane Dale, Dec. 4th, 1899.

# The Provincial Winter Show\*

## Official Report of the Exhibits in Fat Stock, Milking Competition, Block Test, and Dressed Poultry

The 16th Annual Provincial Fat Stock, Dairy and Dressed Poultry Show was held in the live stock and machinery buildings of the Western Fair, London, Ont., during the week commencing December 11th to 15th. In nearly every department the exhibits were ahead of any previous years, but the citizens of London took very little interest in the show, the attendance which was far from satisfactory, being supplied chiefly from the rural districts. This lack of interest on the part of the city is likely to influence the directors unfavorably should it send in a request for the Fat Stock Show to revisit the city next winter. Apart from the attendance, everything else was satisfactory. The officials, one and all, worked well, and exhibitors were well pleased with the treatment they received.

There were many novel and interesting features in this year's show. The block test, that final criterion of an animal's worth, from the consumer's point of view, was extended to sheep. This part of the exhibition was very largely patronized by those present, who watched with great interest the killing and dressing of the many hogs and sheep slaughtered. To those who had never seen hogs killed, scraped and hung up in our up-to-date slaughter houses, the speed and thoroughness with which this was done by the skilled hands from the Canadian packing-house company's establishment, in spite of the absence of apparatus, which would have enabled them to do even better, was a revelation. The carcasses were most closely examined by the crowd, many of whom learned their first lesson here as to thickness of fat required along the back of hogs for the export trade, the length of side, fulness of loin etc. No more valuable object lesson could have been given.

Another new feature was the feeding of poultry by the cramming process. Here Mr. and Mrs. Yuill, of Carleton Place, in their usual thorough manner, explained every detail of the proceedings to a large crowd, who assembled as the feeding hour drew near. At other times lectures and addresses were given by Mr. W. R. Graham, Manager Poultry Department, O. A. C., who had another object lesson in a case of poultry, in which could be seen fowls as ordinarily marketed by farmers, and some as fed at the Guelph Experiment Station—one on corn, another on skim-milk and crushed oats. The comparison was a painful reflection of the losses sustained by farmers who market their poultry anyhow.

At other times Mrs. Gilbert and Prof. Gilbert, of the Central Experimental Farm, Ottawa, explained methods of feeding, dressing and packing poultry. On the last day the poultry under the charge of Mr. and Mrs. Yuill were killed and dressed, thus giving those present another practical lesson in the proper way to do this so as to secure top prices.

### Cattle.

Some of the cattle classes were not up to the average, while others were better than usual. Some of the deficiency was due to sales made at Guelph the week previous of cattle which had to be delivered at once. In other sections there was a shortage of entries.

### Shorthorns.

The "Red, White and Roans" were not as numerous as in previous years. Only two two-year-old steers were entered. These were Harry Smith's Free Trade, a white that won at the Fat Stock Show as a yearling last year, carried premier honors at Guelph the week previous, and which

\* This report was prepared for the Agricultural Gazette, but as we were unable in making up the paper to get it in that department of FARMING we were compelled to give it space elsewhere.

has been victorious in show-rings since he was a calf, and Messrs. Fried's Honest Billy, a big red that carried a great amount of flesh. Free Trade was brought out in first-class shape. He is blocky, evenly fleshed, full of quality, with a capital shoulder, thighs and back, and not a sign of patchiness anywhere. He was awarded 1st prize and Honest Billy the 2nd. We understand that Free Trade changed hands at a price between 10 and 11c. Fried & Sons had the only yearling steer, a good one, but not too overburdened with flesh. Capt. Robson's white calf, Oswald, was the only representative in his section. The Captain was again the fore for cows three years old and upwards with Rosina 2nd, a well-fitted roan that was smoother than her opponent Roan Lily, shown by Fried & Sons, which was rather overdone. A fair, lengthy, three-year-old heifer, owned by F. Martindale, York, was the sole entry in the next section, while Harry Smith's Barmaid, a promising white, had the yearling section all to itself. The same owner's white steer again beat all comers in the sweepstakes for steers, and also as the best animal in the class, while Capt. Robson's Rosina 2nd occupied the same position as regards females. There was a close contest in the section for two animals. T. Robson eventually won with Rosina 2nd and his white steer calf, although Harry Smith's white steer and young heifer had many admirers.

### Polled Angus.

Herefords and Polled Angus had to show together, but the former were conspicuous by their absence. In spite of this the blacks put up a good show by themselves. Walter Hall had his grand steer Robin, which was fitted out in great style and was an easy first. Jas. Bowman's Elm Park Mayflower was second. Bowman had two good ones in yearling steers, which were 1st and 3rd, with Hall's fine Newton's Promise 2nd. Bowman was first again for calves, followed by three of Hall's youngsters. Bowman had no opposition for cows, but the three he showed were all good. Hall won the sweepstakes for a single animal, and Bowman that for two animals in this class.

### Galloways and Devons.

We have never seen a better display of Galloways at a fat stock show than were here present, while Rudd took some prizes for Devons. A. M. & R. Shaw won first in all the sections except that for three year-olds, where D. McCrae's two extra good cows, Adela of Flamboro and Semiramis E., were first and second. Messrs. Shaw's two-year-old Irvana deservedly won the sweepstakes for best single animal and he also took that for pair with Irvana and Minnie May, both well-fitted animals of good type.

### Grades and Crosses.

This class was good and well-filled except in section one for steer one year and under three, where only Leask and Lloyd, Jones & Sons had entries, the former showing a Shorthorn grade, the latter a Galloway grade. After a close competition they were placed in the order named. Fried & Sons secured 1st for yearling steers, beating Leask's very thick, solid son of Moneyfuffel Lad, which was placed above their steer at Guelph, and which was a favorite with very many. Leask had the best calf, followed by Robson's and Fried's entries. Fried won for cows over three years old, Leask being second. The former were also easy winners for two-year-olds. In yearlings Leask had a capital pair, a red and white and a roan, which were 1st and 2nd, and he also won 1st with them for pairs. Messrs. Fried captured the Dominion Shorthorn Breeders' Association's prize for Shorthorn grade steers.



and Harry Smith's steer carried off the championship prize after a close fight with Hall's Angus steer. The wonderful evenness of the former placed him above his opponent. The judges in all the cattle classes were Jas. Smith, Brantford, and John T. Gibson, Denfield.

### Dairy Cattle.

Shorthorns were very well represented in this department, and made a satisfactory showing. First for cows over three years old went to Alex. Smith's Rene, a red, whose udder, though not large, looked serviceable. This exhibitor's roan cow was a good sample of a general purpose animal. F. Martindale and H. J. Davis came in 2nd and 3rd. Martindale won for cows under three years old, with Fairbairn's two entries 2nd and 3rd.

Ayrshires, while not numerous, were good. N. Dymont, Clappison's, was strong and won all three prizes. As usual, Holsteins were well represented and good. Rettie Bros. had the honor of making a new record for a test on fair grounds with their cow, Aaltje Posch 4th, which gave 848 lbs. of butter in two days. This firm was also 2nd, and Clemons came 3rd with Queen de Kol 2nd. Rettie Bros. carried off the red ticket for cows under three years as well,



Nellie Gray 2057, winner of first prize in Ayrshire class, Provincial Dairy Show, 1899. The property of N. Dymont, Clappison, Ont.

and won two specials offered by the American Holstein Association and by Lister & Co., Montreal. Messrs. Rice won the gasoline engine offered for 2 heifers. There was only 1 Jersey entered and but a handful of grades. Tabulated statement of the results will appear in next issue. A feature of this department was a cream separator being run by a gasoline engine.

### Sheep.

Never was there a better exhibit of sheep than that which filled the pens. With very few exceptions, every breed was well represented and there was the strongest competition in every class but Lincolns, where Gibson & Walker were the sole exhibitors of a fine lot of long wools. A very notable feature in the sheep department was the number of sweepstakes won in their classes by ewe lambs of different breeds.

### Cotswolds.

The Cotswold sections were mostly very full, and a capital lot of sheep were forward. John Park & Son, Burgessville, had a grand ewe which for wool, typical head and conformation could not be beaten. She not only took 1st in her class, but also the sweepstakes for the breed. These exhibitors were also to the fore in the two wether sections, with a couple of very superior animals in each, winning both 1st and 2nd. Their three wethers were also placed 1st. T. Hardy Shore, Glanworth, and John Rawlings, Ravenswood, had a very nice lot of well-fitted sheep, which were well placed. The latter also won 1st for the pen of three ewes, with a very nice, well-mated trio. Geo. Allen, Oriel, was 2nd for pen of three wethers under 1 year, and won other minor prizes.

### Leicesters.

The Leicester ewe lambs were the feature of this class

There were 13 in number, and competent sheep judges, who knew of what they were speaking, declared that there had never been a ring of Leicester ewe lambs to equal them at any exhibition, not excepting the Royal. In this section John Kelly's grand entries were 1st and 2nd, and J. M. Gardhouse's typical lamb 3rd, with Orr & Lillico's pair highly commended and commended. Orr & Lillico won for both sections for wethers, with John Kelly 2nd for young wethers. Kelly's ewe lamb won the sweepstakes for Leicesters.

### Lincolns.

Although Gibson & Walker had no opponent in their class, they made a good display of their own, having two or more animals in every section but one.

### Oxtords.

This class, too, furnished a full and good lot of ewe lambs. Kenneth Finlayson's (Campbellton) two lambs came in 1st and 2nd respectively. They were a grand pair, while Andrew Elliott, Pond Mills, was 3rd and 4th, and J. H. Jull, Mt. Vernon, 5th. Andrew Elliott had no opposition in the wether sections, but his wether was good enough to win the sweepstakes for the breed. Finlayson's trio of ewe lambs came in ahead of all competition when shown in set of threes.

### Shropshires.

There was not a weak section in this class. As in other classes, ewe lambs were very strong. A straight, lengthy, typical ewe lamb, nicely covered, of Messrs. Hanmer's, came in first. Richard Gibson's lamb, which handled well, came 2nd, followed by two of John Campbell's and a second of Richard Gibson's string. The next section, for yearling wethers, contained as good a lot of fat Shropshires as were ever brought together in any show ring. Here Richard Gibson came in 1st and 3rd while John Campbell had a grandson of Newton Lord that won 2nd. A very square, thick wether of John Campbell's, another of Newton Lord's descendants, headed the young wether class, being a clear winner, his nearest competitors being a couple of well-fleshed sheep of Messrs. Hanmer's. This ring, too, was a capital one. Hanmer's wethers won 1st for 3 wethers under the year, with R. Gibson's trio 2nd; while John Campbell had the best 3 ewes of the same age, followed by Hanmer. The sweepstakes fell to Richard Gibson's yearling wether after a close contest with John Campbell's lamb. The judges thought the lamb was the most typical, but the yearling was a little better on the shoulder, the flesh firmer, and would dress a little better.

### Southdowns.

John Jackson & Sons, Abingdon, were more than strong in this class, winning all the firsts and three seconds. Richard Gibson's fine yearling wether came in 2nd in its class, and Messrs. Telfer won the blue ribbon for 3 wethers under the year, besides some other prizes. T. C. Douglas, Galt, Messrs. Hanmer, and W. H. Beattie, all exhibited, the two first named, securing a share of ribbons.

### Dorset Horns.

R. H. Harding, Thorndale, had nearly all this class to himself, winning everything except 1st for yearling wethers and 3rd for young wethers, which prizes fell to W. H. Beattie, Wilton Grove, and W. E. Wright, Glanworth, respectively. Harding's lot were nicely fitted, and one of his sheep which was killed in the block test showed a nicely-marbled carcass. Beattie's yearling wether won the sweepstakes.

### Hampshires and Suffolks.

There were two Hampshires shown by John Kelly, both ewe lambs. They came in 1st and 2nd against Suffolks, and the best of the pair won the sweepstakes for the breed. W. J. Rudd entered Suffolks, and won all the three money prizes for yearling wethers and the same for young wethers.

The first prize yearling wether was especially good. Jas. Bowman showed Suffolks, and won part of the prize money.

### Grades and Crosses.

These were numerous and good. John Campbell was strong in yearling ewes and wethers. He won with a daughter of Newton Lord in the ewe class, and a grandson of the same prize-winner in the wether section. The sweepstakes for grades went to the former, after a close fight with the wether. J. M. Gardhouse, Highfield; Orr & Lillico, Gal.; W. H. Beattie, Wilton Grove; Gibson & Walker, Denfield; W. E. & G. L. Telfer, Paris; and W. E. Wright, Glanworth, all won a share of the prize money.

The grand sweepstakes went to Messrs. Jackson's yearling wether, and the Prince of Wales' prize for five pure-bred sheep to John Campbell's pen, four of which were by Newton Lord, and one by a son of his.

### Dressed Carcasses of Sheep.

As might have been expected, John Park & Son won 1st and 2nd in the class for dressed carcasses of Cotswolds, George Allan being 3rd. Gibson & Walker had no competition in the Lincoln class, nor had John Kelly in Leicesters, or Andrew Elliott in Oxfords. Five breeders had entered for Shropshires. Richard Gibson's wether lamb received 1st honors, Beattie's was 2nd, Hanmer's 3rd and 4th, and Wright 5th. T. C. Douglas went to the front in Southdowns, beating Messrs. Gibson, Jackson, and Telfer. R. H. Harding had the only Dorsets, the best of which cut up nicely. In Suffolks Jas. Bowman's first-prize carcass was decidedly the best, showing a very nice mixture of lean and fat. The judges considered the 1st-prize Shropshire wether lamb, the 1st-prize Oxford, and the 1st-prize Suffolk carcasses as standing in the order named, in comparison with all the carcasses entered. A Southdown carcass was the fattest of the lot, and, though the carcass was otherwise excellent in quality, the waste in consequence of the extreme fatness more than counterbalanced the quality of the lean. There were, in the block test, a number of reversals of judgments given when the animals were alive, and in some instances animals that had not won on foot took high places when hung up as dressed carcasses. Of course, a comparison was not always possible, because animals from more than one section had to show in the single class in the block test.

### Swine.

Any one comparing the swine exhibit at this show with that of, say, three years ago, would be struck, not only with the great change of type and the lesser amount of fat carried by the animals of to-day prepared for exhibition, but also with the wonderful increase in the numbers. Step by step there is improvement on the lines advocated by all interested in the raising and feeding of bacon hogs; but, while this advance is being made, there is evidently much to be learned yet as regards proper feeding. Of this we shall have occasion to say more when we come to the block tests.

While all the classes were well filled, to Chester Whites belong the honor of heading the breeds, as regards the number on exhibition.

### Berkshires.

This good old sort was strong in numbers and quality. George Green, Fairview, T. A. Cox, Brantford; George Hill, Delaware; and W. J. Rudd, Eden Mills, were the four who exhibited; but the two last named had only one or two animals entered. Berkshire farrows under nine months were all good. Here T. A. Cox won 1st and 3rd, with Geo. Green sandwiched in between. In young farrows George Green came in 1st and 2nd with a pair of smooth pigs, which were afterwards placed 3rd in the block test for Berkshires. Cox again came to the front for sows between nine and 15 months old. This was a strong class, having eight good sows in it.

Geo. Hill had a capital young sow which showed great quality and substance, and which stood at the head of the class between 6 and 9 months.

The best pair of Geo. Green's pigs, however, as regards bacon type, were the two sows that won 1st and 4th in the section for sows under 6 months. These sows won 1st in the bacon class as well, 1st for dressed Berkshire carcass, and were 2nd in the block test for all breeds. Green also won 1st for 3 pigs, the offspring of 1 sow. T. A. Cox carried off the sweepstakes.

### Yorkshires.

Yorkshires were about the same in point of numbers as the preceding class, and also notable for their quality. J. E. Brethour, Burford; Jos. Featherston & Son, Streetsville; H. J. Davis, Woodstock; W. R. McDonald, Ridgetown; and R. Gilson, Delaware, were the exhibitors. Brethour won for barrows under 9 months with a lengthy, deep pig, light in the head and shoulders, as is required for pigs of a bacon type. Messrs. Featherston's barrow under 6 months, a smooth, well-grown pig, took first honors, beating Brethour's entry, which was a little fleshy, though otherwise good. Brethour's 14 months old sow, a long, smooth pig with deep sides, which won at the Toronto Fall Fair in the class under 12 months, headed its class here. Featherston had a lengthy pig with a good head which came in 2nd. Brethour's sows under 9 months old were too fleshy and 1st and 2nd went to Featherston and H. J. Davis, the former showing a very nice, smooth pig and the latter a lengthier one of good type. An extra long pig with good hams, and head and shoulders of the right kind, carried first honors for Brethour in the section for sows under 5 months. Second place went to a pig of good bone and smoothness shown by Featherston. The sweepstakes went to Brethour's 14 months old sow and 1st for 3 pigs also went to the same exhibitor.

### Chester Whites.

As mentioned above, this class outnumbered any single one of the other breeds of swine. The prizes were rather divided up, but Bennett & Pardo, Charing Cross, who had a very well-fitted lot of pigs, won three out of the six first prizes, viz., for a barrow under 6 months, a sow under 6 months that girthed well, and for 3 pigs, the offspring of one sow. D. DeCourcy, Bornholm, secured 1st on a barrow under 9 months and 2nd on a barrow under 6 months old, the first an even, deep pig of good quality, the other of a lengthier type. W. Butler & Son, showed a roomy, well-fed sow under the 15 months' limit which won 1st and also the sweepstakes, and this firm took other prizes as well. Jos. Cairns, Camlachie, secured the remaining first prize, that for sows under 9 months. The other minor prizes were divided between the 4 exhibitors named, H. George & Sons, Crampton, and W. E. Wright, Glanworth, all of whom had good, useful animals.

### Poland Chinas.

W. & D. Jones, Mt. Elgin, and W. M. Smith, Fairfield Plains, were the only two exhibitors of Poland Chinas, but there were always sufficient animals in each section to take all the prizes. Messrs. Jones took all the 1st prizes and the sweepstakes, but in the bacon class W. M. Smith secured a reversal of the verdict as regards his barrow under 6 months, and he also came out ahead in the bacon test. This was due to the fact that Messrs. Jones' pigs were too highly fed to suit the export bacon trade, although otherwise of good type.

### Essex.

Suffolks and Essex were classified together, but none of the former were entered. Jos. Featherston & Son, Streetsville, and T. A. McClure, Meadowvale, were the two who exhibited this black breed. The bigger proportion of the honors rested with Messrs. Featherston, but McClure won, among other prizes, 1st for sow under nine months and 1st for three pigs. The sweepstakes went to Featherston.



### Tamworths.

This breed was very fairly represented, but the entries were not quite so numerous as might have been expected from the big exhibit of these red pigs at the fall fairs. Of the two barrows under nine months, both shown by A. Elliott & Son, Galt, the 1st was a pig of exceptionally good bacon type. These exhibitors had the best barrow under six months as well, a deep pig but inclined to thickness. W. R. McDonald, Ridgetown, showed a couple of fairly good Tamworth type. W. M. Smith beat all comers for sows under fifteen months with a nice sow. Messrs. Elliott's entry came 2nd. This sow was sold to go to Mr. Van Horne's farm. Sows under nine months were all large, typical sows, and the class was good. J. R. Newell & Son, Crampton, and W. R. McDonald took the three money prizes. Messrs. George & Son's sow under six months beat Elliott's pair that had won 1st at Guelph in the bacon class, and which here were 2nd and 3rd as individuals. Messrs. Elliott won for three pigs and also the sweepstakes.

### Duroc-Jerseys.

Tape Bros., Ridgetown, had the Duroc-Jersey class nearly all to themselves, there being only two others, which were entered by W. M. Smith, Fairfield Plains, both of which were 4th in their sections. Messrs. Tapes' string were good, strong pigs.

### Grades and Crosses..

While the grades shown were few in number, they were all of good type. They were principally of a Tamworth and Berkshire cross, with, in some cases, a dash of Yorkshire or Chester White blood. Andrew Elliott & Son, Galt; T. A. Cox, Brantford, and W. Butler & Son, Dereham Centre, supplied the winners in this class.

### Bacon Hogs.

There was a class for bacon hogs for each of the breeds shown. These classes were judged by C. C. L. Wilson, Ingersoll, and Jas. Leach, of the Wm. Davies Co., Toronto. In the Berkshire class, Geo. Green scored 1st and 2nd, and W. J. Rudd, 3rd. The judges could not agree at first about the order of the Yorkshires, one wishing to give 1st to J. E. Brethour, the other to J. Featherston & Son. The former had more size; the latter had quality and style. Eventually, the judges agreed to give 1st to Featherston and 2nd and 3rd to Brethour, on the understanding that when the sweepstakes were judged this should not prejudice the latter's chance to it, should a referee see fit to give the 1st to him. As will be seen, this was done later on. H. George & Sons, Jas. Smith, Harrietsville; and A. Elliott & Son, Galt, was the order in the Tamworth class for export hogs.

D. DeCourcey well deserved the leading place he won among the Chester Whites, Messrs. Butler & George coming 2nd and 3rd. W. M. Smith's Poland China beat Messrs. Jones' two entries, as the judges considered it a more suitable pig for the export trade. Tape Bros. won 1st and 2nd for Durocs, and Featherston & Son the same awards for Essex. Elliott & Sons' Tamworth-Berkshire crosses won in the grade class.

The sweepstakes took some time. Eventually Prof. Day was called in and gave 1st to Brethour's pigs, Featherston being next, George's Tamworths 3rd, and Green's Yorkshires 4th.

### Dressed Hogs.

This department was one of the most frequented in the show. The pigs were killed on Wednesday, Dec. 13th, and to many it was a revelation to see the short time it took to kill, clean and dress the carcasses.

Geo. Green won 1st for Berkshire pairs dressed. The lean and fat on this pair were all right, except being a trifle thick on the shoulder, and the only other deficiency was a somewhat deficient loin. Rudd's 2nd prize pair were too fat on the back and shoulder. On Green's 3rd prize ones the fat on

the back was uneven and rather thick, the pigs too were a little short. Brethour's Yorkshires, which won 1st thus justifying Prof. Day's decision in the bacon sweepstakes, were not quite perfect in regard to the fat, but the meat was well distributed and juicy. Featherston won 2nd. This pair were a little thick in fat on the back and shoulder, but otherwise good. Major Hood's pair were too short and also thick and fat. Several of the Yorkshires killed were too fat, and this also applies to some of the Tamworths, thus proving that animals of breeds that are known as model bacon breeds can easily have their value lowered by improper methods of feeding, or feeding too long. Another fact as regards feeding was evident—that some of the pigs slaughtered had been held back so as to keep them from getting too fat, and, in consequence, their flesh was not first-class, and would turn soft after curing. Elliott & Son, A. C. Hallman, and W. R. McDonald were the three prize-winners in Tamworths; Harding, Butler, and George in Chesters; while W. M. Smith took the lead in Poland Chinas, beating both of Jones' entries. Tape Bros. were first for Durocs, Featherston for Essex, and George for grades. The sweepstakes for two dressed hogs of any breed fell to Brethour, with Green 2nd, and Featherston 3rd. All the dressed carcasses, both of sheep and swine, were purchased by the Wm. Davies Co., Toronto.

### Dressed Poultry.

The exhibit of dressed poultry was not large, but contained a number of good birds. Jos. Tomalin, Deer Park, was the largest exhibitor, and consequently his winnings were higher than those of any one else, and as a rule he came out ahead in competition with others. Special mention must be made of a pair of Banded Plymouth Rocks shown by Jos. Poole, Lambeth, which won the sweepstakes for fowls, and of the turkeys, bronze and of other colors. The exhibitors in this class were H. J. Woodrow & Sons, J. Tomalin, W. E. Wright, R. H. Harding, and C. E. Smith. Harding won the sweepstakes here. To Tomalin went the sweepstakes for geese and ducks.

While the poultry exhibit was creditable it must be stated that the dressing was not so satisfactory as it might have been. Had some of the birds been properly dressed and their breastbones squeezed down by pressure, they would have shown to much better advantage. Too many of them showed yellowness of carcass from being fed too much corn.

### Object Lessons in Poultry Feeding.

Attached to the dressed poultry exhibit was a crate of birds in charge of Mr. and Mrs. Jos. Yuill, Carleton Place, who have been for some time feeding poultry for Prof. Robertson to be exported to Great Britain as a proof of what we can do in the way of fattening poultry for the markets of that country. These birds were fed three times a day with the crumming machine during the show, which operation was eagerly watched by a large number of interested persons. The birds were scarcely ready for market at the end of the show, but they were killed and dressed by Mr. and Mrs. Yuill, in order to show how poultry for export should be dressed and packed. The Machinery Hall in which these birds were kept during the show was a most unsuitable place, and in consequence of the cold, one of the birds died, but both Mr. and Mrs. Yuill resolutely stuck to their post, and were never weary of telling the many enquirers all the details of their poultry management.

A crate of birds was also purchased on the London market, and after being killed were dressed by Mrs. Gilbert, wife of Prof. Gilbert, Ottawa Experimental Farm, in the manner suitable for home markets.

### Corn vs. Skim-milk and Ground Oats.

Another object lesson was a case of chickens from the Experimental Farm, Guelph, under the care of Mr. W. R. Graham, poultry lecturer at the college. Lot 1 were a pair of chickens as actually offered for sale on the Guelph mar-

ket, one having food in its crop. Lot 2 were full sisters, one being fed on corn for 11 days with a small amount of red carrots, the other on skim-milk and ground oats. These were both a Cochín-Rock cross. Lot 3 were a pair of chickens fed on skim-milk and ground oats for five weeks, being an Indian Game-Malay cross. Lots 2 and 3 were dressed as nearly alike lot 1 as possible but were drawn and not ragged.

The comparison between the corn fed bird in Lot 2 and her half-sister was most undeniably in favor of skim-milk and oats as a proper feed for fattening birds, the pure white carcass of the bird fed on this ration contrasting most strikingly with the yellow carcass of the other.

Mr. Graham had the following table drawn up which shows most unmistakably not only the advantage of feeding properly as shown by the amount of edible meat on lots 2 and 3 as opposed to lot 1, but the enormous difference in the values obtainable for the several carcasses:—

	Average weight undrawn.	Weight when drawn.	Weight of offal.	Percentage of offal.	Weight of edible portion when cooked.	Weight of bone.	Percentage of bone.	Relative value to consumer at market price.	Value when drawn at market price.
LOT I.									
Fair representatives of the ordinary chickens sold on Guelph market. Purchased at 45c. per pair...	2 lb. 12 oz.	1 lb. 14½ oz.	13½ oz.	30.68	1 lb. ½ oz.	6 oz.	36.37	22½c.	22½c.
LOT II.									
Chickens which have been fattened for 11 days.....	4 lb. 1 oz.	3 lb. 6 oz.	11 oz.	20.37	1 lb. 15 oz.	7 oz.	25.8	42.625	33.1
LOT III.									
Chickens which have been fattened for 5 weeks.....	5 lbs.	4 lb. 2 oz.	14 oz.	21.21	2 lb. 4 oz.	8 oz.	22.22	49.5	40.7

Lectures on poultry subjects were given every day, among those who spoke being Prof. Gilbert, Mrs. Gilbert, W. R. Graham, J. E. Meyer, and Mr. and Mrs. Yuill.

#### Notes.

The judges in the dressed sheep and swine departments addressed the audiences on their decisions and gave reasons therefor.

Prof. John A. Craig, Ames, Iowa, gave a capitally illustrated address on an "Ideal Mutton Sheep" on the morning of the last day of the show.

The public meeting held on Dec. 13th in the city hall was addressed by Hon. Sydney Fisher, Hon. John Dryden, Sir John Carling, and other prominent men, and was largely attended by exhibitors and others.

Exhibits were made by the following implement makers and manufacturers: John S. Pearce & Co., London, a full line of poultry supplies; J. E. Meyer, Kossuth, incubators and brooders; Isaac Usher & Son, Queenston, cement; Estate of Jno. Battle, Thorold, cement; Windsor Salt Co., Windsor, salt; McClary Mfg. Co., London, feed boiler; Ripley Hardware Co., Grafton, Ill., feed cooker, tank heater steam generator; Spramotor Co., London, Northey Mfg. Co., Toronto, gasoline engine, used for running the separator; R. A. Lister & Co., Montreal, Melotte cream separators, one of which was used for separating; J. Fleury's Sons, Aurora, grain grinder; Wortman & Ward, London, grain grinder; Gould, Shapley & Muir Co., Brantford, windmills, etc.; Frost & Wood Co., Smith's Falls, disc harrow; Noxen Co., Ingersoll, harrows, etc.; Thom's Implement Works, Watford, feed cutters, etc.; B. Bell & Son, St. George, treadpower and ensilage cutter, shown in operation.

Where possible all machines shown were in motion, and formed a most valuable feature of the show.

## Dominion Cattle Breeders

The annual meeting of the Dominion Cattle Breeders' Association was held in the Farmers' Pavilion, Western Fair grounds, on the evening of December 11th. In spite of the wretched weather, the attendance was large. President John I. Hobson, Guelph, occupied the chair. The president, in his address, referred to the great increase in interprovincial trade in thoroughbred stock, brought about by the reduction of railway freight rates. He thought that there should be a committee to report on fraudulent practices, such as had occurred at the last Toronto Industrial Exhibition. He considered, in view of Mr. F. W. Hodson's retirement as secretary, after such faithful service, and his transfer to a larger field as Live Stock Commissioner at Ottawa, that he should be made a life member of the association. This was unanimously agreed to by the meeting. The question of nomination of expert judges

for exhibitions was left to the various Breeders' Associations. The election of delegates to fair boards resulted as follows: Toronto, Prof. G. E. Day, Guelph, and J. M. Gardhouse, Highfield; Ottawa, J. G. Clark and F. W. Hodson, Ottawa; London, R. Gibson, Delaware, and T. E. Robson, Ilderton; Brantford, G. W. Clemons, St. George, and J. R. Alexander, Brantford. The following were elected officers: President, R. Gibson, Delaware; vice-presidents, A. Johnston, Greenwood, and H. Wade, Toronto; vice-presidents for the provinces: Ontario, H. Wade, Toronto; Manitoba, Hon. Thos. Greenway, Crystal City; Northwest Territories, J. W. Peterson, Calgary; Quebec, H. D. Smith, Compton; Nova Scotia, C. A. Archibald, Truro; New Brunswick, T. A. Peters, Fredericton; British Columbia, J. H. Ladner, Ladner's Landing; Prince Edward Island, Senator D. Ferguson, Charlottetown; Newfoundland, Hon. Thomas C. Duder, St. John's; auditor, J. M. Duff, Guelph; directors, Shorthorns, J. I. Hobson, Guelph; Herefords, W. Macdonald, Toronto; Polled Angus, James Bowman, Guelph; Galloways, D. McCrae, Guelph; Ayrshires, D. Drummond, Myrtle, Holstems, G. W. Clemons, St. George; Jerseys and Guernseys, W. E. H. Massey, Coleman; Ontario Agricultural College, Prof. Day; General Director, A. W. Smith, Maple Lodge.

J. S. Woodward, Lockport, N.Y., gave an instructive address on an "Ideal Dairy Cow." After showing that all domestic animals are now artificial, being far removed in characteristics from original progenitors, he divided cattle of the present day into "beef and dairy" animals, which differ widely. Breed, however, is immaterial, if the animal itself is good for the purpose desired. The ability of a cow to make milk depends on her capacity to eat, digest, and turn feed into milk. Dairy cattle eat, digest, and turn their feed into milk in a higher degree than beef animals eat, digest, and turn their food into beef. Of this he gave two examples. He then, by means of a chart, showed a typical dairy cow, and explained the various points in a cow which showed ability to give a good return in milk for the feed. In answer to a question, he

said that he found that feed did affect the quality of the milk to any extent.

Messrs. R. Gibson, D. McCrae, and J. I. Hobson were appointed a committee to report on fraudulent practices at exhibitions.

## Dominion Sheep Breeders

The annual meeting of the Dominion Sheep Breeders' Association was held in the Farmers' Pavilion, Western Fair grounds, London, Ont., at 7.30 p.m., on December 14th, the president, D. G. Hanmer, in the chair. The room was comfortably filled.

After a few remarks from the president, who congratulated the breeders on the prosperous season they had had, Messrs. Foulds and Yapp, the judges of the dressed carcasses, were called on for addresses, which they illustrated by the carcasses of first prize Shropshire, Oxford Down and Suffolk and one of a Southdown sheep, which was not placed, which were hung up in view of the audience. The Southdown carcass was too fat, and there was much waste in cutting up. The fat must be interspersed with the lean. The Shropshire lamb carcass showed a large percentage of lean to fat, and, though entered against older sheep, well deserved first prize, as it was a typical Shropshire sheep. The Oxford Down filled the bill very well as a typical sheep, and was not too fat. The Shropshire carcass would bring three cents a pound more than the Southdown carcass shown. The quality of the latter was good, but the whole carcass was too fat and the legs would have to be sold at 25 cents a pound to compensate for the loss on the rest of the carcass.

In reply to a question Mr. Foulds said that he thought that rape tended to make fat.

Mr. Yapp answered a question that quality in a fat sheep was better than in a lean one, but was not worth more. As regards the export trade, the sheep carcasses that sell best to-day in Great Britain are those that weigh from 60 to 65 pounds. He thought that crosses of large and small breeds of sheep would fill the bill for export trade. Crosses of Cotswolds, Lincolns or Leicesters on Southdowns were recommended. Sheep with black faces sell for two to four cents a pound higher than white-faced. He was an advocate of shipping dressed carcasses in place of live animals. Canada has now a strong competitor in the Argentine Republic, but it was possible to market our sheep at a time when not many sheep from that country were on the British markets.

In Buffalo markets our lambs of 90 to 95 pounds bring \$5.95 a cwt. The value of sheep there is regulated by the price of wool. He had not heard any complaints from there of lambs fed with rape.

Mr. McKerrow, Sussex, Wis., gave a good practical address, bearing on the sheep he had judged. The standard that we must take is the tastes of the best consumers in the large cities. It is these that pay the best prices. Remark on the rule in the prize list that sheep must be judged from a consumer's point of view, he thought that ought to be amended to read, "from a feeder's and consumer's point of view." A lustrous woolled, white-faced sheep would cut up better than a coarser woolled one.

Hon. John Dryden was pleased that the block test had been adopted as the final test. This is in the proper line of educating the rising generation and is being taken up now at our agricultural colleges.

### DELEGATES AND OFFICERS.

A number of expert judges were then nominated for the various breeds. The following were elected delegates to Fair Boards: Toronto, J. M. Gardhouse, Highfield, and John Jackson, Abingdon; Ottawa, F. W. Hodson, Ottawa; London, A. W. Smith, Maple Lodge, and W. H. Beattie, Wilton Grove.

Officers were elected as follows: President, A. W. Smith, Maple Lodge; vice-president, R. H. Harding, Thorndale; directors, Cotswolds, D. McCrae, Guelph.; Leicesters, W.

Whitelaw, Guelph; Hampshires and Suffolks, John Kelly, Shakespeare; Dorsets, John McGillivray, Toronto; Southdowns, John Jackson, Abingdon; Oxfords, James Tolton, Walkerton; Lincolns, T. E. Robson, Ilderton; Merinos, W. M. Smith, Fairfield Plains; Shropshires, D. G. Hanmer, Mt. Vernon; Ontario Agricultural College, Prof. Day; Auditor, J. M. Duff, Guelph.

Mr. F. M. Hodson was elected a life member of the association.

## Swine Breeders

The annual meeting of the Dominion Swine Breeders' Association was held in the Farmers' Pavilion, Western Fair Grounds, London, on the evening of December 13th. The president, Mr. George Green, of Fairview, presided. In his address he commended the association upon its usefulness, which grew more and more apparent year by year. After indorsing the association's system of nominating expert judges and the importance of adopting the best-known methods of feeding, he dealt with the connection between the packer and the breeder. He believed that the former should pay to the latter a larger percentage of the profits accruing from the business. His desire was that a committee be appointed to investigate the conditions which apportioned to the feeder such a small percentage of the trade's profits.

The following officers were elected for the ensuing year: President, Wm. Jones, Mount Elgin; vice-president, G. B. Hood, Guelph; directors, for Berkshires, Thos. Teasdale, Concord; for Yorkshires, J. E. Brethour, Burford; for Chester Whites, R. H. Harding, Thorndale; for Poland Chinas, W. M. Smith, Fairfield Plains; for Duroc-Jerseys, W. E. Butler, Dereham Center; for Tamworths, Andrew Elliott, Galt; for Suffolks and Essex, Joseph Featherston, M.P., Streetsville; Ontario Agricultural College, Prof. G. E. Day; general director, George Green, Fairview; auditor, J. W. Duff, Guelph; representatives to Toronto show, J. E. Brethour, Burford, and Thomas Teasdale, Concord; to Ottawa, F. W. Hodson, Ottawa; to London, D. De Courcy, Bornholm, and George Green, Fairview; to Peterboro, Robt. Vance, Ida; to Guelph, G. B. Hood, Guelph, and Jas. Anderson, Guelph; to Brantford, J. M. Shuttleworth, Brantford; to Belleville and Kingston, J. M. Hurley, M.P., Belleville. Expert judges were then nominated for the various breeds. An interesting feature of the evening then took place in the presentation to the retiring secretary, Mr. F. W. Hodson, of Toronto, of a magnificent marble clock from his personal friends, and a case of solid silver cutlery from the Fat Stock Associations. The address from the associations, as well as that from personal friends, was beautifully engrossed, and was signed by all the presidents and secretaries of the associations. It spoke of Mr. Hodson's untiring efforts in the interests of the associations and the hope that in his new and larger sphere of work he would be able to do yet more for the live stock industries of this Dominion. Mr. Hodson made a suitable reply.

Prof. Day read a paper on "The Bacon Hog Question" which dealt with facts intimately affecting the swine industry. This will be given in full in our next issue. He advised his hearers to stick to the bacon type.

Prof. Day then entered into a discussion on the question of judging the bacon type of swine. A standard of excellence and scale of points would be useful and a scale was suggested.

Prof. Day and the executive committee were appointed a committee to draw up a scale of points for bacon pigs.

## Hereford Breeders

The ninth annual meeting of the Canadian Hereford Breeders' Association was held on December 12th in the Tecumseh House, London. In the absence of the president, Mr. H. D. Smith, of Compton, Que., the chair was taken by Mr. G. DeW. Green. In opening the meeting, Mr. Green referred in complimentary terms to the work of

the association during the past year and the success which had met its efforts in the interests of Hereford breeding. The following resolution was passed: "Moved by M. H. O'Neill, seconded by A. Rawlings, that this association press upon the Dominion Live Stock Commissioner the importance of at once taking steps to secure direct shipping communication with the Argentine Republic, so that our breeders can have the opportunity of shipping their stock thither at as low a cost as possible, and secure a share of the good market for registered stock which exists in that country at present." The secretary's report was presented by Mr. H. Wade. It noted a great advance in Hereford interests in the United States during the past year. Sales, prices and numbers exhibited had greatly increased. The exhibition and sale by the Hereford breeders of the United States, held in Kansas City, was a new venture and a complete success. The Hereford interests in Canada had also increased in large measure. The first edition of the Canadian Hereford herd book appeared this year and filled a long-felt want. This important volume contains all that is known of Hereford history in Canada. The volume is edited by Mr. Henry Wade. The secretary's report showed a balance on hand of \$70. The following officers were elected: President, Walter Macdonald, Toronto; vice-president, W. H. Hunter, The Maples; vice-presidents for the provinces—Quebec, R. H. Pope; Manitoba, James E. Smith, Brandon; Nova Scotia, W. W. Black, Amherst; directors, H. D. Smith, A. Rawlings, Forest; A. S. Hunter, Durham; M. H. O'Neill, Southgate; J. E. Gowenlock, Warwick West; Mossom Boyd, Bobcaygeon; secretary and treasurer, H. Wade; assistant treasurer, H. G. Wade.

## American Leicester Breeders

The annual meeting of the American Leicester Breeders' Association was held in London, Ont., on the afternoon of December 12th, the vice-president, Mr. A. W. Smith, of Maple Lodge, presiding in the absence of the president, Mr. D. C. Graham, of Cameron, Ill. The secretary's report showed that the society has the very satisfactory sum of \$777.53 on hand. It was decided that the next regular meeting should be held at the same time and place as the Provincial Fat Stock Show. It was also determined that in consideration of his services the secretary, Mr. A. J. Temple, of Cameron, Ill., be given 50 per cent. of all receipts, instead of 30 per cent. as heretofore. A discussion arose as to the advisability of preparing a standard of excellence, whereby an inexperienced breeder might be guided in the selection of his stock, but owing to the two distinct types, the Border and the Leicester English, it was deemed unwise to carry out this idea.

The following officers were elected: President, R. D. Graham, Cameron, Ill.; vice-president, A. W. Smith, Maple Lodge; directors, John Kelly (Shakespeare), Jas. Walton (Michigan), J. W. Murphy (Cass City, Mich.), C. E. Wood (Freeman, Ont.), J. M. Gardhouse (Duffield).

Prof. Grisdale, Central Experimental Farm, Ottawa, read a paper on the history of Leicester sheep, in which he traced them back for fully 150 years. All the long-wooled sheep, he said, owed much of their excellence to the Leicesters.

## Round Up of Institute Workers

At London from December 11th to 15th, all the delegates who are advertised to attend the Institute meeting in January and February, assembled and received practical instruction along several lines of agricultural work.

The exhibit of beef cattle was very fine. By comparison of types, by questioning the owners about methods of care and feeding and by watching and catechising the judges, much special knowledge of fat animals was gained. In the dairy class, the competition, as a rule, was most keen, but there was one marked exception. One Holstein cow, be-

sides yielding the enormous quantity of 75 pounds of milk, tested 8.8 butter fat at the rate of 30 pounds of butter per week. To see this cow was in itself worth a trip to London. The gasoline engine running the cream separator each morning at nine was also critically examined. Among the sheep could be found at almost any hour one or more delegates admiring the representatives of the different breeds. It was, however, when they were killed and judged as to carcass, that the greatest surprise came. One lamb for instance, that took no prize whatever in the live class, was given first money when placed on the butcher's block. The fact deduced was that lean meat is what the consumer wants so the butcher must cater to this trade.

In the bacon class 60 hogs were slaughtered right on the grounds, the institute workers watching every detail. These when hung up and judged by expert packers each and everyone was able to see just what kind of a hog is desired for export. These packers were plied with questions, and when Prof. Day had delivered his splendid address on the bacon hog, he also was interrogated as to food management and the proper scale of points by which to judge the bacon hog.

In the poultry department there could be found at all times an interested audience. Three times a day Mrs. Yuill operated the cramming machine. At first the chickens were decidedly obstreperous, but in a day or two they became quite docile and took their full meal by the tube method without the slightest opposition. Prof. Graham had on exhibition ordinary-dressed chickens as they are offered for sale by the farmers on the market. He had also some fed specially for a short time and some very fat ones. He had a chart illustrating the relative value of these different forms and the lesson drawn from it was that the farmer who does not put his chickens up in a coop and feed them separately and without exercise for at least two weeks before killing is losing about 50 per cent. of their value. There were also on exhibit by Prof. Graham two chickens, full sisters, of exactly the same age. One was of a bright cream or yellow color, while the other was white. When asked by one of the Institute men why the difference in color, Prof. Graham replied that for the past eleven days the white one had received skim-milk and oats, while the other had been fed exclusively on yellow corn. Knowing this fact, the delegate to Farmers' Institutes can now go into every part of Ontario and tell the producer how he can, with an ordinary flock of farm-yard chickens, cater to both the lovers of yellow and white meat. Prof. Gilbert and Mr. Myers spoke on the best varieties of poultry for the farmer. The Barred Plymouth Rock seemed to be the best all round breed for both eggs and flesh. Mrs. Gilbert judged all the fowl, and explained her reasons for awarding all the prizes to the satisfaction of everyone. She also showed how to draw and dress a chicken for the home market. Mr. and Mrs. Yuill, Prof. Graham, and Mr. Tomblin gave practical lessons in killing and plucking.

The practical addresses by Mr. Foulds, a Brantford butcher, on the sheep carcasses, from the butchers' and the consumers' standpoint, were clear and practical. Prof. Craig, of Ames, Iowa, was listened to most intently when he talked on the "Ideal Mutton Sheep." He considered it from five standpoints: that of the breeder, the feeder, the butcher, the consumer, and the wool merchant. He produced samples of wool showing all the different grades, together with their relative values per pound.

Mr. Campbell, Provincial Road Inspector, addressed the delegates on Friday afternoon on the subject of good roads. Two hours were occupied in discussion and questioning, Mr. Jno. I. Hobson, of Guelph, and Mr. Simpson Rennie, of Milliken, handling the discussion. The delegates with notebook in hand received much useful data on the subject of good roads.

These and many other things kept the delegates fully employed during the entire show, and each and everyone should go out among the farmers of the Province in January and February with renewed vigor and much useful information, for they can now say, "I know, for I have both seen and heard."

Unto us a Child is born,  
 Unto us a Son is given ;  
 And the government shall be upon His shoulder :  
 And His name shall be called  
 Wonderful, Counsellor, Mighty God, Everlasting Father,  
 Prince of Peace.



## The Nativity

"What means this glory round our feet,"  
 The Magi mused, "more bright than  
 morn?"  
 And voices chanted clear and sweet,  
 "To-day the Prince of Peace is born."

"What means that star," the shepherds  
 said,  
 "That brightens through the rocky  
 glen?"  
 And angels answering overhead  
 Sang "Peace on earth, good-will to men."

And they who do their souls no wrong,  
 But keep at eve the faith of morn,  
 Shall daily hear the angel's song,  
 "To-day the Prince of Peace is born."  
 —James Russell Lowell

## Watch, Therefore

In Palestine the moonbeams shine  
 Upon each lonely hill,  
 Where shepherds keep their drowsy sheep,  
 And all the land is still.

But through the night a path of light  
 Streams out across the way,  
 While servants feast until the East  
 Gives warning of the day.

"Full many a year, in hope and fear,  
 A band of slavish men,  
 We watch for him with eyes grown dim—  
 He will not come again!"

Far away, at the dawn of day,  
 I hear the Master come,  
 And the rhythmic beat of his horse's feet,  
 Nearer and nearer home.

But no one waits at the castle gates,  
 And on the castle floor  
 The sunlight creeps, while the porter sleeps  
 Till his Lord is at the door.

—Herbert Muller Hopkins.





# Christmas



# Roses

By  
Elsbeth  
Moray



"There's no Christmas roses like them in town," said Barbara Step proudly.

"Unless Emily Ringwood's. Mrs. Millen was tellin' me of 'em only yesterday"——

"Emily Ringwood ain't got no roses like them ones, that I know," Barbara interrupted decisively and her mother attempted no further demur.

"For one thing," continued Barbara, in her usual emphatic style, "Em'ly Ringwood's old barn's a poor hot-house. She hasn't had a geranium even fit to be seen for years."

"It's luck with some," Mrs. Step said, tying her bonnet-strings before the kitchen glass. "You always was lucky with your lilies and things."

"Stand's to reason why," returned Barbara polishing vigorously the last tea plate. "Some folks think their flowers hasn't feelln's. How'd you like to be kep' in a freezin' room and soused with ice water once in a while when you wasn't over dry? Em'ly Ringwood's got no more notion of keepin' flowers than a ragman." She finished the polishing with a flourish, rattled the plate away beside its fellows, and thrust a stick into the burnished stove.

"I'm just runnin' to Dawson's," her mother said as she fastened her cape. "There's them apples to get, an' I was thinking I'd run in and see your Auntie."

Barbara sat, after she was gone, and rocked meditatively in her favorite chair. She was thinking of Emily Ringwood. Some years ago, more than either of them cared to remember, Emily and she had been the belles of the little town. Each had been envious of the other, and their friendship had been only a sham covering dislike. Barbara could not forget that Emily belonged to one of the first families of the village; for herself she remembered no existence beyond three rooms and a kitchen. Emily, on her side, born and bred in the stinging wretchedness of decent poverty, continually suffered in comparison with Barbara, whose father and mother could not clothe their only child too finely or refuse her any advantage. Mr. Step had most of the carpentering of the village, and when he died left his wife and daughter without fear of poverty. Lovers both girls had, but neither married. The years passed and the pleasures of girlhood slipped from their grasp, or were flung away as worthless. Emily lived on without a relative in the big house; Barbara hardly felt the passing of the years in her narrow duties and amidst her flowers. Her love for them was an unexpected beauty in an otherwise plain and commonplace nature. Twice a year her flowers filled the church with an aroma of spice, and at any season the common little parlor with its straw-stuffed carpet and gaudy ornaments, smelt like the gardens of Araby. This winter Barbara was particularly proud of her winter roses, and meant that they should have first place in the church decorations for Christmas Day. Morning after morning she had watched the gradual unfolding of the frail blossoms till one plant bore ten, some fully expanded, others just pouting open enough to show the golden calyx. As she sat rocking thoughtfully in her chair she could see the gleam of their starry blossoms through the open parlor door.

She thought contemptuously of Emily Ringwood's roses. "It ain't in her," she said to herself.

The short twilight had fallen like a shadow on the snow, and the lights were beginning to twinkle in the little town. Barbara rose to draw a blind up, and she saw Emily Ringwood pass like a slim, grey ghost, her long, pale face framed in a black veil like a nun's. She caught sight of Barbara at the window, and waved a spectral hand. Then Barbara heard a tap at the door, and before she could utter "Come in!" Emily entered with a high little laugh.

"I thought I'd run in and see your roses as I was passing," she said.

"They ain't so very much," Barbara responded, with an air of apparent deprecation. She lighted her visitor to the parlor.

"I've a pot myself," Emily said in a casual way. "Likely's not you'll see them in the church to-morrow. Oh! I see your calla's out. My! how lovely!" She bent her head rapturously over the roses. "Heavenly!" she exclaimed, shutting her eyes. "But, Barbara, where's your big begonia?"

Barbara set down the lamp.

"It's in the kitchen," she said.

"If it's not too much trouble——," Emily began, but Barbara was already fumbling for the begonia in the dark.

"Don't mind to bring it in," Emily said, appearing at the door with the lamp. "It's such a heavy pot."

"Anyway, it's nothing much to look at now," her companion returned, smoothing the hairy leaves fondly. "But it was real pretty a couple of weeks ago."

Emily nodded. "I've often seen it at the window. Well, I must go. Run in and see me sometime, Barbara." With a flutter of the black veil she was gone.

Barbara sank once more into the rocker, cogitating many things, and there her mother found her.

"Danson's been givin' out his calendars to-night. When I was in gettin' the apples, says he, 'Just you give that to Barbara,' says he, 'with my love.'"

"The calendar's 'bout as much as I can tackle," Barbara responded dryly.

"It's a real pretty one," her mother said. She sat down and leisurely divested herself of her bonnet.

"Peace on earth, good-will to men," read Barbara. A number of pink angels floating in a very blue sky held a scroll aloft with these words, and underneath some black men in remarkably modern clothes were mixed up rather indiscriminately with sheep of no color particularly.

"It is pretty!" Barbara said at last. "It's that real-like. It's queer how them artists has the imagination in them!" And with a sigh of admiration for the genius of the unknown painter Barbara dismissed him from memory.

"Emily Ringwood's been and gone," she said to her mother.

"Well, of all!——" exclaimed Mrs. Step. It was her favorite expression. "What on earth brought her?"

Barbara rose and carried the lamp into the front room. She covered the more delicate flowers with paper at night. "I guess she come to let me know about her roses."

"Like as not," Mrs. Step replied, with an absent yawn. She had not yet removed her cape, but sat rolling up her bonnet strings in her fat fingers. Meantime Barbara hummed an air and covered up her



plants. Suddenly her mother heard the rustling cease.

"For the land's sake!"

"What on earth's wrong?" Mrs. Step enquired from the kitchen.

"Well, for—the—land's sake!" came the ejaculation again, this time as if there was nothing more to be said.

Mrs. Step rose and came heavily into the best room. Barbara stood over the Christmas rose like a mother over her hurt child. The poor plant drooped as though ashamed. It had only one blossom remaining on the stem; the others, already wilted and brown, lay scattered around the pot.

"Why, what ails it?" cried Mrs. Step.

"What ails it?" returned Barbara, in splendid scorn. "Nothin' ails it. No mor'n if you had your feet and hands tore off. Of all the sneaky, thievin' things I ever heard on, this is the worst."

"What, you talkin' about?" asked her mother, not unnaturally.

"I'm talkin' of Em'ly Ringwood, that's who I'm talkin' of. If there ever lived a Pharisee in this world, it's her. Here she comes in last night and says she, that soft and velvet-like: 'Well, Barbara,' says she, 'and how's your roses?' she says. 'Oh,' says I, 'pretty well. How's yours?' 'Gettin' on,' says she, and then she sneaks over here that curus like and bends hoverin' over the roses, and, says she, 'Ain't they lovely!' and as sure as I live she's snipped every one of them blossoms off, and me in the kitchen and never knew."

"Well, of all!—" cried Mrs. Step.

"She was for takin' her roses to church to-morrow so's folks could see she had 'em, and as soon's she sees mine has more blossoms and is perkier 'n hers, I guess the devil jogged her elbow a bit. Anyways, they're off." Her eyes fairly sparkled with rage.

"What you goin' to do?"

"Do? There ain't nothin' to do 's far 's I can see. I'd like nothin' better'n to march in on her now, and if she ever had a settin' out—. As for her Christmas roses, she'd better ask Barbara Step to drop in to see 'em, that's all." She gave a scornful laugh, and then her face changed.

"Here to-morrow's Christmas, and there ain't a mite o' use in sendin' that plant to church after all. I know them that'll be lookin' for it, and her's'll be settin' there in front with her lookin' at it—seems to me it ain't in human nature for me to go to church to-morrow with her there. You'll have to go alone, and if the minister asks for me I'm not forbididin' you to tell him the truth."

Next morning Mrs. Step went to church alone, and Barbara spent the morning in preparing dinner and watching vainly for the passing of Em'ly Ringwood. When her mother came home she was all ready with their festival dinner, and she herself dressed finely in honor of the day.

"Em'ly Ringwood wasn't to meetin' this mornin'," Mrs. Step said, pinning her best bonnet carefully up in a napkin and laying it aside.

Barbara stopped dishing the potatoes.

"No more was her roses 's far 's I could see," went on Mrs. Step, quite satisfied with the impression she was making. She drew a chair to the table and spread a towel over the lap of her best dress. "What's more, she's real sick," she continued, when these preparations were accomplished with satisfaction. "Mis' Trevlin caught me 's I was comin' out, and she says, 'Have ye heard how Em'ly is this mornin'?' she says. 'Law, no!' I says, 'and what's more, I never knew 'at she was sick.' 'My sakes, didn't ye now?' says she. 'Took real sick last night—inflammation or somethin'."

"Humph!" said Barbara helping herself to pickles; "It's queer she didn't send over for us to come and help nurse her. 'Taint like the last time she took sick. My sakes! wasn't she sick though! Well, if she ain't repentin' now." She gave her head a virtuous toss, with her knife at right angles to the table. Barbara was not an imaginative girl. She looked on the loveliness of dawn and sunset, summer and winter, with some appreciation certainly of their varying beauty, but with no ear for the message they brought to the human heart. The transitoriness of life and the eternity of it were never borne in upon her mind by the autumn-leaf eddies or the re-flourishing of the May boughs. Facts alone had for her an existence. And yet, to night, Barbara thought. In the comfortable little kitchen, with the warmth of the stove causing her mother's head to nod cosily over her knitting, everything spoke of homely and familiar comfort, from Barbara herself, rosy and fat, to the very cat bunched up in sleepy meditation on the rag carpet at her feet. Outside, a stripped creeper seemed to tap for admittance into the glow of the rosy room—it tapped, now loudly, now faintly, a poor brown thing shorn of its glory, a ghost of June. Now and again, the wind shrieked a bitter story through the invisible cracks in the window casement—Barbara dropped her white seam on her lap and thought. Since her mother had spoken of Emily Ringwood's illness she had not been able to forget her—lying alone in that great bare, cold room in pain—a frail, bloodless soul. Barbara knew that the old housekeeper, grown close and sour with age, would have but a small fire in the stove. She was deaf too; Emily might call, she might shriek, and old Min would never hear her in the kitchen. With no mother, no visible heart of love to bend over her, the delicate creature would be lying alone in the darkness, surrounded by the haunting memories of happier days. And it was Christmas night! Somehow the more Barbara thought of it the more uncomfortable she became. But she would not have been human had she given way without a struggle. She rose, slipped into the parlor and in the semi-darkness she touched the mutilated plant tenderly.

"She hadn't ought to have done it," she muttered rebelliously. "It was a mean and sneaky thing." And, then, she did not know why, but her eyes fell upon the new and gaudy calendar hanging on the opposite wall, and the pink angels swam through a mist that gathered, God knows why, in Barbara's eyes.

Mrs. Step, dozing over her knitting, was fairly awakened by her daughter's voice. "I'm going to run over to Emily's, mother. Like as not she'll be alone 'cept for old Min, an' she's worse'n nothin', seems to me."

"Law sakes, Barbara, you near scared me to death! What are you goin' there for? You was mad as mad with her only this mornin', and here you're runnin' over, 's if she was your best friend. I ain't sure o' you a minute."

Barbara laughed. "I've gotten over bein' mad, that's all. I guess it's burnt out. Anyways I'm goin'."

"Do's you like," her mother answered, sighing as though the puzzle lay beyond her. Her eye caught the corner of a basket under Barbara's shawl. "What you got there?"

"It's a little cream and some of the leghorn eggs, and a bit of your sponge cake. Em'ly don't have cream on her puddin', I'll bet."

"Couldn't ye find room for a barrel o' flour and a roast o' lamb," her mother suggested with heavy jocularity, but Barbara had already shut the door and was speeding along the bleak road with the north wind in her face. The big house loomed against the



purple sky, dim and gray; only from one window came a small and cheerless light, all the others showed in the gloom like the sockets from which the eyes have long since fallen into dust. How many bright young cheeks had pressed their bloom on these window panes in the Christmases ago to watch the falling of the frail snow? How from these old rooms once rang out to the passers by the echo of the gay voices and the music of dancing feet. All gone! And the snow lay thickly upon their graves. Barbara knocked at the back door. To her impatient fancy old Min took an hour to shuffle forward and open it. She held a lamp in her hand and the light threw a glare over her yellow and hard face.

"How's Em'ly?" asked Barbara.

"Just so. She ain't very spry. Will you come in?"

Barbara stamped the snow off her rubbers and shook her cape. "I don't mind if I do. Ain't she sleepin' though?"

"Not as I know. Ye can see for yourself." She shambled along the cold hall where the paper hung in strips, and pushed open a door. "Here's Barbara Step to see you," she announced to someone within, and forthwith disappeared.

The room was very large, but bare and comfortless. A small lamp hardly lit up the dingy wall paper and the carpet, the pattern of which had faded beyond hope of recognition. The bed stood in the corner further from the lamp, and on it, propped up by pillows, lay Emily. A crimson shawl lay around her shrinking shoulders from which her fragile neck and long, pale face turned in a scared and bewildered way to her visitor. Then all at once it seemed to Barbara as if nothing were left in her heart but pity and love. She hustled forward.

"How you keepin', Em'ly? You was real sick wasn't you?"

"Pretty bad," Emily replied with a nervous tremor.

A pitiful, red blush had taken the place of the pallor on her high cheek bones.

"'Taint such a nice Christmas either when you're sick in bed, I guess." Barbara went on rushing into conversation to cover confusion.

"Won't you sit down?" asked Emily. Barbara sank down with an embarrassed laugh.

"It's snowin' outside," she said,

"Is it?" was the listless response. "I'd no notion what kind of day it was."

"Ain't ye had no visitors?"

"Visitors!" repeated the thin, querulous voice. "What visitors would I have, I'd like to know? Do you know I forgot what day this was even, till I heard the bells ringing for church. The doctor's been last night late, when I took sick, but I haven't seen another living soul, 'cepting yourself."

"How's your appetite?" asked Barbara, eminently practical as ever.

"I've hardly broke fast all day. Min's not much of a cook, and somehow I can't eat."

Old Min was pushing even then the door open with her foot. Barbara glanced at the tray she held in her hands with not much appreciation of its contents. A cup of weak and muddy tea, and a few slices of bread buttered sparingly—this set on an old tray destitute of napkin. A sharp and painful flush rose to Emily's brow—perhaps no one had ever seen her evening meal before. Barbara was equally uncomfortable. Suddenly she bethought herself of the basket.

"I must get home," she said, rising, "Mother gets scared easy. Say, Emily, our hens has been layin' late, so I brought you some fresh eggs—if you care for 'em," she added, fumbling with much confusion in the basket.

"Oh! a fresh egg!—yes, I would like the taste of one."

"Wouldn't you like it with your tea now?" queried Barbara, waxing bolder. Old Min had her apron out receiving the eggs.

"Boll one," whispered Barbara, "cut a bit of the sponge cake and bring the cream for her tea! No! here, I'll take them to the kitchen." She whisked them back in the basket, caught up the tray and its contents and disappeared, followed by Old Min at a slower pace. When she returned Emily was lying in the same position but something radiant in her eyes told of tears lately fallen. For the first time Barbara noticed the pot of Christmas roses on a small table opposite the bed. She came in, bringing with her an atmosphere of bustling cheeriness and the fragrance of well-made tea.

"Now, Emily," said she, "You sit right up and eat this egg."

She placed the tray down on the table, pinched up the pillows dexterously and fixed the red shawl. When that was done she placed the tray before the invalid. Emily gave a fleeting glance at its contents and then, to Barbara's consternation, she covered her face with her hands and wept.

"Mercy on us, Emily Ringwood, you want to get a set-back," she exclaimed, with genuine concern, "Don't you, now, Emily, don't! See your tea's coolin' and the egg too. Ain't it right? Too soft, eh?"

"No, it's all right, Barbara," came the sobbing voice.

"There now!" Barbara said, breaking the head off it—"don't be wastin' any more time."

"Oh, Barbara, don't you hate me? I really hate myself. I suppose I've got callous living so much alone, but I'm sorry about—you know, Barbara"—

"Now, look here, Emily Ringwood, I'll have no more said about it. I'll just profess to you right now that I was mad—bollin', ravin' mad, but I've gotten over it. An' no one 'll say Barbara Step keeps pesterin' after she's forgave her enemies. I've no patience with them plous folk what never gets angry, but keeps harborin' spite in their bosoms all the time till it fairly sizzles up all the good in 'em. I'm not one o' them and I'm thankful of it. But my motto is: When you're angry, get a good blaze and burn it up at once." She paused for breath.

"You're very good, Barbara," poor Emily said, weakly after this eloquence.

"Oh! good! Barbara sniffed, scornfully. "I ain't good nor never will be, 's far 's I can prophesy. Maybe, the Lord will take the will for the doin'. Now I must be off. Are you eatin' your egg now?"

"Indeed, I am, and thank you, Barbara."

"Good-night then. I'll look in to-morrow."

She fastened her shawl and made for the door.

"Barbara!" cried Emily.

Barbara turned.

"I just want to tell you how unhappy I've been since I did it. If I could stick every one of them on from mine I'd do it." She looked at her plant. Barbara walked to the table and bent over the blossoms.

"It's real pretty," she said with a touch of patronage. "But I might as well tell you mine had two blossoms mor'n yours."

"Yes," said Barbara. "Your's has eight, mine had ten." She paused, and then turning to the little figure with its anxious and hungry face she added, smilingly:

"But I profess to you, your blossoms has it on the side o' size."

And thus in the saying of it, Barbara's last bit of mal'ce did.



## Christmas Bells

It chanced upon the merry, merry Christmas Eve,  
I went singing past the church across the moorland dreary,  
Oh! never sin, and want, and woe, this earth will leave,  
And the bells but mark the walling sound, they sing so cheery.

How long, O Lord! how long before Thou come again?  
Still in cellar, and in garret, and on moorland dreary,  
The orphans moan, and widows weep, and poor men toll in vain,  
Till the earth is sick of hope deferred, though Christmas bells be cheery.

Then arose a joyous clamor from the wild fowl on the mere,  
Beneath the stars, across the snow, like clear bells ringing;  
And a voice within me cried, Listen! Christmas carols even here!  
Though thou be dumb; yet o'er their work the stars and snows are singing.

Blind! I live, I reign; and all the nations through,  
With the thunder of my judgments even now are ringing,  
Do thou fulfil thy work, but as yon wild-fowl do,  
Thou wilt hear no less the walling, yet hear through it the angels singing.

—Charles Kingsley.



## Christmas in the Commonplace Family

By Lotte Hausfrau

The Commonplace family would have opened their cheerful eyes wide if you had spoken of their "policy" of living. They themselves would have declared with laughter they hadn't any. But the principle on which they carried on their peaceful lives was in constant use.

As November merged into December the Commonplace family were as well aware that Christmas was coming and that there were four children and four grown-ups to participate in the "giving and getting" day as any family in the country. The mother of the family made mincemeat. The girls held secret consultation. The boys were more than willing to do any errand or work by which they could add five or ten cents to the fund of pocket money never very large. When the buying time came on, Mrs. Commonplace came home one evening with an armful. Everyone knew what she carried, because it had been the same for many years. There were illustrated local papers for the friends across the sea and old-fashioned Christmas cards for the old friends of days gone by, who remembered each other and old times so every year; and calendars for a few lonely people, whose paths had crossed Mrs. Commonplace's quiet one, and who had not thereafter been so lonely. Mrs. Commonplace's shopping did not take much time or money, for she knew just what she wanted to get, and, besides, she said she "just wanted them to know she was thinking of them" and "everything was so nice she could not make a mistake." During her

quiet times Mrs. Commonplace had been thinking of this season, and when Christmas came she had some gifts, which came to her cheerful family with her love. They were very simple. There was some knitted trimming for the girls' skirts, and scarfs for the boys and mittens for the little ones; and, though they were very useful, they were extra dainty, and, as the children agreed, "quite Christmasy."

Among the young Commonplaces it took some scheming and a good deal of patient work to make small sums of money go over the circle to be remembered. The boys carved blocks and made stools and tables for the children, while the girls made them dolls' clothes and fitted them out with diminutive bed and table linen. The baby was delighted with a big rag doll, which was well adapted to resist her destructive capabilities. These inexpensive gifts left a larger share of money for the gifts to the grown-ups, which had to be more conventional. But even they were made more attractive and suitable by thought and patience. None of them came from the shops. There was a great deal of shopping to get suitable materials, but the Commonplaces knew their limitations. They knew they were just like other people and could not do the planning, shopping and making for a dozen gifts in a week or ten days. So they started early in the year, and, in consequence, there were certain recesses in each drawer which were considered by common consent private.

As Christmas Day came near there seemed to be plenty of time in the Commonplace house to put up evergreen wreaths through the rooms and a green "Welcome" and "Peace and Goodwill" in the hall. It had been done every year but this seemed to make the custom sweeter to the older ones. Their energetic up-to-date cousins thought the custom old-fash-

loned and untidy, but the Commonplaces were not progressive and I regret to say that the fact that a thing had always been done seemed to them sufficient reason that it should be done still.

The guests on Christmas Day at the Commonplace dinner-table were not numerous, but they were happy. There were some old people whose latter years had been left lonely and some young ones whose homes were far away. For Mrs. Commonplace pitied above all the homeless and, as far as she could, made her home theirs. She was not very strong perhaps as a thinker, but she felt that Christmas least of all was a day for shutting in happiness and out the stranger.

It would indeed have been hard to frame a "policy" out of the simple lives of the Commonplaces. But their Christmas was a happy one and brought happiness to others. For one thing they "were content with such things as they had." It was said they "lacked in ambition," and that "they would never set the world on fire." Which was true; they were hopelessly commonplace.

## Folly or Friendship

There is truth in an article in the *United Presbyterian* concerning the extremes into which the custom of giving gifts at Christmas time has run. The old custom, however, is dear to many hearts and makes many a ray of sunshine in lives otherwise gray enough. There is room no doubt for reform, though perhaps not as sweeping as the American writer suggests:

"The greatest Christmas folly," he says, "comes just before Christmas, when everybody in these days seems planning to give presents to pretty much everybody else. The gift-making has come to be distressing to many of both givers and receivers. Indeed, the same limit will include both classes, inasmuch as presents are exchanged, and it is generally understood that in the long run equivalent values are to be transferred from one to the other. If not, somebody is probably put down as mean. If it were the old-time way of doing it that was still in vogue, there would not be much to say against the custom. When friends remembered each other with small and inexpensive tokens and only occasional years, did anybody feel under particular obligation annually to fall down and worship the tyrannical custom of gift-giving, and serve this idol that dominates the land as often as the sun reaches his winter solstice? It has come to pass in these later days that he, and particularly she, that does not faithfully serve is likely to feel the displeasure of the idol's worshippers. And besides, the gifts must be generous, often elegant. Appreciation of the heart of the giver is strictly commensurate with the cash he has put, or promised the merchant he will put next pay day into the present. The Christmas affections of society are becoming strictly commercial. The fatter the present, the more fervent the affection. The days of simplicity of life and plainness in life's appointment are over. People are wanting more and better things, and a mere recognition is nothing, in the eyes of the receiver, among the presents spread out on the piano on Christmas morning. To meet expectations a multitude of people of small and moderate means strain themselves at the holidays, and then pinch and scrape during the two or three succeeding months to catch up and feel pecuniarily comfortable. For many such the holidays bring a batch of small horrors, alike in choosing the presents and paying for them afterwards; and they have not yet the courage to drop the custom of making presents lest friends

think it strange and feel wounded. The average American does not like to be thought mean. If some one would organize a club for those who wish to seek pecuniary relief from the kindness of their own hearts and the slavery of a foolish and oppressive custom, and open some respectable door into it, a multitude would sing his praises and gladly flee to it for refuge. Since that is not likely to occur, how about letting one's friends know that the custom of present-making at holidays will cease to be honored henceforth, and this is in view of emancipation all around? It is to help these bond servants of the social slavery into which they have fallen that these lines are written, and possibly the desired improvement may come by passing this paper around with the remark, 'I believe his doctrine; don't you?' If it does not, cease to send presents and very soon they will cease to come."

## Frightening Children

Little Arthur, while visiting his grandmamma, came screaming from the yard where he was playing and throwing himself into grandmamma's arms, sobbed out: "Please, don't let him have me, grandmamma."

"What do you mean, dear? What has frightened you so?" and grandmamma held the quivering child closer to her bosom, fearing he would go into spasms with fright.

"Oh, grandmamma, the old black dog has come for me; mamma said he would if I was bad, and I broke your plate this morning. Oh, don't let him take me, please don't."

"No, no, darling, he sha'n't have you; I will hold you tight. Where is he?"

"Out in the yard, quite close to me when I ran to you."

"Well, we will shut the doors and keep him out, and then you can come to the window and show him to me."

Arthur suffered himself to be led to the window, but the sight of the small black dog running around the yard renewed his terror, and grandma had to quiet him by assuring him again and again that the dog could not get in while the doors were shut.

After he had slept off some of the effects of his fright, and the dog had been driven out of sight, grandmamma tried to undo the evil wrought by his thoughtless young mother by telling Arthur the dog was too small to carry off such a big three-year-old boy. But it was several days before his nervousness wore away enough to allow him to enjoy a play in the yard unless someone went with him to keep off the black dog.

How many children, like little Arthur, suffer from the dread of bugbears of every kind that can be imagined by their thoughtless mothers and nurses! Their nerves are injured, and, what is far worse, they lose the sweet faith and trust which is childhood's heritage as soon as they learn they have been deceived. Would it not be much better to retain their loving confidence at any cost! It may take more time and trouble to secure obedience by firm and loving discipline, yet it is much better for both child and parent.—*Christian Observer*.

Do good to all  
As much as in you lie.

*Queen Mary, iv. 3.*

We make the time, we keep the time—ah, and we serve the time.—*Becket*.

## Candy-Making for Christmas

By Annie Fraser, Oread Institute

Candy-making is always part of a child's holiday. It is better for the child to make it himself than to have it made for him, and home-made candy is healthier than that from the shops. Candy-making is suggested as an occupation sure to be hailed with delight by the young people whose winter holiday is scarcely an unmixed blessing to busy mothers.

In giving candy to children, it is most necessary that it should be pure. For this reason it is best to make it at home. From an economical standpoint, also, mothers will find it is quite worth while to take the care necessary to learn how to make candy, as it can be made sometimes for less than half the cost if purchased. Never buy cheap candy; it is almost sure to be adulterated. Children often have an inordinate craving for sweets, and therefore should not be allowed candy in excessive quantities or between meals. At the end of a meal, and after the child has had a sufficient supply of other food, is the proper time for candy. A little care and watchfulness in this respect, particularly during the holiday season, may make Christmas time happier both for parent and child.

For the use of the young people and their mothers the following recipes are submitted:

### CHOCOLATE FUDGE.

Two cups granulated sugar, 1 cup milk, 2 squares Baker's chocolate, 1 tablespoon butter, 1 teaspoon vanilla.

Boll together milk, sugar, and chocolate for ten minutes, stirring constantly; at the end of that time a little of the mixture should be waxy if dropped into a cup of ice water. Add butter, remove from fire, and add flavoring. Stir till thick, and pour quickly into a buttered pan. When cool cut into squares.

You may prepare plain fudge by using light brown sugar instead of the granulated. This is improved by the addition of some walnuts. Fudge requires a little practice to have it perfect. It should be solid but still soft, not hard and granular.

### PEANUT BRITTLE.

Shell roasted peanuts, remove skins, and place thickly in a buttered pan. Melt granulated sugar, and as soon as it is a clear brown syrup pour over the nuts. It will harden almost immediately. While melting the sugar stir occasionally, and watch carefully to prevent burning.

### PEPPERMINT CREAMS.

Two cups granulated sugar, two-thirds of a cup of water, one-eighth of a teaspoon of cream of tartar, a few drops of peppermint oil.

Mix the sugar, cream of tartar and water together; stir occasionally till the sugar is melted; then boil slowly until a little of the syrup dropped into cold water will form a soft ball when rolled between the fingers. Remove from fire, allow to cool slightly, then add the peppermint, and beat till white and creamy. Set in a dish of hot water. Butter a large platter or marble slab, with a teaspoon drop on the buttered dish in round flat candies about the size of a half dollar. If you wish, these may be colored pink with a few drops of carmine or cochineal, and flavored with wintergreen or rose. If they should become hard or granular, add a little water and cook over again.

### ORANGE CREAMS WITH WALNUTS.

Wash a large juicy orange with a small brush, then

grate off the yellow part of the rind. Cut the orange and squeeze out the juice. Beat the yolk of an egg light, add the orange juice. Put the grated rind into a piece of thin muslin and squeeze the juice and coloring matter into the egg and orange juice. Mix in a sufficient amount of confectioners XXX sugar to form a stiff paste. Mould into little balls and press half an English walnut on top of each one.

### STUFFED DATES.

1 pound dates,  $\frac{1}{2}$  cup blanched Jordan almonds,  $\frac{1}{2}$  cup granulated sugar,  $\frac{1}{2}$  cup powdered sugar.

Blanch the almonds by turning boiling water over them; allow to stand for three minutes and drain off the water. Slip off the skins and dry in a towel. Wash the dates and drain, then dry carefully in a towel. Open lengthwise and remove the seed. Make a caramel of the granulated sugar by melting the sugar slowly in a saucepan over the fire, stirring till golden brown. Then set the saucepan in a dish of boiling water and dip each almond in the caramel by piercing with a long pin, and drop off on a plate till all are done. Place the almond in a cavity of the date from which the seed was taken, press lightly together and roll in powdered sugar. Arrange on white doyley on plate.

## Christmas in the Far West

By Rev. C. T. Brady in "Ladies' Home Journal"

One Christmas I was snowbound on one of the obscure branches of the Santa Fe Railroad. If the train had been on time I would have made a connection and have reached home by Christmas Eve, but it was very evident as the day wore on that it was not going to be on time; indeed, it was problematical whether it would ever get anywhere at all. It was snowing hard; our progress had become slower and slower; finally, in a deep cut, we stopped. There were three other men, one woman and two little children in the car; no other passengers in the train. The train was of that variety known out West as a "plug," consisting of a combination baggage and smoker and one coach.

One of the train hands started on a lonely and somewhat dangerous tramp several miles up the road to the next station to call for the snow-plow, and the rest of us settled down to spend the night. Certainly we could not hope to be extricated before the next evening, especially as the storm then gave no signs of abating. We all went up to the front of the car, and sat around the stove, in which we kept up a bright fire; fortunately, we had plenty of fuel, and in such circumstances we speedily got acquainted with one another. One of the number was a drummer—a travelling man for a notion house—another was a cowboy, another was a big cattleman, and I was the last. We soon found that the woman was a widow who had maintained herself and the children precariously, since the death of her husband, by sewing and other feminine odd jobs, but had at last given up the struggle and was going back East to live with her mother, also a widow, who had some property.

The poor, little, threadbare children had cherished anticipations of a joyous Christmas with their grandmother. From their talk we could hear that a Christmas tree and all sorts of things had been promised them. They were intensely disappointed at the blockade. They cried and sobbed and would not be

comforted. Fortunately the woman had a great basket filled with substantial provisions, which, by-the-way, she generously shared with the rest of us, so we were none of us hungry. As the night fell we tipped up two of the seats, placed the bottoms side-ways, and with our overcoats made two good beds for the little folks. Just before they went to sleep the drummer said to me :

"Say, parson, we've got to give those kids some Christmas!"

"That's what!" said the cowboy.

"I'm agreed!" added the cattleman.

"Madam," said the drummer, after a brief consultation between us, addressing the woman with the easy assurance of his class, "we are going to give your kids some Christmas."

The woman beamed at him gratefully.

"Yes, children," said the now enthused drummer as he turned to the open-mouthed children, "Santa Claus is coming around to-night, sure. We want you to hang up your stockings."

"We ain't got none," said the little girl, 'ceptin' those we've got on, an' ma says it's too cold to take 'em off."

"I've got two new pair of woollen socks," said the cattleman eagerly, "which I ain't never wore, an' you are welcome to 'em."

There was a clapping of little hands in childish glee, and then the two faces fell as the elder remarked :

"But Santa Claus will know they are not our stockings, an' he will fill them with things for you instead."

"Lord love you!" said the burly cattleman, roaring with infectious laughter, "he won't bring me nothin'. One of us will sit up anyway, an' tell him it's for you. You've got to hustle to bed right away because he may be here any time now."

Then came one of those spectacles which we sometimes witness once or twice in a lifetime. The children knelt down on the rough floor of the car beside their improvised beds. Instinctively the hands of the men went to their heads, and at the first words of "Now I lay me down to sleep" four hats came off. The cowboy stood twirling his hat and looking at the little, kneeling figures, the cattleman's vision seemed dimmed, while in the eyes of the travelling man there shone a distant look—a look across snow-filled prairies to a warmly-lighted home.

The children were soon asleep. Then the rest of us went into earnest consultation. "What should we give them?" was the question.

"It don't seem to me that I've got anythin' to give 'em," said the cowboy mournfully, unless the little kid might like my sjurs; an' I would give my gun to the little gal, though on general principles I don't like to give up a gun; you never know when yer goin to need it, 'specially with strangers," he added, with a rather suspicious glance at me! I would not have harmed him for the world.

"I'm in much the same fix," said the cattleman. "I've got a flask of prime old whisky here, but it don't seem like it's very appropriate for the occasion, though it's at the service of any of you gents."

"Never seen no occasion in which whisky wasn't appropriate," said the cowboy, mellowing at the sight of the flask.

"I mean, 'tain't fit for kids," explained the cattleman, handing it over.

"I begun on't rather early," remarked the "puncher," as he lifted the flask for a drink, "and I always until this time drank it when my feelin's is unsettled, like now."

Then he looked at the two little forms asleep with

a sigh, and handed the flask back—its contents untouched.

"Never mind, boys!" said the drummer, "you all come along with me to the baggage car."

So off we trooped. He opened his trunks and spread before us such a glittering array of trash and trinkets as almost took away our breath.

"There!" he said, "look at that! We'll just pick out the best things from the lot and I'll donate them all.

"No, you don't," said the cowboy; "my ante's in on this game, an' I'm goin' to buy what chips I want an' pay for 'em, too, else there ain't goin' to be no Christmas around here!"

"That's me, too," said the cattleman.

"I think that will be fair," I heartily assented; "the travelling man can donate what he pleases, and we can each of us buy what we please, as well."

I think we spent hours looking over the stock which the obliging man spread out all over the car for us. He was going home, he said, and everything was at our service. The trainmen caught the infection, too, and all hands finally went back to the coach with such a load of stuff as you never saw before. We filled the socks and two seats besides with it. The grateful mother was simply dazed.

As we all stood about, gleefully surveying our handiwork, including the bulging socks, the engineer remarked :

"We've got to get some kind of a Christmas tree."

So two of us plowed off in the prairie—it had stopped snowing and was bright moonlight—and wandered around until we found a good-sized piece of sage-bush, which we brought back and solemnly installed. The woman decorated it with bunches of tissue paper from the notion stock, and clean cotton waste from the engine. We hung the train lanterns around it.

We were so excited that we actually could not sleep! The contagion of the season was strong upon us, and I know not which were the more delighted next morning, the children or the amateur Santa Clauses, when they saw what the cowboy called "the lay-out."

Great goodness! Those children never did have, and probably never again will have, such a Christmas; and to see the thin face of that woman flush with unusual color when we handed her one of those monstrous red plush albums which we had purchased jointly, and in which we had all written our names in lieu of our photographs, and between the leaves of which the cattleman had generously slipped a hundred-dollar bill, was worth being blockaded for a dozen Christmases. Her eyes filled with tears, and she fairly sobbed before us.

During the morning we had a little service in the car, in accordance with the custom of our church, and I am sure no more heartfelt body of worshippers ever poured forth their thanks for the incarnation than those men, that woman and the little children. The woman sang "Jesus, Lover of My Soul," from memory, in her poor, little voice, and that small but reverent congregation—cowboy, drummer, cattleman, trainmen and parson—all solemnly joined in.

"It feels just like church," said the cowboy gravely to the cattleman. "Say, I'm all broke up. Let's go in the other car."

The train band who had gone on to division headquarters returned with the snow-plow early in the afternoon, but, what was more to the purpose, he brought a whole, cooked turkey, so the children had a Christmas tree, and Santa Claus to their hearts' content.

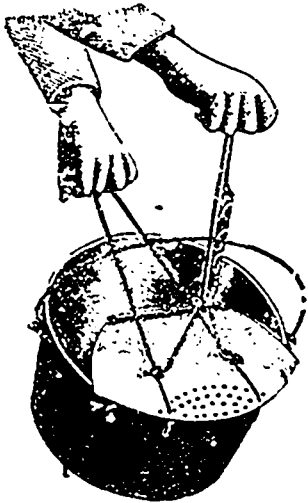
I did not get home until the day after Christmas.

But, after all, what a Christmas I had enjoyed!

# Farm Implement News

## Handy Pot and Kettle Strainer.

The pot and kettle strainer shown in this article is worthy of special mention. The proprietor, Mr. John Easton, Mohawk, Ont., has been an invalid for over four years, having had his spine dislocated in a street railway accident in Brantford. He has not been able to walk or even sit up since, and has to be kept in plaster of Paris all the time. He is endeavoring to make a living for his delicate wife and three small children by selling this article. It is, therefore, with the greatest pleasure that we publish a description of this contrivance in our Farm Implement Department, and trust that it will result in a greatly increased trade for our invalid friend.



But the intrinsic value of the strainer is also worthy of note. It appears to be a convenient and useful contrivance that should save a lot of trouble and inconvenience in the kitchen. It prevents the scalding of the hand and the spilling of vegetables when draining the water off after cooking. The device will fit all sizes of pots and kettles having bails, and will not allow the contents of the vessel to fall out, and with ordinary usage will last a lifetime. The price is 25 cents. When using place the strainer on the vessel as shown in the above cut. To carry the vessel take hold of the upper handle with one hand and carry to the desired place for straining. When straining hold one handle in each hand, spreading the hands slightly apart.

## Steel Wind Mills.

THE WIND IN HARNESS.

By HENRY YEIGH, Brantford, Ont.

Most of us remember the illustrations of the quaint old long-armed wind-mills peculiar to a former generation, and a few of which are still to be found in America, while hundreds are

yet to be seen in Holland, the home of wind-mills.

The inventive power of many minds, in America particularly, has been at work improving and evolving more effective models, until the steel wind-mill of the last quarter of the eighteenth

century was produced, and each year finds some development tending to increase its efficiency. exposure to the elements. During the past few years, however, since the advent of the steel mills, thousands of Canadians, from Cape Breton to Victoria, have purchased wind-mills, and the trade is rapidly increasing.

We mention the good work done by

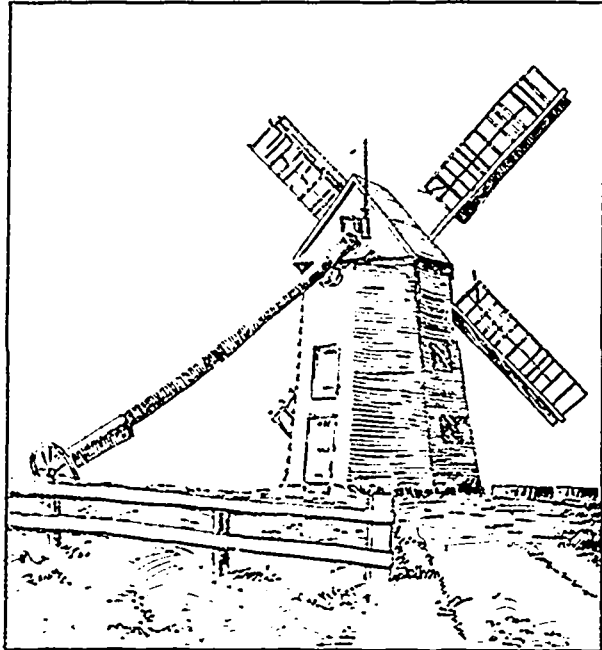


Fig. 1. Old Nantucket Wind-mill, erected A.D. 1746.

century was produced, and each year finds some development tending to increase its efficiency.

As already stated, the United States has led the way in bringing this cheap and effective power to its present state, and the citizens of the United States have adopted them in large numbers for various uses, until in some sections almost every farm has one or two, and thousands of people in village and town use them to lighten labor, and to add to their comfort and happiness.

Americans, the inventors in the United States, in developing wind-mills, but during the last few years some Canadian brains have been put to good use and models produced, distinctly new, and far ahead of the Yankee mill, so that to-day the best wind-mills produced anywhere are made in Canada. Among some of the reasons why steel mills are superior, we might mention the following:

The steel fans or blades which catch the wind are curved, and much wider than it is possible to make wooden slats



Fig. 2. A Cut from First Catalogue of Goold, Shapley & Muir Co., published in 1854.

Canadians have been rather slow in awakening to a sense of the efficiency of the modern steel wind-mill, possibly, in part, through the failure of most of the old wooden mills to do their work properly, or to stand the

consequently they retain the wind as long as it is required or is effective, and being very thin offer very little obstruction to the wind, and in consequence the modern steel wheel much more powerful than the wooden



one with narrow slats. Then again, the steel parts are much more durable than wood, especially when properly galvanized. Some Canadian firms do their own galvanizing, and at least one has a complete and extensive galvaniz-

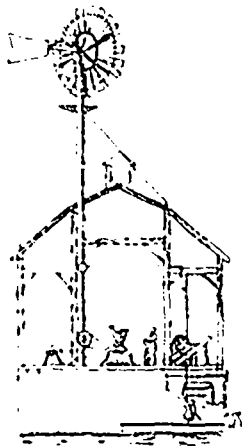
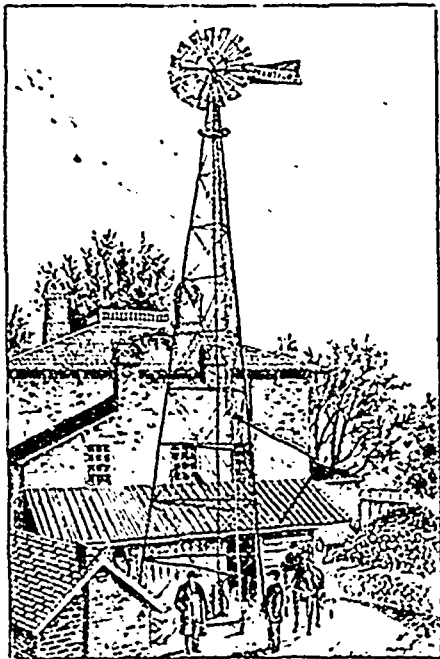


Fig. 3.

ing plant for this purpose. The process is expensive, but experience has proved it to be of great value, and now we presume that ninety per cent. of all sold in Canada are galvanized.

Wind-mills are of two classes, viz., pumping mills for pumping water only, and power mills for driving light machinery. Thousands of Canada's most enterprising farmers, stock breeders and others, are using steel power wind-mills for grinding all the grain required for their stock, running the cutting-box,



Brantford Steel Mill and Tower, erected for Lieut.-Col. Skinner, Woodstock, Ont.

root pulper, wood saw, etc., in addition to pumping the water required for all purposes. The engraving (Fig. 3) shows the ordinary method of attaching a power wind-mill to a wood mast on a barn.

Another class of wind mills already mentioned are those for pumping water alone. In the great majority of cases, these are erected on steel

towers of a sufficient height to give the mill free access to the wind. The best mills and towers are thoroughly galvanized, and will stand the stress of wind and weather for many years. Not only are farmers in large numbers profiting by the use of these labour savers, but many market gardeners, residents of small villages and towns, owners of summer houses by lake and river, are happy in making the wind pump all the water required for stock, garden, and lawn, as well as for house use. The illustration (Fig. 4) shows a farm outfit.

There are very few people with any experience who doubt the efficiency of wind mills for pumping water, but a larger number are dubious regarding the satisfactory working of the larger geared mills for driving machinery. To such we can only say that there is no "perfect power"—all have some drawbacks. About the only one of importance with a properly constructed wind-mill is the necessity for a good wind to give good power, and prac-

power of the others cannot be increased.

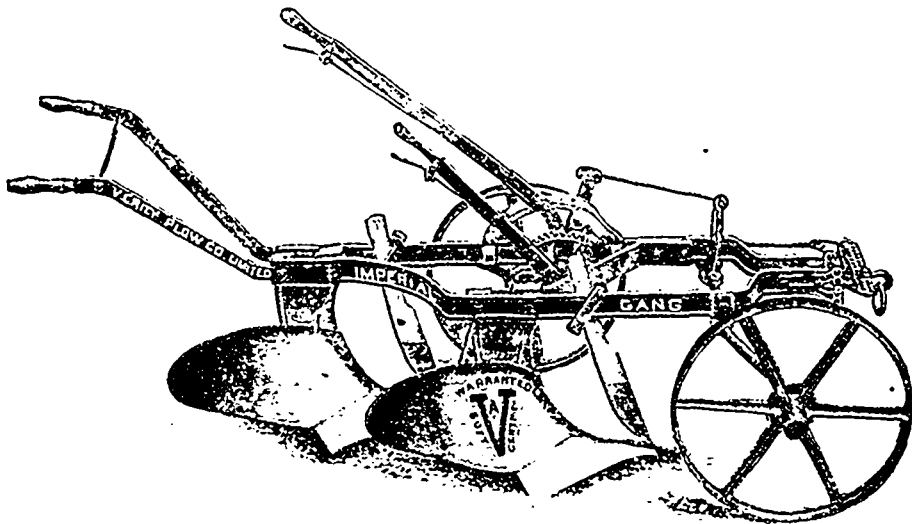
Wind-mills are not satisfactory for running cream separators, or for filling silos if the work needs rushing, but for most other purposes they have proven themselves to be cheap and thoroughly satisfactory.

### Two New Gang-Plows.

We have pleasure in presenting our readers with a description and illustrations of two gang-plows recently placed on the market. The importance of surface cultivation makes the gang-plow more of a necessity than in former years, when shallow cultivation of the soil was not so much practised.

#### THE "IMPERIAL" PATENTED.

This is a two-furrow gang-plow with a ten and twelve inch cut and is one of the latest and most improved plows of its kind on the market. Wherever introduced it has taken first rank, and is in use by many farmers throughout



The "Imperial" Two-Furrow Gang Plow.

tical experience shows that there is sufficient wind to give all the power needed to do the grinding and other work on any farm. This is proven by thousands of hard headed men, careful men in every part of Canada, who are using wind mills to do their work, and express great satisfaction with the result.

The wind mill is low in cost compared with most other kinds of power, and is very inexpensive to run, requiring no one to look after it, and thus leaving all the help available to handle the work of grinding, cutting, or sawing.

While on a visit to Manitoba this past summer it was found that the progressive farmers there are firm believers in wind mill power, and in most cases as rapidly as they are able to erect a good barn they also purchase a power wind-mill.

One advantage of the wind-mill over engines or tread sweep powers is that in a strong wind large power can be obtained from the mill, while the

the Dominion and foreign countries. Below will be found some of the new and patented features which account for its popularity:

*Patented Compound Lever.*—By means of which the operator can change the depth and level the plow while in motion with ease and despatch.

*"Balance."*—Is such that a boy can handle without any trouble.

*Wheels.*—Are an admirable and important improvement, being self-oiling and dust proof, making it impossible for oil to leak, or dust to get into the box—two points extremely desirable.

*Mouldboards.*—Are of the best American Soft Centre Steel, tempered "Hard as Glass," the scouring and wearing qualities of which cannot be excelled.

*Construction.*—Is such that it will instantly draw into the ground, and its power of suction will hold it down to its work in the hardest soil.

*Team*—Hitches close to the plow, thereby getting all the power possible.



**Capacity.**—By two simple movements, can be adjusted to cut from twenty to twenty-four inches wide, and five to nine inches deep, enabling the farmer to plow as much as four acres daily, with three horses, and one man or boy, thus saving time and money.

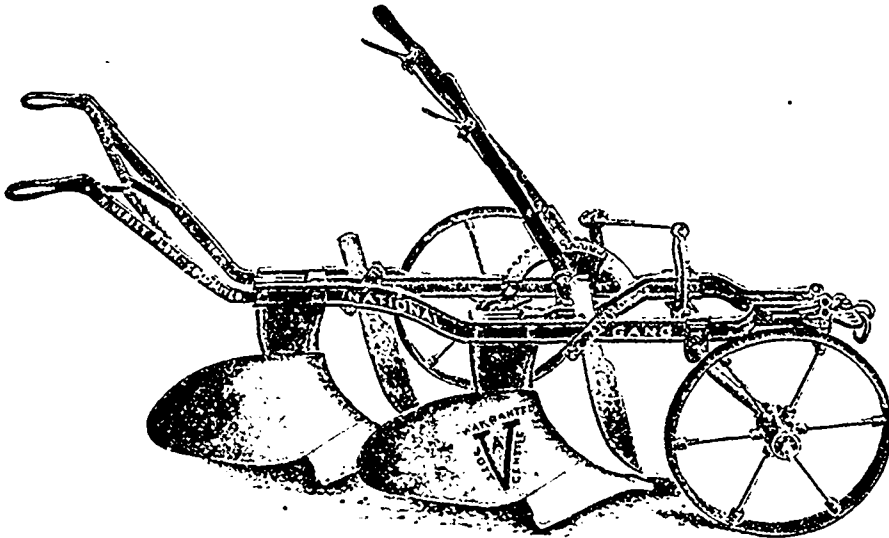
**Clevis and Jaws.**—Give every desirable range of adjustment.

**Patent Coulter Adjuster.**— Gives every required rake to the coulter without the use of wedges.

**Simplicity.**— Although this plow possesses so many new and up-to-date features, there is no complication in its make-up; on the contrary, it has exceedingly few pieces, and with no plow in the market is there less to confuse the operator.

#### THE NATIONAL PATENTED.

This is also a two-furrow gang-plow, somewhat similar to the "Imperial." The manufacturers, in describing this plow, say:



The "National" Two-Furrow Gang Plow.

*"A Product of a Life's Experience.*—Coupled with the newest machinery, resulting in a plow, a better than which is not to be found in the land. All that is desirable in a plow in the matter of scouring, ease of operation, draft, strength, wearing qualities, and so forth, are here embodied, and has met with a universal and most flattering acceptance. The 'National' is similar to the 'Imperial,' only lighter, and cuts from seventeen to twenty inches. It possesses all its patented improvements, with the addition of a

*"Patented arrangement* for widening cut, consisting of another bar on the rear end of land frame bar, forming a slot into which the rear plow is bolted for twenty-inch work. This addition very materially strengthens the rear end of plow."

"How can a man perpetuate his memory most easily?"

"By dying in debt."—*Chicago Record.*

#### A New Feed Cooker.

By J. A. Macdonald, Hermanville, P. E. I.

Only a short time ago I took home from the station, two new and improved agricultural implements, probably the only ones of their kind in this province. One is an improved scuffler or cultivator. Its working I cannot speak of till I test it next spring. The other machine is a newer and much more intricate machine and which I have thoroughly tested with the greatest satisfaction. It is a steam cooker built on an original principle, after the manner of a steam-engine. In fact it is nothing less than a small steam-engine not including the machinery to set power in motion. I obtained it from Illinois, and the duty and freight amounted to \$11.50. It is called the Reliable Feed Cooker and Water Heater, and with it I can steam two barrels of turnips at once, in about an hour after I get up steam. It is portable, being built in a wooden framework with handles in each end so that two men

On looking at the machine first, it is similar in construction to a donkey engine. On a wooden horse is suspended, in front, the fire-place and boiler and coming down to within four inches of the ground. The fire place is about sixteen inches in diameter and about two feet in depth, with grate in bottom. Around the fire-place is the boiler, which contains a bucket of water of about an inch and a half space. Situated immediately above the boiler, but back of it, is the steam chest, which also contains the water supply. This steam chest is about the size of a barrel, and is provided with safety valve, which blows off at eight pounds steam pressure, globe valve, and water gauge, with two globe valves connecting. Back of the steam chest is the water tank, with one-inch pipe and jetcock connecting with steam chest. From a little forward of the centre of bottom of steam chest a two-inch pipe connects with bottom of boiler, and from near the top of boiler another short pipe connects with end of steam chest. Through the long pipe the water descends from steam chest into boiler, and this boiler, forming a thin film of water of only one and a half inches thick surrounding the fire-box, the water heats in a remarkably short time, and the steam escapes through the short pipe at top of boiler back into steam chest, and when the water gets hot there is a constant circulation of water and steam through the long and short pipes respectively. On the top of the steam chest is a concern provided with two cocks, to which two lengths of rubber hose can be attached for the conveyance of the steam to where it is required. On the end of each hose is a 26-inch nozzle for placing in the bottom of a barrel.

The whole is made of galvanized boiler steel very strongly riveted. It is also provided with a whistle which can be heard several miles. The convenience of a steam whistle on the farm is not to be despised. By blowing the whistle at certain hours, of beginning and knocking off work, the work of the farm can be conducted on the same business methods and hours of labor as obtain in the factory. I may say that I never purchased a farm appliance that gave me more pleasure and satisfaction. It will be a great economizer of feed for my swine. I can now utilize several products of the farm for swine feed that formerly were wasted, such as chaff, grain tailings, cut sheaf oats, cut hay, etc., etc. When stuff such as this is steamed, two barrels at a time, and mixed with a little meal, it makes very fine feed for breeding pigs, for calves, milk cows, and fattening cattle.

"Some men," said the Cornfed Philosopher, "think they have religion, and other men think they have all there is."—*Indianapolis Journal.*

### New Tine and Link Harrow.

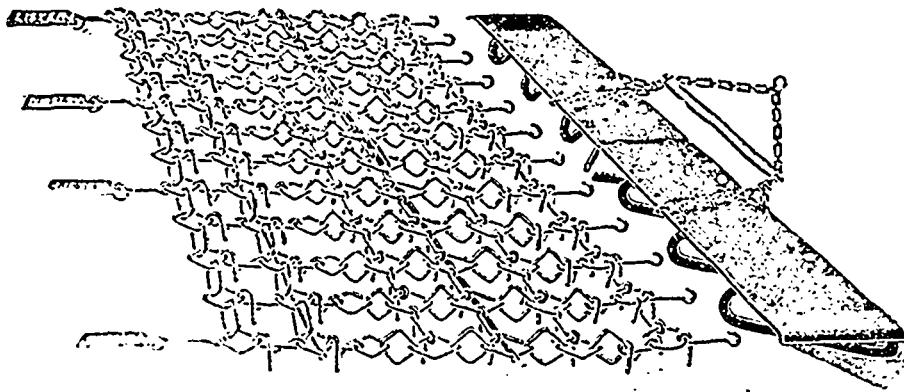
A new adjustable tine and link harrow with front levelling attachment has been introduced in Great Britain. The accompanying illustration will show the mechanism of this new and improved machine. *The Implement and Machinery Review* of England, speaks of it as follows :

In his "Defence of an English Spring," Alfred Austin employs these beautiful lines :—

While cloudland shadows o'er the grass  
In noiseless billows break and pass.

No less useful than lovely are our English meadows, affording as they do abundant food for the animal creation, and if the aid of the implement maker be taken advantage of, that utility can be greatly enhanced. One is afresh reminded of this last fact by the intimation which is just now being made by Messrs. R. A. Lister & Co., Ltd., of Dursley, Gloucestershire, to the effect that they are introducing their new adjustable tine and link harrow to work in conjunction with a well-known "Chain Harrow Appliance," whose merits *The Review* was

levelling attachment. The adjustable "Tine and Link Harrow," as now made in combination with the levelling attachment, offers numerous important advantages. In the first place, it is possible to instantaneously regulate the "brushing" power to suit the requirements of pastures under any conditions, so that the friction on the land may be made either, light, medium or heavy at will; and the adjustment of the amount of friction also alters the pitch or angle at which the tines work. In the second place, the firm's combination link enables this implement (or also any chain harrow) to be repaired, if necessary, on the field in a few moments, and by any farm laborer. The firm supply separate links for this purpose, whose use is most simple, the usual forging or shutting being entirely avoided. In the third place, this latest combination implement comes into contact with, or "brushes," a far greater extent of surface than the ordinary link harrow; it is arranged also to cut out separate tracks and to "give" readily to uneven surfaces of the soil. Our readers should note



Lister's "Farmer's Progress" Chain Harrow, with Front Levelling Appliance.

among the earliest (some years ago now) to impress upon agriculturists and implement agents. Most of our readers are well aware that this appliance was originally intended for attachment to any make or size of chain harrow. It is so shaped that it rubs or scrubs down all surface accumulations in front of the harrow. Turned upside down it becomes a sleigh, upon which the chain harrow may be conveyed from field to field, or along the road. This appliance has done excellent work in effectually moving out and scattering cattle droppings, levelling molehills and irregularities of surface upon heavily trodden pastures, and in ridding old land of moss and creeping weeds. So popular, in fact, has the appliance become that within the past two years, it has been fitted to upwards of 2,000 of the firm's chain harrows. The new combination renders these advantages obtainable not with chain harrows alone but with likewise tine and link harrows, and gives, therefore, an even wider scope than previously for the employment of this very useful

that the front levelling attachment is not available only in combination with the implement named, but is capable, if so desired, of being attached to any other existing harrow.

### Cultivation of the Soil.\*

BY J. B. REYNOLDS, B.A., PROFESSOR OF PHYSICS, O.A.C., GUELPH.

To have the soil in the proper state of tilth is of more importance than to have it rich. A rock may contain the principal ingredients required for fertility, but it does not afford a good seed-bed or a reservoir for water. If a soil is well cultivated, at the right time and in the right manner, even though it is not rich, there is a better chance for the crop than in a richer soil in which the physical conditions are unfavorable. Hence cultivation of the soil should be the first consideration of the farmer, for upon this all other conditions depend.

\*A synopsis of an address prepared for Farmers' Institutes in Ontario. Condensed for publication by the Superintendent.

There are various objects attained by cultivation, some of which are: (1) to prepare a seed-bed, (2) to control the supply of water in the soil, (3) to check and kill weeds; (4) to bury manure; (5) to increase the depth of fertile soil. The purpose of this article



Prof. J. B. Reynolds, B.A.

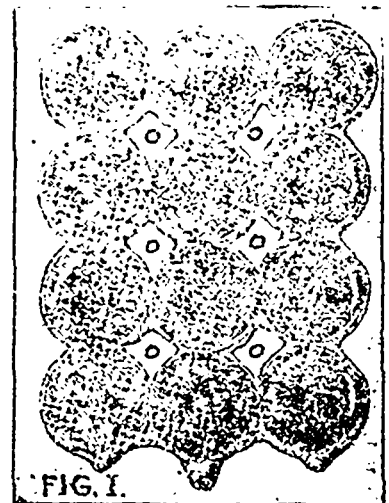
is chiefly to consider Nos. 2 and 3, and the other points incidentally.

*Water dissolves plant-food*, that is, it takes up the solid plant-food that it finds in the soil, and liquifies it. Since plants cannot take food in the solid form, without water the plant must die, no matter how rich in plant-food the soil may be.

*Water carries food to the plant.* Animals can move about in search of food, but the plant cannot do this. Nature, which fixes the plant solidly by its roots to one place, must provide a means for carrying food to it. Water is the agent that Nature has provided.

*Water enters the root of the plant, carrying the plant-food with it.* It then distributes itself throughout the stem, branches, and leaves of the plant, filling all the cells, and giving to the plant turgidity or stiffness. A lack of water is noticeable when the plant wilts, that is, when the turgidity diminishes.

Water makes the plant grow, by keeping the cells filled and distended.



Showing air spaces in the soil, and soil grains surrounded by capillary water.

*The evil effects of too much water.* It is quite possible to have too much water in the soil. This condition frequently occurs, as in low-lying lands, or on any land early in the spring, or

after heavy rains. Some of the evil effects are: It is impossible to cultivate very wet lands, and sowing and planting are often delayed beyond the proper time.

Wet land is always cold land. Heat is necessary for sprouting of seeds and for the growth of crops, and the wet soil will often hinder the crop in this way.

When the land is too wet, the pores of the soil where air should be are filled with water. Under this condition crops are often what is called "drowned out." Too little air for the roots is the principal cause of this. Low, wet places in the field often grow a sickly-looking crop.

*How the soil holds its water.* Water is held in the soil in three ways: first, as *capillary water*; that is, water that surrounds the soil grains, and is held there by attraction. It is the direct source of moisture for plants. The soil, when in the proper state of tilth, has the power to draw this capillary water in any direction, up or down or sideways, from a moist to a dry spot. In a dry time, as the plant root absorbs the water immediately around itself, and leaves that part of the soil dry, this dryer soil draws on the resources of the moist soil below, and by this means the plant is kept supplied with moisture.

The amount of capillary water present in the soil is proportional, other things being equal, to the amount of free surface within the soil, that is, the total area of the surfaces of the detached soil grains. Anyone fond of a little calculation can easily prove that in a given volume of soil the total amount of area over which the capillary water can creep varies directly with the smallness of the particles. The smaller the grains, the more capillary surface. The larger and coarser the grains or lumps, the less surface. Hence there is a direct relation between tilth and water supply. Tillage, which makes the ground fine and mellow, increases the total capillary surface within the soil, and consequently the water capacity.

*Hygroscopic water* is the second form in which water is held in the soil. From the derivation of the word, this term means the moisture that any soil is capable of absorbing from the air. If a soil is thoroughly dried at the temperature of boiling water, weighed, and then allowed to stand in the open air, it will increase in weight on account of absorbing water. The amount of moisture absorbed will depend upon the nature of the soil, sandy soils absorbing in this way very little, while a clay soil or one rich in humus will absorb a considerable amount. This hygroscopic moisture is supposed to be taken *into* the soil grains, not held on the outside, and its effect is to expand the soil, in much the same way as peas or beans will swell when put in water. It is not likely that plants are able to make

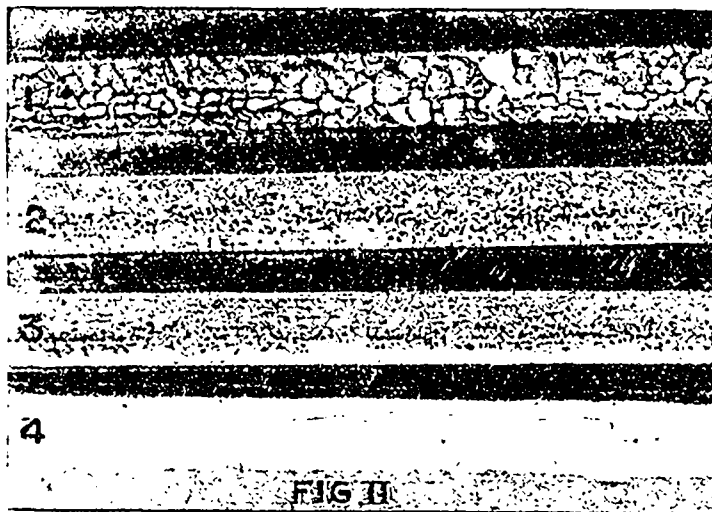
direct use of this form of water, since, it has been determined, plants will wilt in all sorts of soil before the amount of moisture present has been reduced to the hygroscopic limit.

*Free water* is the third form of soil water. This water flows under the influence of gravity, and is the source of wells and springs. Its presence in the soil within the space usually occupied by the roots of growing crops, is decidedly injurious to the crop, since the water excludes the air necessary to the life and health of the plants. When it exists in the soil below the feeding ground of the crops, it is of great value, for it constitutes the reserve supply from which the crop can draw moisture in dry weather.

*Importance of good tilth.* We have seen the importance of the right amount of water, enough and not too much. Can the farmer control conditions so as to have just this right amount, neither too much nor too

the physical ingredients, the proportions of gravel, sand, silt, clay. All these are simply decomposed rock, broken up to a greater or less degree of fineness, gravel being the coarsest and clay the finest of the rock particles. A gravelly soil is one with a certain amount of gravel and coarse stones in it. A clay soil is composed mostly of very fine grains. All of these soils require special treatment, and it is a great mistake to suppose that what is good for one soil is good for all. If a simple uniform recipe be given for the treatment of all kinds of soil, the science and practice of agriculture would be infinitely easier than it actually is.

*The value of humus as part of the soil.* The constituents mentioned above are mineral; humus is a vegetable constituent. It is to be found in the pure state in forests or on new land, and it is also found mixed with the mineral parts in all good soils, imparting to



1. Gravel. 2. Coarse sand. 3. Fine sand. 4. Clay.  
Showing various kinds of texture, and the number and sizes of air spaces in different soils.

little? Mr. T. B. Terry, the well-known Ohio farmer, has said that with a fair amount of water in the soil in the spring, he is independent of rainfall, and can guarantee to his growing crops moisture enough whether it rains or not. By irrigation, it may be said. No, by careful and intelligent cultivation of the soil before and after seeding. The amount of water in the soil can to a very large extent be controlled by work intelligently applied to the soil. And by "controlling," I mean allowing the surplus water to run off, as well as preventing a too rapid escape of the moisture necessary to the plant. Good tilth, then, means that physical condition of the soil that will enable the crops to make the most economical use of the water and plant food in the soil. How to attain to that good state of tilth is therefore an important study.

*Soil ingredients in relation to tilth.* The ease or difficulty of getting the land ready for a crop depends largely upon the nature of the soil, that is,

them their dark color. Humus has the following important properties:

It has the power of retaining large quantities of water. This property makes it an indispensable part of coarse, sandy soils, a great defect of which is their small water-holding power. As a consequence of its high water capacity, humus prevents the leaching and draining away of rain water and plant food that may be dissolved in it. Since leaching is another great defect of sandy soils, humus becomes doubly valuable as an addition to these soils.

Humus has little or no adhesiveness. This property is also of great value. When humus is mixed with clay, in such proportions as may be found in a good fertile clay soil, this non-adhesiveness of the humus corrects the excessive stickiness of the clay.

*How to manage heavy clay soils.* It takes a patient as well as a brainy man to manage a clay farm successfully. Clay has to be humored and petted

and indulged like a spoiled child, and even when you think you have done your best to get it into good temper, all at once it sulks and becomes intractable.

If worked when wet, heavy land falls into the state called puddling:



FIG. III

Showing clay soil in a lumpy state. In this state it affords a very poor seed-bed. It also fails to bring water from below to supply what the plants need.

that is, the soil becomes reduced to an extreme state of fineness by the working and the action of the water in it, the air is driven out of it, and the sticky stuff settles down and dries out into a mass almost as solid as the original rock. The best thing to do with such a soil when it is wet is to let it alone. Then again, it is almost impossible to work it when dry on account of its extreme hardness.

The man with the clay farm must choose his time very judiciously for working the land. He must not work it when it is wet, and cannot work it when it is dry. But to off-set these disadvantages, clay has many good qualities. It can retain large stores of water, it does not allow leaching of plant food, and is naturally fertile, or in other words is a "strong" soil. This natural fertility is undoubtedly due to the great retentive and absorptive power of clay; the fertilizing ingredients that come down with the rain or that are supplied by manure and the decay of plants, are absorbed instead of be-



FIG. IV

Showing clay soil in first-class condition. This affords a prime seed-bed, its water capacity is large, and its power to carry water to and fro for the plants is all that can be desired. This condition can be reached only by proper drainage, judicious cultivation, and plenty of humus to make it mellow and friable.

ing allowed to leach away. So that while it perhaps requires more skill to manage heavy land, it makes up in fertility what it demands by way of extra cultivation.

*The importance of drains.* To come to practical details, the farmer must

first consider how to correct or ameliorate the defects of heavy lands. And the very first essential is *drainage*.

Without drainage all other attempts, however well carried out, must wholly or partially fail. The free water in the soil must be disposed of. It is seldom

that a heavy soil has a sufficiently open subsoil to give natural drainage, and the farmer is consequently driven to a system of artificial drainage. This is not the place to discuss the methods of drainage. The writer desires only to point out the necessity of it, believing that once a farmer is convinced of the "why" he will soon find out the "how." The drain, by taking away the free water that occupies the pores of the soil, allows the air to pass through the soil. The soil may be said to *breathe* through the drain, for there is a continuous movement of air to and fro, up and down, caused by the variations in the pressure of the atmosphere. When the soil is comparatively dry, there is a good deal of air in its pores. Then when a rain comes, it fills the upper ends of these pores, and if there is no outlet for the air below, it is imprisoned and, exerting a backward pressure on the water above, prevents it from entering the soil more than an inch or two. It may happen, therefore, that in an undrained soil a quick heavy summer shower is forced to run off the surface, while the land below the first inch is as dry as ever. From this we see the truth of the paradox that a good underground drain is a safeguard against drouth. This changing of air which results from good drainage, also warms the land simply by introducing warm air into it, while the same fresh air induces those processes within the soil that liberate the plant food. So that drainage is indirectly a source of fertility, since the growth of crops does not depend on the total amount of fertility in the soil, but on the amount available. By drawing off the surplus of free water in time, the drain aids in preventing baking or the formation of hard-pan. By emptying the free water space, the plants are encouraged to take root more deeply in the soil, whereas if the soil is full of water the roots are compelled to feed at the surface. In a period of drouth these shallow-rooted plants will suffer for lack of moisture when the deep-rooted ones are feeding in moist soil farther below. Here again the drain is a safeguard against drouth.

In heavy soil it is a mistake, according to the best practical authorities, to lay the drain deep. Two and a-half

feet to three feet is deep enough for a close heavy soil; because the object of the drain is to remove the surface water as quickly as possible, and if the tile is buried four feet deep below the surface and the water has to find its way through that space of fine clay, the drain might just as well be away altogether. And although there may be many theoretical arguments in favor of deep drains, after all the practical necessity of getting the water away as soon as possible calls for shallow draining in heavy land.

*Humus to improve the texture of clay soils.* As already seen, the chief defects of heavy land are, stickiness when wet, lack of mellowness when dry, and a tendency to coldness. A good proportion of vegetable matter will correct all of these defects. By its non-adhesiveness humus will correct the first two mentioned and by its dark color it will allow the heat of the sun



FIG. V

Showing clay that has been wet and is now dried out. The cracking is due to its adhesiveness and the fineness of its grains. Such a condition is unfavorable to plant growth, especially small tender plants.

to penetrate into the subsoil, instead of reflecting that heat as a light-colored soil will do. In order to prove this fact, the following experiment might be quoted: Last October, for a number of days in succession, two lots of soil, both dry, the one dark in color and the other light, were set in the open air so as to catch the heat of the sun's rays. On one day between seven in the morning and two in the afternoon, when the highest temperature was reached, the dark soil rose thirty degrees in temperature and the light soil twenty-two, both being at the same temperature at the first. The dark soil was principally vegetable matter, and the other fine sand. The practical farmer, who knows that the difference between a cold, ill-conditioned seed-bed and one that is warm and mellow, is the difference between a good crop and a poor one, will also know how to appreciate the value of humus in the soil, and will set to work to increase the supply of his own fields.

*Lime to improve the texture of clay*

*soils.* The well-known properties of lime need only be mentioned here. The effect of lime on heavy land is peculiarly beneficial, so much so that it is a wonder that more of it is not used. Its physical effect is the same as that of humus, but much more pronounced, that is, it removes the binding and baking tendency. The writer is strongly convinced that the cost of buying and spreading lime on heavy land, unless it is known that lime is already present in sufficient quantities, will be returned to the investor many times over in increased yield and ease of working.

*Treatment of sandy soils.* Less need be said concerning light soils, since, so far as the mere mechanical working is concerned, they are much less difficult to treat. The principal defect of



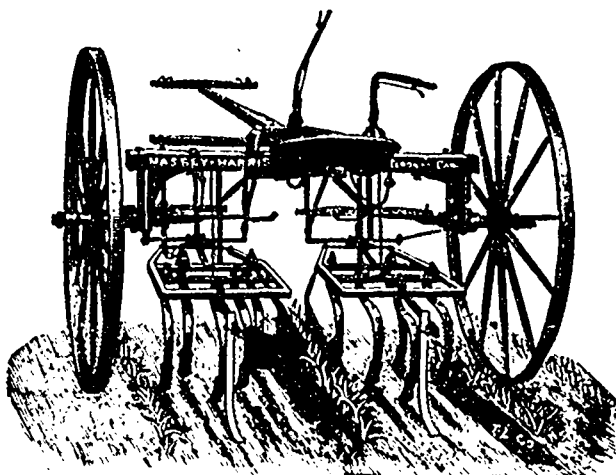
Showing the same clay as in the previous illustration, and treated in the same way, with the exception that there is in the latter a quantity of humus mixed with the clay. This figure illustrates the effect of humus in mellowing heavy soils.

a light soil is its lack of power to absorb and retain moisture and fertility. Deep cultivation should not be practised on a light soil, since that tends to loosen the subsoil, which is already too loose. All else that need be said on this subject may be found under the topics "Humus" and "Surface Cultivation."

*Surface cultivation for all kinds of soil.* By this term may be understood the stirring of the surface soil to a depth of a few inches, without inverting or mixing to any extent. This is opposed in principle to deep plowing, trenching, spading or any such method of working the soil that turns down the upper soil and brings to the surface new and generally crude material. The two methods, as above stated, are radically different in principle. The one claims that the upper soil should

be, and generally is, more fertile than the soil below, and therefore affords a better seed-bed. According to this principle it is a mistake to turn down

result being that the upper soil is completely buried to a depth of two or three feet, and all the soil is thoroughly mixed. This is deep cultivation in the



Two-horse Corn Cultivator.

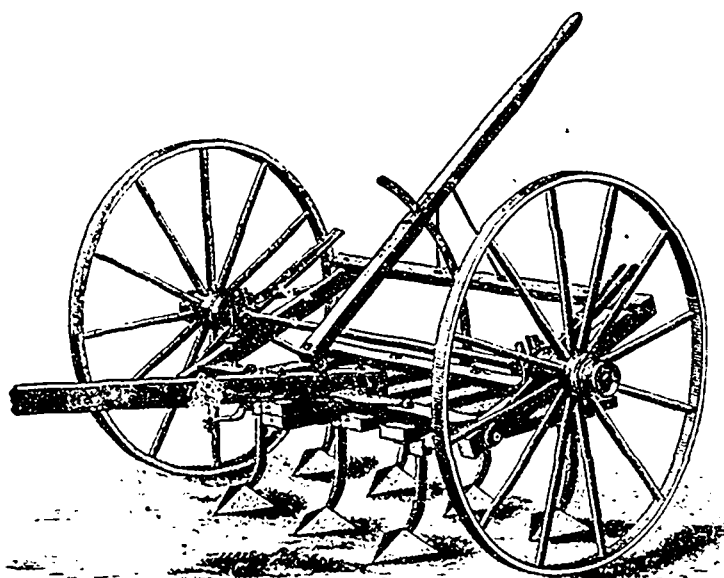
rich well-decomposed soil, and bring up for a seed-bed that which is crude and inert. It claims that a good system of farming makes the upper soil more and more fertile with each successive season, and that this fertility is best kept within a few inches of the top, leaving the subsoil to perform its natural function of storing and carrying water.

The other system claims that there is unused fertility in the soil extending to considerable depths, and that it is best, after exhausting the fertility of the upper soil, to bring up new, unexhausted material, let the air and the water act on it for a little while, setting free the latent fertility; then this new soil will be in a better state than what has been turned down.

The latter system has ancient practice in its favor, as for instance the old

extreme. Deep plowing gives the same result proportionately to the depth.

In virgin fields, where the rich vegetable mold extends to a practically unlimited depth, deep plowing and inverting will undoubtedly give the best results for the least cost; for when the fertility of the upper soil is partly exhausted the lower layer may be brought to light and its reservoir power used. This method has been used in this country from pioneer days. But with what result? The fertility of the soil has been decreasing steadily year by year. Two years ago the writer had a sample of soil sent from a new district in Northern Ontario, along with the following question: "Is there enough fertility in this soil to stand cropping continuously for a number of years?" The first occupiers of the land on too many farms in Ontario



A Rigid Foot Cultivator, almost indispensable in surface cultivation.

method of trenching. This consisted of digging a trench three or four feet wide and two or three feet deep across the end of the field, filling it with the earth from a similar trench dug parallel with it, and so on across the field; the

assumed that the fertility was practically inexhaustible. And the problem that their successors to-day have to deal with is, how to restore the exhausted fertility; and not only that, but they have also to consider how to



restore the fine texture and mellowness of the virgin state. Where the vegetable matter has been exhausted the texture has been correspondingly injured.

Of course, this lamentable condition of so many Ontario farms is not directly chargeable to the practice of deep plowing, but to the fact that deep plowing enabled the pioneer farmers to disregard the laws that govern soil fertility, and to stave off beyond the limit of their active years the inevitable impoverishing of the land; thus putting themselves in the position of improvident business men, who, beginning with so much capital invested in buildings, machinery and plant, make themselves rich with the earnings of the concern but allow the establish-

ment to fall into decay. The loss is not always theirs, but generally their successors'.

that *cut, crush, pulverize, and loosen, but do not invert.* The results have been, cleaner and cleaner land every year, better and better crops, and a steadily increased fertility; so much so that with reference to a certain field the color of the soil has darkened appreciably, showing a considerable increase in humus.

*Surface Cultivation in Detail.* To make this matter clear, it would be well to follow a rotation through. Suppose the second season's cutting has been taken off the hayfield. The stubble is plowed about August, as early as possible in order to take advantage of the summer's heat to decompose the roots. Then it is harrowed to loosen the surface and prevent the escape of moisture, which is

face, is carried into the drills. More or less of the rain that falls in the late autumn will be shed by these ridges into the furrow between. There is on this account less chance of the plant food, most of which is heaped into the drills, being leached away. Secondly, there is more surface exposed to the action of frost, which is a valuable pulverizing agent in heavy soils. Thirdly, the ridging will allow a more rapid drying in the spring, and consequently earlier working and seeding.

One of the crops that may follow this treatment is ensilage corn. In the spring the ridges are smoothed down and a good seed-bed formed, all without using the plow, and then the corn sown. After that, surface cultivation



Breed's Weeder, cultivating rake. Used also for cultivating young corn, potatoes, etc.

also necessary in decomposition. After that, it is cultivated frequently, without tearing up the sod, the objects of the cultivation being, to destroy the weeds that may be growing, and to enable the sod to rot by keeping in the moisture. As the manure is plowed in with the sod a good supply of humus is undergoing preparation for the next series of crops, and will be well decomposed before the cold weather sets in.

The last work of the season on the sod is drilling up, instead of the older practices of ridging up. Drilling is simply the same process as preparing for sowing turnips by running drills through the field with a double mold-board plow. This ribbing serves several purposes. First of all, the best part of the soil, being at the sur-

kills the weed and conserves the moisture.

After the crop of corn is harvested the double-faced plow is used again to prepare the land for the winter. Care is taken to bury the roots of corn in the drill, where they remain rotting for two years before the plow disturbs them. Everyone who has worked land where there are loose corn-roots scattered over the field, will be able to appreciate the method which buries them out of sight.

After the corn, oats or barley or spring wheat may be sown, and the land then seeded. This completes the rotation. It should be observed that the land is plowed but once in three or four years, according as the clover stubble is allowed to stand for another crop or not.

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The writer wishes it to be understood that the above detailed account is given, not for the sake of explaining the rotation, which is only part of a complete system, and which in any case may not suit other circumstances; the details are given in order to show how surface cultivation is carried on through a complete cycle of operations.

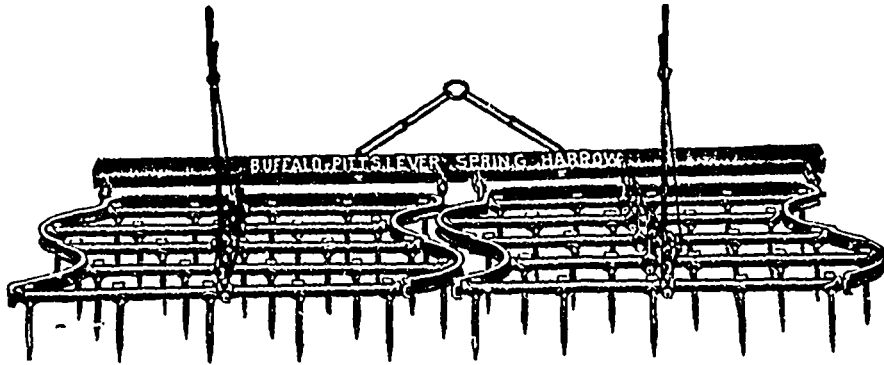
various places throughout this article, reference has been made to the practice of keeping the ground-surface stirred in order to conserve the moisture. To find out the actual effect of a soil-mulch on the amount of moisture in the soil, we conducted last year at the experimental field a trial test on two plots side by side. The one plot

3. A catch of clover is a sure thing every year, on account of the excellent texture and fertility of the soil.

4. The drainage has been improved by the action of the clover and grass roots in penetrating the subsoil. This last fact does away with the necessity of deep cultivation on any soil but the very heaviest.

5. The fertility is extending to a greater depth. Each successive rotation, at the breaking up of the sod, the plow may be allowed to go deeper than at the previous plowing, on account of the increased fertility of the surface soil. The principle at the beginning was, that it is better to have three inches of good rich soil, than nine inches of comparatively poor soil.

"All our experiments tend to show that it is the physical condition of the soil, its capacity for absorbing and retaining water, its permeability to roots, and its capacity for absorbing and retaining heat, that is of more importance than its chemical composition."—*Sir John Lawes, Chief of the celebrated Rothamsted Experiment Station.*



Buffalo-Pitts, Lever Spring Harrow.

*Surface Cultivation and Weeds.*—As a matter of fact, surface cultivation affords the best means for destroying weeds. There are various ways in which weeds may be successfully combated, depending in part upon the nature of the weeds themselves, and in part upon the exigencies of the crop. The good farmer is seldom on the defensive in fighting weeds. He fights them in his own way, and with what crop he pleases. It is only when the weeds get the upper hand that the farmer is compelled to sow a particular kind of crop in order to be able to keep the weeds in check. One method, then, is to prevent the seed from maturing, either with a hoed crop or an early maturing crop such as clover. The second method is available when a late crop allows the weeds also to mature. In that case, surface cultivation after harvest will encourage these seeds to germinate the same season, when the young plants can be destroyed. To bury the seeds by deep plowing, and then sometime when it will be impossible to destroy the weeds, to bring the seeds up again to germinate, is a tremendous mistake, and yet one that is the rule rather than the exception. Last year a field near the Experimental Farm was planted to potatoes, and carefully hoed and cultivated through the summer. It had been badly infested with mustard. This year it is sown to oats, and the field is as yellow as ever with the weed. Surface cultivation last year destroyed all the plants that grew, but beneath the surface thousands of seeds were waiting their chance. That chance came when last fall after the potato crop had been taken off the field was plowed. Now if that field had been drilled simply to prepare it for the winter, it is likely that very few mustard plants would have been seen this year. The same principle will apply to all weeds, even perennials, that can be destroyed by cultivation at all.

*Surface cultivation and moisture.* In

was left with a hard smooth surface, and the surface of the other was kept loose and mellow. In all other respects the plots were the same, no crop being grown on either. The exact amount of moisture present was determined for three months in succession. In the month of July, the driest month of the three, the difference between the two plots was greatest. The amount of moisture saved by the surface mulch in the month of July was 37% of the total rainfall for the month. In California, irrigation has to be resorted to, to supply moisture for the fruit-trees. On one particular orchard, \$2,000 a year is spent in irrigation and surface cultivation, the most of it being for the cultivation. The proprietor claims that he may as well spend money in keeping moisture in the ground as in putting it there, and he finds it more economical and more effective to keep it there, for water is costly at certain seasons in California.

Summary of results achieved by sur-

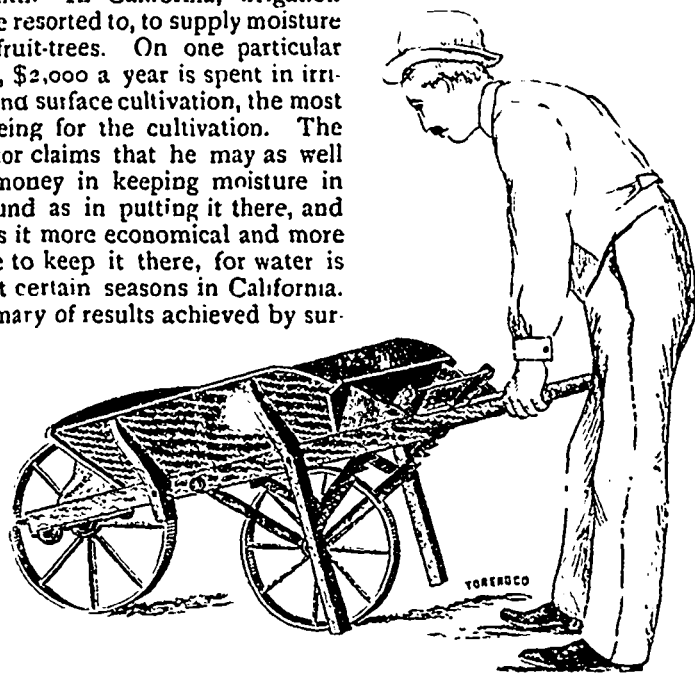
face cultivation and a systematic rotation of crops:

1. The land is made richer, and better crops are grown. On the farm where this rotation is practised, there was three years ago just enough manure for one-eighth of the farm. This year there is enough for one-fourth. In other words, the total yield has doubled within three years.

2. The land has been rid of weeds.

### A Handy Wheel-Barrow.

The accompanying illustration shows a new contrivance in the way of a wheel-barrow. Instead of having one wheel, as is the case with the ordinary barrow, this one has two wheels, as shown in cut. These two wheels carry



the load, and the only power required of the operator is to shove it along, which he can do more easily when he has no load on his shoulders. This new barrow is the invention of Creelman Bros., Georgetown, Ont.

We should treat fortune as the farmer his wheelbarrow—push it from us when full, and drag it behind us only when empty.



# The 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' \$1

### 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' Associations 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 10,000 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.

F. W. HOBSON, Secretary.  
Parliament Buildings, Toronto, Ont.

## FARM HELP EXCHANGE

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars to F. W. Hodson, Secretary Live Stock Association. In the case of persons wishing to employ help, the following should be given: particulars as to the kind of work to be done, probable length of engagement, wages, etc. In the case of persons wishing employment, the following should be given: experience and references, age, particular department of farm work in which a position is desired, wages expected, and where last employed.

These names when received together with particulars will be published FREE in the two following issues of the "Agricultural Gazette" and will afterwards be kept on file. Upon a request being received the particulars only will be published, the names being kept on file.

Every effort will be made to give all possible assistance, to the end that suitable workers, male or female, may be obtained. Every unemployed person wishing to engage in farm or dairy work is invited to take advantage of this opportunity.

## LIST OF STOCK FOR SALE.

### DOMINION CATTLE BREEDERS' ASSOCIATION.

#### Shorthorns.

Bonnycastle, F. & Son.....	Campbellford.....	Cows, heifers and heifer calves.
Bright, J.....	Myrtle.....	11 bulls, bull calves, 10 heifers, under 2 years.
Douglas, J.....	Caledonia.....	Bulls, 8 to 14 months; young cows and heifers.
Jeffrey, Wm.....	Whitby.....	4 bull calves.
Jeffs, E.....	Bond Head.....	12 bulls, 10 to 15 months.
Sibbald, F. C.....	Sutton West.....	2 yearling bulls; bull calf; 10 heifer calves; 8 yearling heifers; 20 cows.
Strigley, J.....	Allandale.....	3 bull calves, 5 to 9 months.

#### Polled Angus.

Bowman, Jas.....Guelph..... Bull calf; yearling bull; females, all ages

#### Ayrshires.

Guy, F. T.....	Bowmanville.....	5 bulls, 6 months to 2 years; 18 cows, heifers and calves.
Owens, W.....	Montebello, Que.....	Calves, 1 to 20 months.
Willis, Wm.....	Newmarket.....	2 bulls, cow, 5 years, heifers.
Yuill, J. & Sons.....	Carleton Place.....	Cows and heifers, 2 weeks to 14 years; 32 heifers, under 2 years; bull; 4 yearling bulls; 8 calves, under 4 months.

#### Holstein.

Hallman, A. C.....New Dundee..... Bull, 8 months; heifer, 18 months.

### THE DOMINION SHEEP BREEDERS' ASSOCIATION.

#### Cotswolds.

Bonnycastle, F. & Son.....Campbellford..... Ram and ewe lambs; breeding ewes.

#### Leicesters.

Douglas, Jas.....Caledonia..... Ram and ewe lambs.

#### Shropshires.

Yuill, J. & Sons.....Carleton Place..... 30 ewes, over 1 year; 8 lambs; rams; 4 ram lambs.

#### Dorset Horns.

Bowman, Jas.....Guelph..... Rams and ewes, all ages.

### THE DOMINION SWINE BREEDERS' ASSOCIATION.

#### Berkshires.

Bonnycastle, F. & Son.....	Campbellford.....	30 pigs, 6 weeks to 5 months.
Campbell, Mac.....	Northwood.....	Aged boar; 6 boars and sows, 2 months; boar, 12 months.
Decker, C. R.....	Chesterfield.....	30 sows.
McCrae, A.....	Merrickville.....	Aged boar; 7 boars; 3 aged sows; 2 sows, 7 months; 11 sows.
Ross, A. W.....	Douglas.....	Boar, 9 months.
Vance, R.....	Ida.....	20 boars and sows, 2 to 9 months.
Yuill, J. & Sons.....	Carleton Place.....	13 sows, 4 months to 2 years; 3 boars, 4 to 20 months.

#### Yorkshires.

King, Oliver.....	Wawaneta, Man.....	Boar, 2 years; 2 boars, 2 sows, 5 months; boars and sows, 3 months.
Owens, W.....	Montebello, Que.....	Imp. boars, 4 to 8 months.
Ross, A. W.....	Douglas.....	Sows, 5 years; boar 9 months; 20 sows, 4 to 6 months.
Russell, F.....	Cedarville.....	8 boars, 9 months.

#### Tamworths.

Boyd, A.....	Kars.....	Sow, 8 months; boar, 7 months; young stock, both sexes.
Hallman, A. C.....	New Dundee.....	Imp. boar, 2 years; 10 boars, 3 months; 25 sows, 2 months to 1 year.
Owens, W.....	Montebello, Que.....	Boar, 8 months.

## Help Wanted.

A married man wanted to work on a farm. Steady job to suitable person. No. 205. a

Married man with small family and some capital wanted to furnish or purchase one half interest in stock and implements and work 100 acres of land with good buildings and orchard, on shares. Send references. No. 206. a

Man wanted to do general farm work, mostly tending to stock in winter. Farm 100 acres. No. 207. a

Man wanted to do general farm work on a small farm. Not much work in winter but chores. No. 209. a

Man wanted to do all sorts of work on a farm of 150 acres, tending stock principally in winter. Must be able to plough well. No. 210. a

Man wanted in a month or six weeks to work a farm and especially take care of stock. No. 211. a

Young man wanted to go to the Northwest to do general farm work. Good wages to suitable man, also board, washing, and lodging. No. 212. a

Young man wanted to do general farm work. Must be able to drive young horses. No. 213. a

Single man of good character wanted for general farm work. Liberal wages to right man. No. 214. a

Young man wanted to do general farm work, more particularly care of stock in winter. No bush work. Would engage for a year and promise a comfortable home. No. 215. a

Young man wanted to do general farm work. Would want him to start work on the 8th of January, 1900. References as to character required. No. 216. a

Young man wanted to commence work January 1st, 1900, by the year. Must understand all kinds of work and give good references. No. 217. a

Single man wanted to do general farm work. Would have to work among cattle at times. Must be willing, honest, and quiet. Will hire by the year. No. 218. a

Young man wanted as general farm hand. Will be required to work in the stables in the winter. Wages \$15 per month without washing. No. 219. a

Young man wanted to do general farm work. References required. No. 200. a

Experienced young man wanted to do general farm work. Good references required. No. 222. a

Good, honest man wanted by the year, to do general farm work. Must give first-class references as to character. Not afraid of work and agreeable around the place. Wages \$160 a year and board. No. 223. a

Experienced young man wanted to care of stock and do milking. Keep 10 head of stock generally, and 2 or 3 horses. Have a little bush and would require stove wood out of it in winter. No. 224. a

Young man for general work on a farm of 200 acres in Michigan. Raise a good deal of stock and keep a dairy of 20 odd cows. No. 225. a

Married man wanted to work on a farm by the year to do general farm work. Must also be used to pruning fruit trees. Farm, loamy soil in the township of Wainfleet, county of Welland. No. 227. a

Young man required to do general farm work, milk cows, and drive a milk wagon. Must be strictly honest, temperate and reliable. Steady employment assured to right kind of man. No. 184. b

Am in need of immediate help. I work a farm of 100 acres, but do not carry much stock. Winter work, chiefly chores. As I am preparing to build a house next summer, I have to be away a good deal this winter. The summer work will be general farm work, besides helping to draw stones for the house. References required. No. 185. b

Wanted—A good man to do general work on a farm. Must be a good milker and good caretaker of horses and cattle. Yearly employment, with board and washing for a suitable man. Apply, stating wages wanted to Box 205, Aurora, Ont. b

I am very pleased with the good work you are doing in regard to Farm Help Exchange, and avail myself of the privilege offered. I need a first-class man and his wife, the wife to take

charge of our boarding house, the man to make himself generally useful on the farm, either looking after stock or working with horses, wherever he is best suited. Good wages will be paid to the right persons, who are not afraid of work. No. 191. b

Am in need of a farm hand. I have not much stock and the work is only general farm work. Will engage a satisfactory man for one year, if references are all right. No. 192. b

Require a steady, sober man who understands the care of stock, is a good milker and plowman, and can do general farm work. Would pay \$120 a year with board and washing and engage a suitable man at once. No. 193. b

Man wanted at once for general work on farm of 75 acres. Must be able to do all plowing. Will give \$120, and board, lodging and washing. No. 194. b

I am very pleased with the Farm Help Exchange, and avail myself of its columns to try to obtain a man for general farm work, engagement to commence at once. No. 195. b

Man wanted immediately for general farm work, will engage for a year if suitable. State length of time and kind of work done on last farm you were engaged on. No. 196. b

Place ready for a good man on a stock farm where there is no milking in the summer to be done. A comfortable home to a trusty young man. No. 197. b

Man wanted, used to tending stock and milking cows. Must have no bad habits. Send references. No. 198. b

Farm hand wanted for general farm work. No. 199. b

Man wanted to help with care of live stock and for general farm work. No. 200. b

Will give \$120 a year, board and washing to a man who can do general work on a farm. Month's trial preferred. No. 201. b

General farm hand required. Must be good plowman. No. 202. b

I would like to engage a suitable man at once. Must be capable of doing all kinds of farm work. No. 203. b

Young man wanted to help on farm. Must be able to put his hand to anything, plow, work in woods, cut wood and milk. Steady job for honest man. Hillsdale Jersey Stock Co., Truro, N.S.

Man capable of doing general farm work, milking included, required. Good home to suitable man. No. 182. b

Man wanted to work on farm; single, between 23 and 30 years of age; must be used to all kinds of farm

work. Wages \$150 a year, including board and washing. No one who drinks or smokes need apply. Good references required. No. 183. b

### Situations Wanted.

Position wanted as gardener and to assist in caring for stock by married man with small family. Good references. No. 208. a

Young man, 25 years of age, weight 160 pounds, wishes a position on a farm for the winter. Always lived on a farm and understands taking care of stock. No bad habits. Good references. Wages expected, \$10 a month and travelling expenses. No. 221. a

Wanted position of farm foreman before spring. Good references given. No. 186. b

Situation wanted on farm by man 40 years of age, strictly temperate and not afraid of work. Married. Understands farming in all its branches. No. 187. b

An experienced poultry man wishes a position as manager of a poultry farm. Has had a large business experience. State terms and length of engagement in writing. No. 188. a

Wanted foreman's place on farm by farmer's son, married, age 33. Will take \$250 with house and ½ acre of land. No. 189. b

An experienced man wants place on stock farm. Has managed a cheese factory for 5 seasons as cheese maker, taught school for two years and had charge of grain elevator. Good recommendations. 27 years of age and unmarried. No. 190. b

Position wanted as farm manager or working foreman. Am 35 years of age, single, brought up on a farm, had life experience in farm work, and am accustomed to care of horses, cattle and swine. Have farmed for 12 years on my own account with good results and am accustomed to taking charge of men. Am handy with carpenter's tools. Wages \$25 a month, board, washing and lodging included. Good references.

### Domestic Help.

Situation wanted as working housekeeper for bachelor or widower, by middle-aged woman. Good references supplied. No. 228. a

Situation wanted by married woman, 28 years of age with one child, 6 years of age. Good cook, well acquainted with housekeeping and dairy work. No. 226. a

**N.B.—Where no name is mentioned in the advertisement apply to F. W. Hodson, giving number of advertisement.**

## Raising Good Calves Economically.

(Continued from last issue)

### FEEDING CALVES WITHOUT MILK.

We have seen that dairy calves can be successfully raised on skim-milk and whey, provided that proper attention and care are given to certain important particulars, and that the standard of the equivalent of the butter fat in whole milk is made to correspond to that of the butter fat. It now remains to be seen how calves can be raised without any milk at all except perhaps for the first week, while the mother's milk is getting into a normal condition.

**HAY TEA.**—The oldest method known of retaining calves without milk and one that is practised with good success at the present day is by means of hay tea. Good clover hay which has been cut early is taken, cut  $\frac{3}{8}$  of an inch long, and boiled for one-half hour. Three pounds of hay are allowed for each calf. After the hay is boiled the short hay is placed on a wire-cloth sieve and strained, while the flaxseed and middlings to be mixed with it are put into the kettle with the hay extract and boiled to a jelly. Two gallons of the tea in which  $\frac{1}{4}$  pound of flaxseed and  $\frac{1}{4}$  pound of wheat middlings have been boiled are given each day to a calf 30 days old.

At the end of 60 days the wheat middlings are increased to  $\frac{1}{2}$  pound per day. The boiling extracts the soluble nutritive constituents of the hay and this extract contains all the food elements required to make the animal grow and is, moreover, as digestible as milk.

Gains per day of 2 pounds per head and over have been reported in calves up to 2 months old that were fed on the extract of tea, flaxseed and middlings. To ensure success, however, the hay must be well cured, bright and of good quality, and the tea be fed at a temperature of 90 or 92 degrees F. Very often the extract is weak in albuminous and fatty matter on account of being made from late, cut or poorly cured hay, or the mistake is made of adding too much water. Under the circumstances it is not surprising if the calves do not make a good, healthy growth.

The hay tea can be fed to calves until they can do without it, its place being then taken by pasture, or green feed in the pen. Some discontinue it when their calves are 3 months old, but continue the oil and bran in a dry state all the summer; or these can be mixed with water if this is considered advisable. The steeped hay after the is extracted is greedily eaten by horses and cattle, but of course, much of its goodness is removed in the boiling. For older animals, however, this loss might be replaced by other feed substances if a shortage of hay renders it necessary to feed the hay from which the tea was made. The hay tea can

be profitably fed in conjunction with a little sweet skim-milk for a time, should there be a sufficiency of the skim-milk to warrant this.

**ALTERNATIVE FOODS.**—A porridge made of oil meal, shorts and brans, to which fine oatmeal is added as soon as the calf grows a little, has been the medium by which many good calves have been raised. It should, like other milk substitutes, be fed at a temperature of not less than 90 degrees.

**OAT EXTRACT.**—A correspondent of *Hoard's Dairyman*, who is a medical man, had conducted some experiments in the line of substitutes for milk for calves. Taking as his principle the benefits conferred on dyspeptics who use extracts of malt, he prepares an extract of oats which he has found very beneficial for feeding calves. He gave whole milk for a week and then commenced mixing the oat extract with the milk. At the end of another week the calf received nothing but the extract. This was made by soaking oats for forty-eight hours, then the water was drained off and they were allowed to sprout. The experiment was carried on in winter and the oats were spread out in a shallow pile on the cellar floor where the furnace was. They were turned once or twice a day till all were well sprouted, then dried quickly without cooking, when they were fit for use. A gruel of oil-meal was then made and after this was cooked below a cooking heat, half as many oats by weight as the oil-meal used were added and the mixture allowed to stand in a warm place for eight or ten hours. It was then boiled in order that all the nutriment should be thoroughly extracted and afterwards it was thinned to the consistency of milk. Ten pounds of oil-meal and five pounds of oats make one hundred pounds of this artificial milk, which has exactly the same chemical composition as skim-milk, which it resembles in appearance, except that a glucose is substituted for lactose. When it is desired to veal calves ten pounds of this malted flaxseed with five pounds of oil-meal, or ten pounds of malted sunflower seed with five pounds of cotton seed meal for each 100 pounds of weight of mixture would make, so the correspondent asserts, a liquid akin in chemical composition to new milk.

A number of dairymen, especially in the United States, utilize corn-meal in conjunction with hay-tea, oil-meal, middlings, or fine oatmeal. In some parts the comparative cheapness of corn is a great temptation to the farmer to use it more extensively than he should. As stated above, it is an excellent food to be used in moderation for calves intended for veal, or eventually as beef, but any heavy feeding of it to dairy calves is liable to result in their accumulating flesh in after years, instead of devoting their energies to the production of milk. In the late winter and spring finely-cut mangels are an excellent food to give calves in

addition to their other rations. If a little fine strip is put into the calf's mouth it will soon learn to eat and like it and the roots will be a great help to digestion.

### MR. NESS' METHOD OF FEEDING.

Mr. Robt. Ness, Howick, Que., has kindly furnished us with his method of feeding calves without milk which we give in his own words: "In raising calves without milk there must be particular attention given to them even more than to milk fed calves, as they are not usually so robust and fat. Still they can be raised more economically and profitably, more especially dairy stock. I feed them on their mothers' milk until about two weeks old. I then begin by putting in some porridge for a feed or two; each feed after that I give less milk and add more water, always keeping it as near the new milk heat as possible. Shortly after they are three weeks old they can live on porridge and water and do well. In the meal line for some time I have used Ewing's Calf Meal with very good results. It is composed chiefly of flax seed meal. It should be mixed first in a little cold water, then scalded. Add cold water until it is about the temperature of new milk. When the calves are about five weeks old I begin mixing the calf meal with some cheaper meal such as barley meal, and some shorts or wheat middlings. This makes a very good drink. I teach them to eat dry grain just as soon as possible, giving ground oats and barley with good clover hay. This is a preventive as well as a nourishment in case of their scouring. When they are about three months old their porridge, if any is needed, can be made of barley meal alone. I always feed each calf separately and give them as much as they should have, feeding in pails, which must be perfectly clean as well as their pens. In this way one can raise very good calves with a profit, if the milk can be disposed of to advantage. As soon as I have good after grass I get the calves on it."

(To be Continued)

### The Bulletin.

The Farmers' Institute Bulletin has been published and sent to the secretaries. It was found necessary to make some change in delegates just before publication. Mr. J. G. Davidson, of Collingwood, will not go out in January and February, and his place will be filled in Div. 10 in January by Mr. C. W. Nash, 105 Waverly Road, Toronto. In Div. 6 Mr. J. E. Orr, will occupy Mr. Simpson Rennie from Feb. 5th to 27th inclusive.

Mrs. Catterson—What a pity you have no children. Mrs. Hatterson—I don't know. If I did have, I wouldn't be able to take such an active part in the Mothers' Congress.

# The Farm Home

## Santa Claus on the Train.

On a Christmas eve an emigrant train  
Sped on through the blackness of night,  
And cleft the pitchy dark in twain  
With the gleam of its fierce head-light.

In a crowded car, a noisome place,  
Sat a mother and her child;  
The woman's face bore want's wan trace,  
But the little one only smiled,

And tugged and pulled at her mother's dress,  
And her voice had a merry ring,  
As she lisped, "Now, mamma, come and  
guess  
What Santa Claus 'll bring."

But sadly the mother shook her head,  
As she thought of a happier past;  
"He never can catch us here," she said,  
"The train is going too fast."

"O, mamma, yes, he'll come, I say,  
So swift are his little deer,  
They runs all over the world to-day—  
I'll hang my stocking up here."

She pinned her stocking to the seat,  
And closed her tired eyes,  
And soon she saw each longed-for sweet  
In dreamland's paradise.

On a seat behind the little maid  
A rough man sat apart,  
But a soft light o'er his features played,  
And stole into his heart.

As the cars drew up at a busy town  
The rough man left the train,  
But scarce had from the steps jumped down  
Ere he was back again.

And a great big bundle of Christmas joys  
Bulged out from his pocket wide;  
He filled the stocking with sweets, and toys  
He laid by the dreamer's side.

At dawn the little one woke with a shout,  
'Twas sweet to hear her glee;  
"I knowed that Santa would find me out;  
He caught the train, you see."

Though some from smiling may scarce refrain,  
The child was surely right,  
The good Saint Nicholas caught the train,  
And came aboard that night.

For the saint is fond of masquerade,  
And may fool the old and wise,  
And so he came to the little maid  
In an emigrant's disguise.

And he dresses in many ways because  
He wishes no one to know him,  
For he never says, "I am Santa Claus,"  
But his good deeds always show him.  
—Henry C. Walsh.

## Preparing a Turkey for Roasting.

Singe off all small feathers left on the bird with a lighted paper, moving it quickly so as not to scorch it. It is an error to depend on this singeing to take away the feathers carelessly left in plucking. If any appear, pull them out; if singed out, an odor of burnt feathers will cling to the bird. Now commence to draw. Place the bird back downwards upon the table, cut a small slit in the skin of the neck, draw the neck towards you, cutting it off at the root. Then make a small slit in the tail-end

of the bird, and with the middle finger loosen the entrails, doing this carefully that you may afterwards have less trouble in drawing. Cut off vent and draw. Be careful not to break the gall bladder, for by so doing the bird will be ruined. With a clean cloth wipe out the inside, also the flap of skin at the neck, and should you accidentally break any part, it is only safe to wash the inside, drying it thoroughly with a clean cloth. Dip the legs in boiling water, scrape them and cut off claws; also the tips of pinions. It is now ready for trussing. Skewer the pinions by inserting the skewer through the first joint of the one on the right side (the middle of the leg being brought near to it), then through the body and through the pinion on the left. Fasten the skin over the neck, placing it over the back with a skewer. Now put a long skewer through the skin of the back, on the left side; then through the first joint of the leg and on through the leg on right side. Clean and wash gizzard, put it on one of the pinions and the liver on the other. Commence to draw the sinews. Break the leg bones close to the feet, hang the bird on a hook in the wall, the hook passing through the break you have just made. (It is best to have the hook above you.) Now, with all your strength, draw the sinews. This is a necessity, or the legs will be uneatable. This done, chop off the legs, cut off the neck near the back, just leaving enough skin to turn over it. Remove the crop, loosen liver, etc., at the neck end. Now cut off vent, remove gut and carefully draw. Wash and dry with a clean cloth, cut the breastbone through at both sides, close to the back, and flatten it with the rolling pin. Firmly skewer the pinion at the right side through the bird until you reach the other. Press the legs close to the body, skewer at first and second joints. Proceed to stuff, skewer over flap of skin, also that at neck. It is now ready for cooking.—*Ideal Cook Book.*

### TO GENERAL OTIS.

A Georgia citizen who has a son fighting in the Philippines has addressed the following rhymed note to General Otis:

"Ginral Otis,  
Please take notice  
Yonder, 'cross the foam,  
We need field hands  
In these here lands—  
We're wantin' Billy home.

"He's fit an' fou't  
Fer nigh about  
Six months thar, 'cross the foam;  
We jest won't mention  
Any pension  
If you'll send Billy home."

—Frank E. Stanton, in the *Constitution*, Atlanta.

## When Father Was a Boy.

Say, when my daddy was a boy he nefer done  
a thing,  
He allus told the truth an' nefer even owned a  
sling!  
Because his mother didn't want ter have him  
rough an' wild,  
An' kep' him in the house ter be a model of a  
child.  
Why, boys then studied all the time, an' never  
stopped ter play,  
They nefer said they'd rest jus' now an' work  
some other day,  
An' none of 'em 'u'd spring a joke an' none of  
'em annoy,  
An' everything was perfick when my father  
was a boy.

My fother nefer thought of such a thing as  
skippin' school,  
But allers went, an' acted nice, an' nefer broke  
a rule.  
The boys they didn't play baseball, an' didn't  
even swear,  
An' in their cloze their mothers couldn't nefer  
find a tear.  
Why, when the cirkis came ter town they didn't  
cut an' go,  
An' so they wusn't punished for they didn't  
like a show;  
They worked an' worked an' plodded on an'  
nefer cared fer joy—  
So everythin' was peaceful hen my father  
was a boy.

I don't see how he ever lived ter tell the lone  
some tale,  
I should 'a' thought he'd died or else been  
swallowed by a whale,  
Er something orful happened ter him 'cause  
he was so good,  
An' did the things he orter do, in just the way  
he should.  
The rest of 'em have all fell off, an' now  
there's only one,  
An' I have heard but nefer seen the noble  
things he done;  
The perfikt ways in which he'd all his energies  
employ,  
Ter win some golden medal—when that  
feller was a boy.

—Paul Krugero.

## Old-Fashioned Country Games.

O, we'll chase the buffalo,  
O, we'll chase the buffalo,  
We'll rally through the canebrake,  
And chase the buffalo!

This refrain, so familiar to the old-time boys and girls, doubtless sounds like wild western gibberish to the boys and girls of to-day. Yet ask grandfather, sitting there in the cosy corner by the kitchen fire, if he remembers a game called "Chase the Buffalo," and see how his eyes will light up and a flush of pink steal into his withered cheek! "Chase the Buffalo"? Why, my dears, we used to play it at every corn-husking and apple-paring and sugaring-off when I was a boy. Remember it? Well, I should say so! "Chasing the Buffalo" was the first game in which I ever had your grandmother for a partner, and after that I wouldn't have anybody else, nor she either!

How completely those dear, rollicking old games of grandfather's day have passed away! Occasionally we hear of "Drop the Handkerchief," or

"Button, Button, Who's Got the Button?" or perhaps "Copenhagen," that fascinating old kissing game with the outlandish name, but most of the old-fashioned, country games are not even a memory nowadays. They are utterly forgotten, and our young people, even in the back districts, do nothing but dance, dance, dance.

Probably not a boy or girl who reads this paper would know what to do first, if ranged in a row, the girls on one side and the boys on the other, for a jolly game of "Chase the Buffalo." But, as grandfather will tell you, the movement of most of these old-fashioned games, where the boys and girls stood opposite each other, was like that of a dance called "Virginia Reel." "Chase the Buffalo" was a very simple game—little more than an excuse for "pairing-off." Each boy's partner stood opposite him in the double row. Then the first couple would promenade up and down between the lines, while the other players clapped their hands and made the rafters ring with the song:

The boys can reap and mow,  
The girls can knit and sew,  
And we'll rally through the canebrake  
And chase the buffalo!  
O, we'll chase the buffalo,  
O, we'll chase the buffalo;  
We'll rally through the canebrake,  
And chase the buffalo!

"Now You're Married" was another favorite kissing game, very similar in simplicity and directness of action to "King William," only in this case the obligation to surrender your lips to the lord of creation was conveyed in the line:

"Now you're married you must obey;" and the girls usually obeyed without a murmur.

After the first couple had "chased the buffalo" three times, hand in hand, between the rows, they took their places at the foot of the line and the second couple began to promenade. So they kept the game going, each couple in turn, until the laughing players were ready for something else.—*Country Gentleman.*

**Ancient English Cookery.**

By Sarah Jackson, in American Kitchen Magazine.

"Elizabeth Tudor her breakfast would make  
On a pot of strong beer, and a pound of beef-steak  
Ere six in the morning was tolled by the chimes.  
O, the days of Queen Bess, they were merry old times."

Those were, indeed, the times of "cakes and ale," junketings, and merrymakings of all kinds, and one would scarcely believe what dainty dishes graced the tables even a century before Elizabeth's reign or how our most *recherché* dishes are to be found in the collections of recipes written out and not printed until much later. One is inclined to believe that a decadence of the art of cookery must have set in, say, in the days of the apotheosis of ugliness—the Georgian and early Victorian period.

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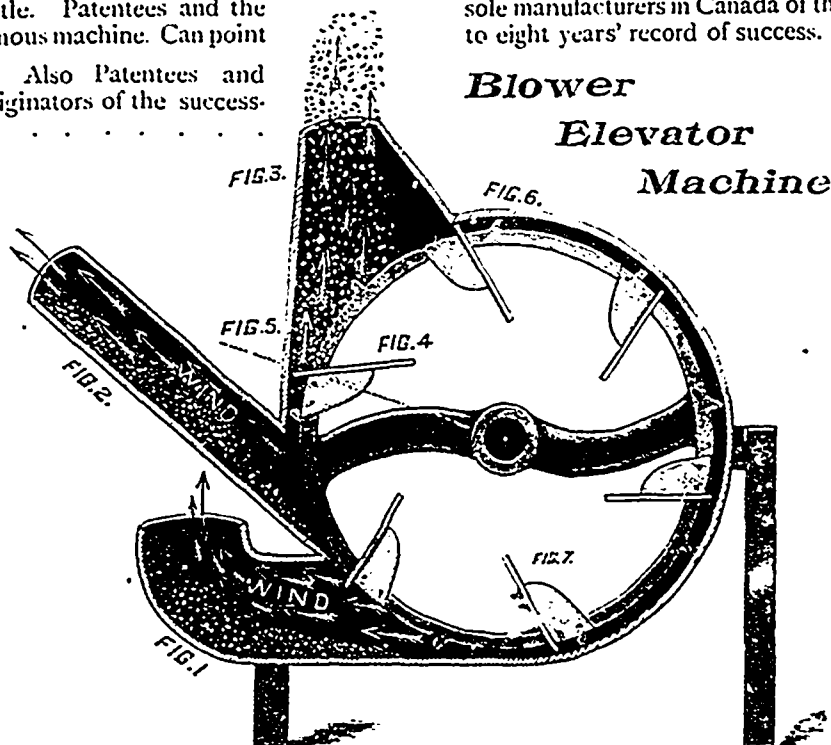
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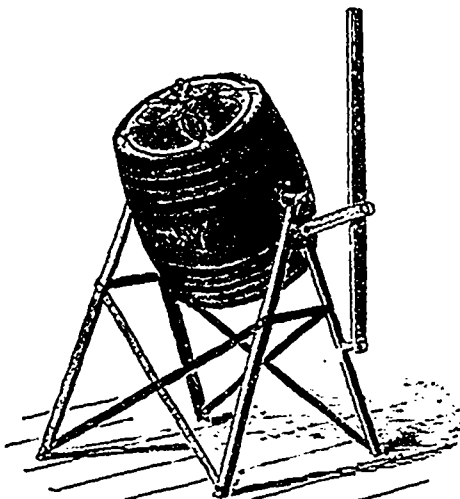
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It is scarcely credible that the national reproach of bad cookery can have been deserved when one contemplates the number of recipes collected and treasured by the dear, dead women of long ago. Truly, there are some that smack of barbarity, as, for instance, the following:

"At a Feste Roiall Pecokkes shall be dighte in this manere: Take and flece off the skyn with the fedurs, taylor and the necke, and the hed thereon; then take the skyn with all the fedurs, and lay it on a table abroad; and strawe thereon grounden comyn; then take the pecokke, and roste hym, and endore him with rawe yolkes of egges; and when he is rosted take hym of, and let hym coole awhile; and take and sowe hym in his skyn, and glide his combe, and so serve hym forthe with the last cours."

One can well imagine "good Queen Bess" appreciating the splendor of such a dish at one of her royal banquets, and to this day a similar one, or at least a roast peacock decorated with its tail feathers, glorifies the banquet at the Guildhall on Lord Mayor's Day, while at Christmas and other ceremonials the same dainty graces the royal table of our times; connoisseurs, however, declare that, as regards flavor, the gorgeous bird does not compare favorably with the more homely yet toothsome guineafowl.

I select another recipe from the same source as the foregoing, which shows that in the days of our forefathers the fashion of vegetables plain boiled in water did not obtain, for this is how they dressed their cabpages:—

**CABOCHES.**

"Take caboches, and wasne hom in cleue water; and boyle hom wel, and at the second boyle take hom down off the fyre, and presse hom wel tyl the water be cleue oute and then cutte hom in grete peces, and caste hom in the broth of beef, and seth hom up with maribones (marrow bones), colour hom then with saffrone and thikke hit with grated bred; but for a lorde hit schal be thikked with yolkes of eyren (eggs) beten, and then let ones boyle, and serve hit forthe."

The curious spelling is as interesting as the recipes themselves. Many times a word recurring a second time

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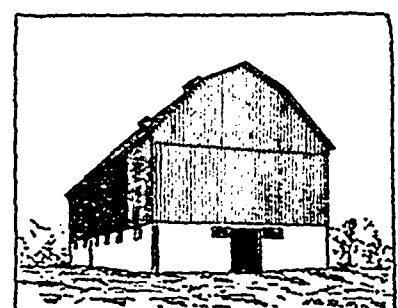
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is spelled differently. By omitting the saffron and substituting butter for the marrow, this dish would be brought up-to-date and might figure on any table, unless considered too rich.

**Carnegie's Advice to Young Men.**

1. Never enter a bar-room, nor let the contents of a bar-room enter you.
2. Do not use tobacco.
3. Concentrate. Having entered upon a certain line of work, continue and combine upon that line.
4. Do not shirk; rather go beyond your task. Do not let any young man think he has performed his duty when he has performed the work assigned him. A man will never rise if he acts thus. Promotion comes from exceptional work. A man must discover where his employer's interests lie and push for these.

The young man who does this is the young man whom capital wants for a partner and son-in-law. He is the young man who by-and-bye reaches the head of the firm.

5. Save a little always. Whatever your wages, lay by something from them.

6. Never speculate. Never buy stocks or grain on margin.

7. Never endorse. When you enter on business for yourself never indorse for others. It is dishonest. All your resources and all your credit are the sacred property of the men who have trusted you. If you wish to help another give him all the cash you can spare; never indorse. It is dishonest.

**AN EDITOR'S LUCK.**

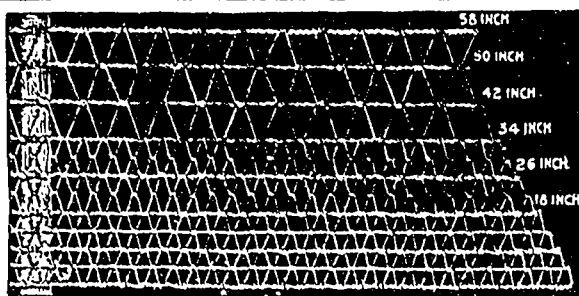
Society Reporter — Mrs. Skihigh complains that the picture we printed does not look a bit like her.

Editor—That's lucky. We can use it for some one else then.—*New York Weekly.*

**ONE FEAR FOREVER BANISHED.**

"I am in mortal terror!" exclaimed the agitated maiden, who was preparing to elope. "If the horses should whinny we are lost!"

"Horses!" said the waiting lover, tenderly reassuring her. "Darling, it is an automobile!"—*Chicago Tribune.*



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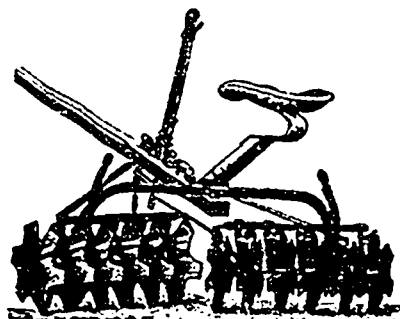


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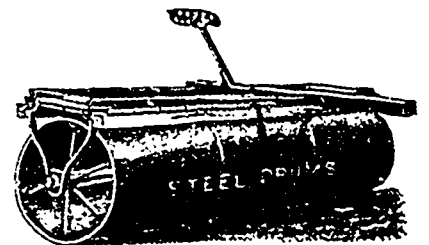
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Managing Director, D. T. McAINSH  
Editor, J. W. WIKATON

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FARMING,  
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TORONTO.

## Ontario Poultry Show.

The 26th annual show of the Ontario Poultry Association will be held in the Market Hall, Peterborough, Ont., on January 9th to 12th next. A large prize list is provided, including a number of special premiums. The annual meeting of the Association will take place on Thursday, January 11th, at 1.30 p.m., for the election of officers and transacting general business, which, it is hoped, will be done in a more expeditious manner than last year, especially if prominent speakers are to address the gathering. Thos. A. Browne, London, Ont., is Secretary of the Association, from whom all information regarding railway rates, application forms, etc., can be secured.

## Toronto Poultry Show.

The Poultry and Pet Stock Show to be held in Toronto this week promises

### Madame Roy's IRON-ARSENIC TABLETS

(With Tansy and Pennyroyal)

Prepared from the original French formula. Nature's Sure Tonic for Women. The only infallible tonic and monthly medicine. \$1.00 a box, six boxes for \$5.00.

THE MADAME ROY MEDICINE CO.,  
411 1/2 Parliament St., Toronto.  
(Canadian Agency).

### New and Novel, a Sight Seller.

### BIG MONEY FOR AGENTS

Combination  
**WRENCH AND JACK**  
for Buggies, Carriages & Light  
Wagons. Removes and grasps  
burr while  
PRICE \$1.00 Jack acts as continuation of axle, supporting  
wheel and leaving spindle clear for oiling.  
No lost washers. Agents write for special prices.  
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**LIGHTNING WELL MACHY**  
IS THE STANDARD  
STEAM PUMPS AIR LIFTS  
GASOLINE ENGINES  
WRITE FOR CIRCULAR  
THE AMERICAN WELL WORKS  
AURORA ILL CHICAGO DALLAS TEX

YOU CAN MAKE 12 TO 20 PAIRS PER DAY

## Klondike Knitter.

YOU CAN GET 10, 15, & 20" PER PAIR.

ATTACHMENTS

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MACHINE

ALL FOR \$20.00

FREE AGENTS WANTED

ADDRESS: CREELMAN BROS., GEORGETOWN ONT., CANADA.

INSTRUCTION BOOK

SET UP

MAJOR

Good for  
**\$3.00**  
With Order.  
Send to us with Balance in Cash.  
FOR  
Power Knitting Machines  
AND  
Visible Writing Typewriters  
write us. Catalogues Free.  
(Cut out, send to us.)



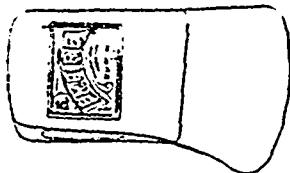
## "Good Cheer"

...RANGES...

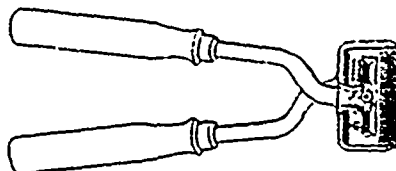
We have a pretty Book-Mark ....It's yours for the asking.

The JAS. STEWART Mfg. Co. Limited,  
Woodstock, Ont.

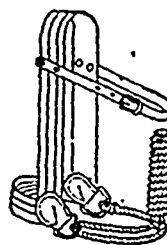
# Seasonable Needs AT REASONABLE PRICES



Magnificent value in Axes from 19c each upwards.



A guaranteed Horse Clipper for 98c.  
A good Horse Singe for 25c.



Halters and Headstalls, good heavy sical leather, 3 for 25c.

Splendid heavy Leather Headstalls, with leather shank, special value at 75c.

### Cattle Chains



A splendid variety of the best makes and styles, at 10c each and upwards

Mail Orders receive prompt attention at . . .

## RUSSILL'S AT THE MARKET

159 KING ST. EAST, TORONTO

to be one of the best shows of its kind ever held here. The entries in all classes are unusually large, there being nearly 2,000 fowls, 500 turkeys, 300 geese, besides a large number of ducks, pheasants, canaries, pigeons, cats, etc. The show will be held at 56 to 58 King street west, Toronto. It is expected that His Excellency the Governor-General will extend his patronage to the show.

#### Canadian Jersey Breeders.

The annual meeting of the Canadian Jersey Breeders' Association will be held in the board room of the Albion Hotel, Toronto, on Saturday, Dec. 30th, commencing at 10 o'clock. It is urgently requested that every owner of a Jersey cow be present, as matters of special importance will be discussed.

#### Successful Institute Meetings.

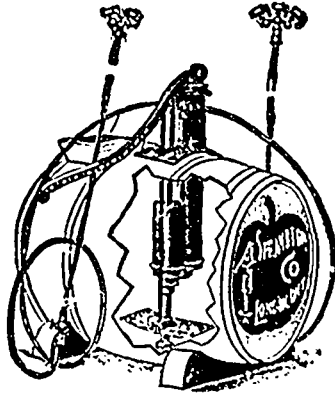
The following report of Farmers' Institute meetings, held this month in Eastern Ontario, is very encouraging, and shows that the interest in this important work is growing:

H. J. Clendinning, of Manilla, Victoria county, and W. C. Shearer, of Bright, Oxford county, were the delegates. They attended meetings at Iroquois and Morrisburg, Dundas county, which were largely attended, and the discussions were interesting and beneficial to all those present. Meetings were also well attended in Stormont, Cornwall, G'engarry, Russell and Prescott counties. The subjects most in demand were: "Grasses for Permanent Pasture," "Growing Corn in Hills or Drills for the Silo," "Feeds and Feeding," illustrated with charts; "Building Up and Maintaining a Dairy Herd," "The Hog and Export Bacon Trade," "Cost of Cementing Stable Floors," "The Farmer's Vegetable and Small Fruit Garden," "Raising Pure-bred Poultry on the Farm," and "The Poultry Export Trade." At Vankleek Hill a two-days' meeting was held, and the interested crowds numbered up in the hundreds. Each address drew forth intelligent and useful discussions, and the officers declared it to have been the best held since they became an institute ten years ago.

#### A Valuable Sweepstake Prize.

The Raymond Sewing Machine Co., of Guelph, with progressive enterprise, very kindly gave to the Fat Stock Association one of their new, and latest improved national cream separators, as a sweepstake prize for the best fatted animal at the show. This is a prize that any farmer could appreciate, not only because of its artistic design and finish, and of its market value, but because it is a prize that will be of great practical use to the winner. By its use, 10 to 25 per cent. more butter is made from the milk than by any system of gravitation, which

## 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 at 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.

Sixty-eight outfits are in use by the Ontario and Dominion Governments for experimental work. Adopted by six American and European Governments.

Certificate of Judges' Award.

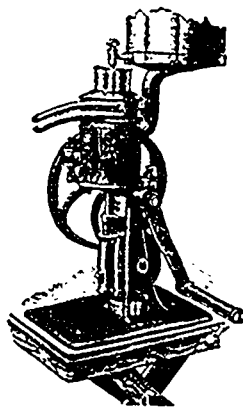
THIS IS TO CERTIFY that at the Contest of Spraying Apparatus held at Grimsby, under the auspices of the Board of Control of the fruit experimental stations of Ontario, in which there were eleven contestants, the Spramotor, made by the Spramotor Co. of London, Ont., was awarded First Place.

Agents Wanted.

H. L. HUTT, H. PETIT, Judges.

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

## Another Grand Victory at the Iowa State Convention FOR



# Alpha DeLaval

Out of 154 Separator made butter entries, 145 were **Alpha DeLaval**

First prize and Grand Sweepstakes went to A. G. Armstrong Collins, who was owner of a **DeLaval** Machine.

You might as well try to make water run up hill from natural gravity, as to try to make any "hollow-bowl" Separator do the work of an Alpha Disc Machine.

Anyone who has the slightest conception of the principles of centrifugal separation, knows that no human agency can accomplish such a result. This is where the **Alpha DeLaval** differs from all others.

Full particulars and information with catalogue for the asking.

## The Canadian Dairy Supply Co.

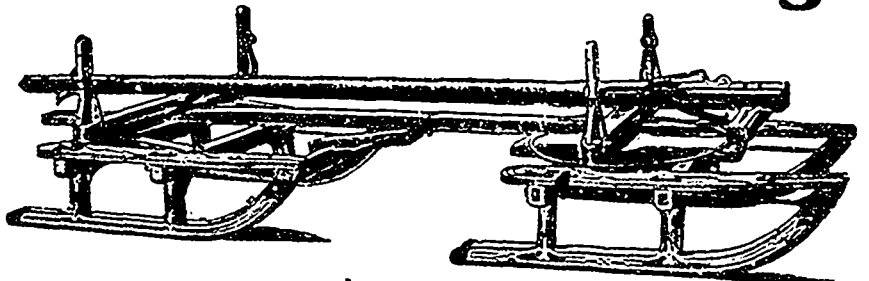
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# The Speight

Improved Ontario

## Two \* Bench \* Sleigh



—Adapted for General Farm Work  
—in all parts of Ontario.

2-inch Runner, 2x½ Steel Shoe.

Full Circle and Bolster Plates, Clips on Benches.

Log Bunks and Clevises Furnished Extra if Required.

Width between Bolsters 40 and 42½.

Write us for Prices and Terms.

## The Speight Wagon Co., Markham.

Toronto Warehouse, 102 FRONT E.

means 10 to 25 per cent. profit in dollars and cents.

The Centrifugal Cream Separator is certainly a great invention, and a good investment for farmers having five or more cows, for by its use, more butter is made, and the warm, sweet skim-milk is more palatable, and digestible than when fed cold or sour to young stock. And being designed for every day use on the farm, no wonder it is becoming so popular a machine among farmers, because it is a labor-saving and money-making machine, not in the harvest, but in all seasons of the year alike.

Mr. H. Smith may well feel proud of his white steer that has won for him the National Cream Separator.

**Sugar Beet Seed for 1900.**

The Ohio Experiment Station has further been assured of a limited supply of sugar beet seed to be imported from Europe by the United States Department of Agriculture for experiments in Ohio in 1900. In view of the great difficulty in securing a good stand of beets in 1897 and 1898, by the late planting that late seed distribution made necessary, it has been suggested to try planting the beets much earlier. It is hoped in this manner to get the beets started before the dashing rains and hot sun of May and June. It seems to be advisable to try planting late in March and in April, just as soon as the ground can be well worked after fall or winter ploughing and subsoiling which should now be done. With the sugar beet it is advised to follow the custom of onion growers and aim to secure germination before the crusting of the soil by the rain and sun which is so liable later. It is not believed that frost danger is greater with due care than the danger just stated for late planting.

The Ohio Experiment Station is now ready to receive applications for sugar beet seed intended for planting in 1900.

Application cards are mailed to growers with this announcement and

**Farmers,  
their**

Your spare time can be very profitably used in a genteel money-making diversion right at home.

**Sons and**

We want your services, and will pay you liberally for the time you spend in the interest of our work.

**Daughters**

If you are interested in making money, write

**J. L. NICHOLS & CO.**  
33 Richmond Street West,  
TORONTO, CAN.

Cut this out.

**THE McLAUGHLIN CARRIAGE CO**

THE McLAUGHLIN CARRIAGE CO  
No. 202, Jarvis "A Young Man's Cutter"

**ONE GRADE ONLY AND THAT THE BEST**

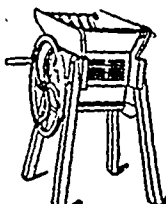
**OSHAWA ONTARIO**

McLaughlin Carriages and Sleighs  
are Always Reliable.

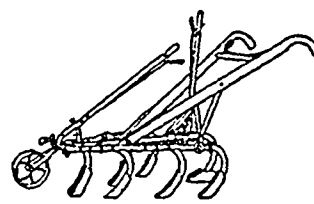
Never the cheapest—  
—Always the best.



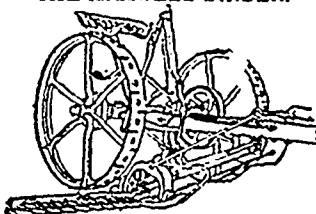
THE MAXWELL BINDER.



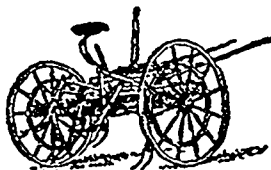
ROOT CUTTER.



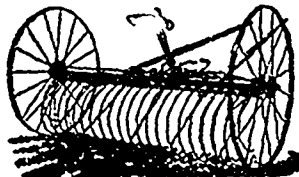
SCUFFLER.



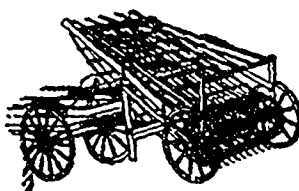
THE MAXWELL MOWER.



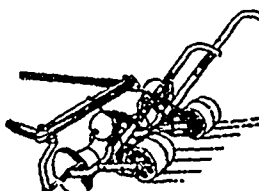
TEDDER.



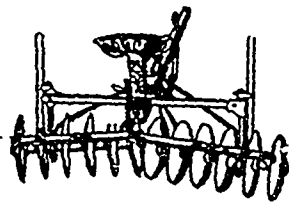
STEEL HORSE RAKE.



LOADER.



TURNIP SOWER.



DISK HARROW.

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ST. MARYS, ONTARIO, CANADA

MANUFACTURERS OF BINDERS, MOWERS,  
REAPERS, HAY RAKES, HAY TEDDERS,  
HAY LOADERS, SCUFFLERS,  
DISK HARROWS, TURNIP SOWERS, ROOT  
CUTTERS, WHEELBARROWS, ETC.

RESPONSIBLE AGENTS WANTED IN ALL  
UNOCCUPIED TERRITORY.

will be sent to others upon postal card request.

It is the purpose to send out the beet seed in March, 1900. The amount sent any person will be limited to 12 pounds.

Address, Experiment Station, Wooster, Ohio.

### Tuberculosis.

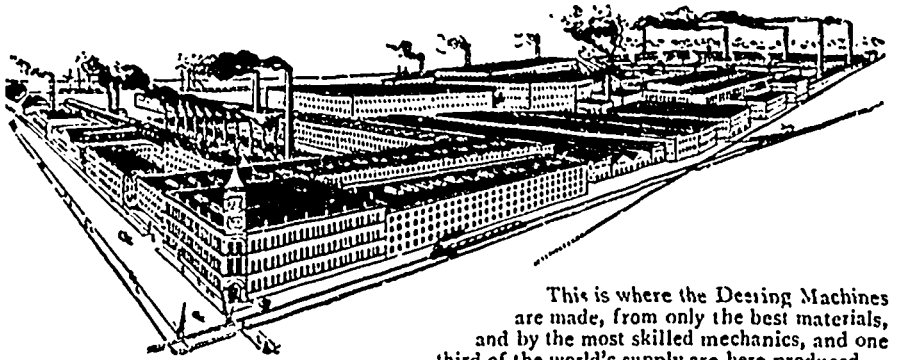
In a lecture by Dr. Norner-Halle reported in *Milch Zeitung*, he gives the following causes as weakening the constitution and predisposing the cows to the above disease:

1. Continuous existence in small, poorly-ventilated and crowded stables.
2. Insufficient food and the use of a large quantity of offal from breweries and distilleries.
3. Forced milk production.
4. Those cows that have narrow chests and a weak constitution.
5. By frequent changing the position of the cows, which is done in stables where the fresh milking cows and the dry ones are arranged in groups.
6. Inbreeding.
7. Animals, the parents of which have tuberculosis. They are not born with the disease, but have little powers of resistance against the germs.
8. When the calves are kept in close and poorly-ventilated quarters, and not given exercise, the lungs are not sufficiently developed and succumb easily to the disease.
9. The great development of the creamery system, whereby the skim-milk is mixed before returning it to the farmers. [This danger is overcome in Denmark by the compulsory heating of the skim-milk at creameries to 185°, and the burning of the separator slime which contains most of the germs.]

### The Size of Eggs.

Because eggs are usually sold by the dozen, regardless of size, a great many people believe that it is not necessary to consider size, so they are eggs. The market price is generally so much per dozen without regard to size. We know of some prudent and thoughtful housewives who, knowing this, carefully sort the eggs before taking them to market and keep the larger ones at home to use in their own kitchens. The woman who has eggs of several sizes in her poultry yards is sensible in doing this so long as all are sold by the dozen rather than by the pound. When eggs are sold by the pound, or as potatoes are sold, then it will pay breeders to consider size. Potatoes are sold according to quality, size being one of the points, and those with the little ones left in will not sell for as much per bushel as those that are carefully sorted. The same would be true of eggs if dealers would demand it. A grocer could, if he would, have two or even three prices for eggs, and he would if he sold them as potatoes are sold. If consumers would

## The Machines that Made America Famous



This is where the Deering Machines are made, from only the best materials, and by the most skilled mechanics, and one third of the world's supply are here produced.

IT PAYS TO USE DEERING MACHINES

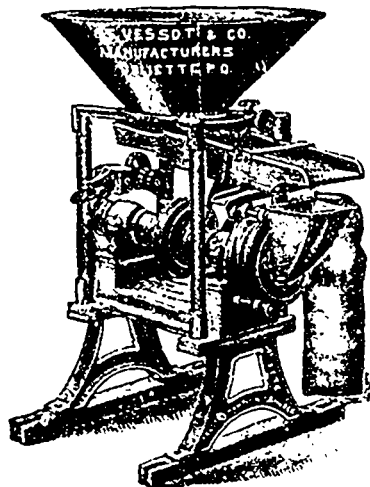
## Deering Harvester Company

Main Office and Factory:

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Permanent Branch Houses:

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## Ahead of Them All

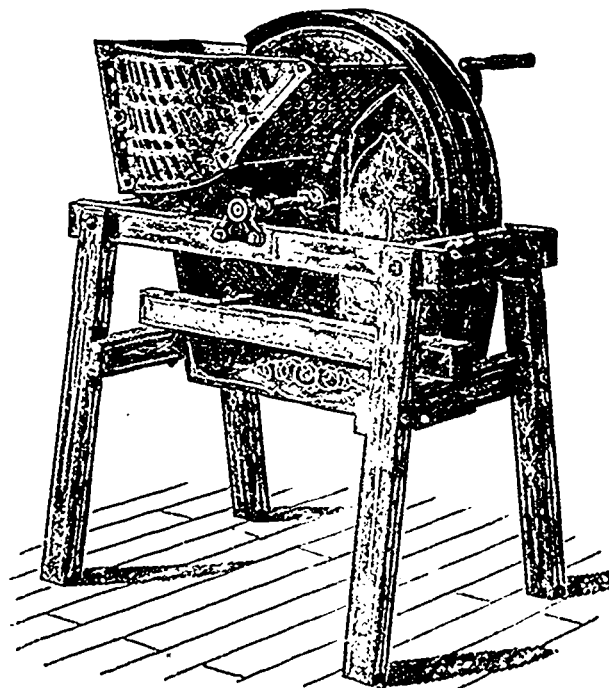
### The Champion Grinder, Model '99

is the most improved grain grinder; it is strong, compact, simple and durable; large surface bearings, automatic oilers, and sand-cleaning device.

Made in four sizes.

Write for Catalogue.

**S. VESSOT & CO.,**  
Joliette, P.Q.



New Root Cutter (Palper and Slicer combined)

**THE  
NOXON  
CO.**  
(LIMITED)  
Ingersoll, Ont.

MANUFACTURERS OF  
**HIGH-GLASS  
FARM  
IMPLEMENTS**

Please write for  
Price List and Descriptive Catalogue

insist on eggs of a certain size and and would take no small eggs at large egg prices, it would not be a great while until eggs would be sold according to size or weight. A few years of such methods would make a radical change in the business.

It is not always the prolific layer that lays small eggs. A thorough weeding of hens that lay small eggs and keeping only the prolific layers of large eggs will soon be noticed as beneficial. —*The Homestead.*

### Stock Notes

**FINE YORKSHIRES.**—Mr. L. Rogers, Cooksville, is receiving encouraging acknowledgments of sales made proving very satisfactory. Mr. C. O. Hess, Glenmillar, writes: "Pigs arrived all safe and sound, very well pleased with them." And from Mr. E. D. Richardson, Beeton, who writes: "Boar arrived all right and am well satisfied. He is the best ever was in our neighborhood of his age."

Mr. Rogers has a prize yearling boar "Pride of York," weighing 710 pounds. Intending buyers would do well to see him. He also has some large Yorkshire thoroughbred English type, choice boars and sows 70 to 80 pounds for \$8 each, also sows in farrow. Parties desiring good types of Yorkshires could not do better than secure some of Mr. Rogers.'


**CHOICE AYRSHIRES.**—A. Hume & Sons, Munro, Ont., writes: We have had the best season in our history and our stock of 46 head have gone into winter quarters in good condition. The milch cows are doing well and our young stock is the best we have ever put into the stable. We are now through with our grand stock bull "White Chief of St. Anne's" whose breeding is well known to Ayrshire men, dam "White Floss," sire Glencairn III. (imp.) The most of our choicest young things are sired by him, hence the reason we have had to purchase another bull. Among these young bulls we offer are prize winners at Toronto and Kingston, and are fit to head any herd. We also offer special bargains in our pigs, which we guarantee of good quality and breeding.

**PURE-BRED STOCK FOR RUSSIA.**—Messrs. Alfred Mansell & Co., livestock exporters, Shrewsbury, England, recently made an important shipment of pure-bred stock to Russia. The shipment consisted of 52 Clydesdale and Suffolk horses, 10 bulls and heifers, 24 Shropshire and other rams and 6 ewes and ewe lambs. This stock was purchased from some of the leading breeders in Great Britain.

**A GOOD DEMAND.**—C. R. Decker, Chesterfield, Ont., writes:—My Berkshires are doing well. Have about 30 head. Have added 4 head to my herd, three choice sows and one very fine stock boar, sired by Baron Lee, bred by N. H. Gentry, of Sedalia, Missouri. I find that when feed is dear and and pork cheap a great many farmers are looking for Berkshires, as they say they are easier fed and the most profitable breed. The demand has been good considering the price of pork. The following are some of my recent sales: Donald McDonald, Sutton West, 1 boar; J. S. Cowan, Newry, Ont., 1 boar; N. P. Moyer, Jordan Station, Ont., 1 boar; Joseph Granger, Woodslee, Ont., 1 boar; R. J. Logan, North Glanford, Ont., 1 sow in farrow; W. H. Smith, New Hamburg, Ont., 1 sow in farrow; J. Shantz, Plattville, Ont., 1 sow in farrow; Leonard Kirby, Picton, Ont., 1 boar; D. Hamilton, Harriston, Ont., 1 sow; H. T. Leader,

Be sure to mention **FARMING** when writing to advertisers.

**TOLTON**  
**NO. 1 DOUBLE ROOT CUTTER**



**Points of Merit :**

1. To change from pulping to slicing is but the work of a moment.
2. There are two separate wheels, one for pulping and the other for slicing.
3. The united force of both wheels is always used in doing the work in either capacity.
4. The hopper is between the wheels, and does not choke.

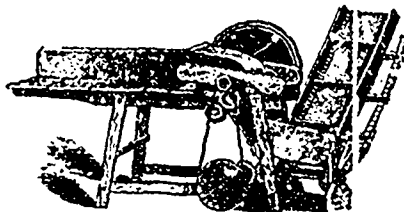
**THE ONLY DOUBLE ROOT CUTTER MANUFACTURED.**  
Fitted with Roller Bearings, Stool Shafting and all that is latest and best in principle, material and construction.

**TOLTON BROS., - - GUELPH**

*Just a Few Left*

# Lancaster Feed Cutters

(PATENTED)



No blow, no exaggeration. They do their work and do it well. While in consequence of the automatic "quick stop" appliances, the life of the operator is as good as insured, and the liability of breakages reduced to a minimum.

#### WHAT THE PEOPLE SAY

Glen Roy, Ont., Dec. 10th, 1895.

The Lancaster Machine Works,

Gentlemen.—I take pleasure in testifying to the many merits of the excellent Feed Cutter and Elevator (No. 11 size), purchased from you last summer. I do not know wherein it could be improved, as it does all that you claimed for it and that to my entire satisfaction. I ran it with a two-horse tread power, and could cut corn as fast as six good men could handle it. It would easily do thrice as much if sufficient power were used, for it runs very light. The fact that the elevators can be worked at any point within three-quarters of a circle, places it ahead of all competitors. The principle upon which the carriers run is unequalled. The friction apparatus works like a charm. Wishing you the success which the machine justly merits.

Yours truly,

JOHN D. McCORMON.

## Lancaster Machine Works

### LANCASTER, ONTARIO

N.B.—Cattle and Hog Feeding Troughs, clean, healthful and durable.



## SCHOOLS.

## HAMILTON.

# CANADA BUSINESS COLLEGE

Hamilton, - - Ontario.

The leading Canadian Business College. Connected with over a thousand business firms through its graduates. For beautiful prospectus

Write—R. E. GALLAGHER, Principal.

## STRATFORD.

Winter Term opens Jan. 2.

## Central Business College

STRATFORD, ONT.

A large advertisement is not necessary to tell you that we have the best commercial school. Get our catalogue. It gives you full particulars. In one month 34 of our recent students notified us that they had taken good situations. We have a staff of nine male teachers.

W. J. ELLIOTT, Principal

## TORONTO

# Situations

In the business field are constantly opening to those who are qualified to fill them.

THE

## Central Business College

TORONTO

received these calls for help within three days from Oct. 30th.—Bradstreet's Agency, lady, stenographer; H. H. Williams, Real Estate, young man, clerk and stenographer; J. D. King & Co., lady, stenographer; Gowans, Kent & Co., lady, bookkeeper; King, Darrell Produce Co., young man, bookkeeping and stenography. Our students secure such places as soon as they become qualified for them. It will pay to prepare for them. Correspondence invited.

W. H. SEAW, Principal

Plattsville, Ont., 1 sow in farrow; John Wright, Chesterfield, Ont., 1 sow in farrow; T. Gosney, Miami, Manitoba, 1 sow in farrow; J. S. Currie, Collingwood, Ont., 1 boar; A. L. Currah, Bright, Ont., 1 sow in farrow; Geo. A. Hyde, Shakespeare, Ont., 1 boar.

### Publisher's Desk

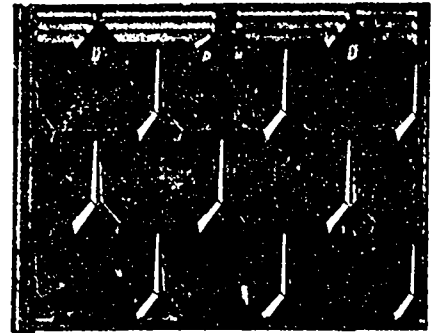
**Acetylene Lighting.**—We are living in a wonderful epoch of discovery and invention. Event follows event with such rapid succession that we no sooner begin to wonder at one than we are overwhelmed by the startling splendor of another. Not since the edict went forth "Let there be light" and the great Monarch of the skies started on his journey dispelling the darkness, has man's effort to produce an artificial light been so successful. The recent discovery of acetylene has given to the world an artificial light far superior to any other artificial light and only equalled by actual sunlight. The spectrum of acetylene is practically the same as the solar and almost equal in quality. It is a pure white light, and colors under its rays appear as by daylight. It has great energy of diffusion, which combined with its wonderful softness, make it the most beautiful artificial light in existence. Its already extensive use in so short a time is the best proof of its superiority and points to it as the coming light.

## DANGERS.

Acetylene gas is not so poisonous as coal gas, being practically free from carbonic oxide. It will not suffocate or asphyxiate. If much is breathed, it causes nausea and awakens the individual. There is no more danger from explosion than from other illuminating gases, excepting that on account of its richness the percentage of air required to form an explosive mixture covers a wider range. There have been some explosions with acetylene, but for the most part they have been due to carelessness. These accidents have been so masqueraded before the public by enemies of acetylene and those having pecuniary interests at stake, that the false impression has gone out that acetylene is too dangerous for illuminating purposes. But, despite all this, it is rapidly supplanting other lights by its *par excellence* and adaptability to the private house, the business house, the factory, church, or hall. But explosions are not confined to acetylene alone. Only last year an explosion occurred at the Capitol Building at Washington, which destroyed priceless records, besides damaging the building to the extent of about \$25,000. We could enumerate numbers of other explosions and fires from other gases. Acetylene is so wonderfully adapted for use in private houses, as well as all business houses and factories, that its growth, no doubt, will be marvellous. We may have something to say regarding its manufacture and use in the near future.

# Eastlake Shingles

GALVANIZED OR PAINTED  
Will suit you better  
than others.

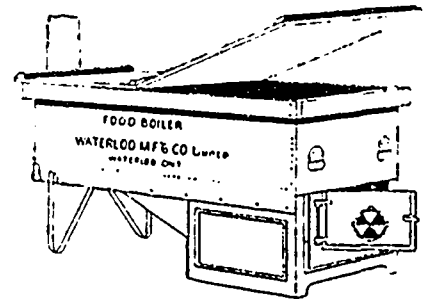


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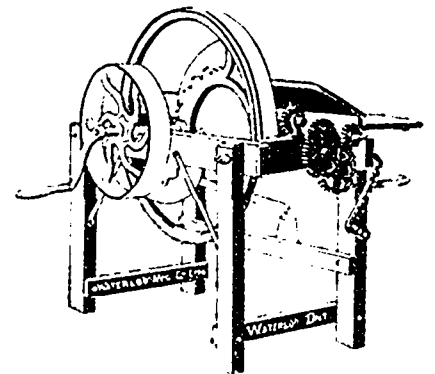
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# Market Review and Forecast

Office of FARMING,  
Confed. Life Building,  
Toronto, Dec. 18th, 1899.

This is usually a quiet period in wholesale circles. The year's business, now that there is a little time to look over it, has been most satisfactory. Travellers from all parts of Canada report general business in the most prosperous condition. Payments continue to be made in a very satisfactory manner. Money continues firm and yet there seems sufficient for all legitimate purposes. There is a good demand for call loans.

## Wheat.

The wheat markets show no material improvement over a week ago. In fact, there is very little new to report. The week opened with a somewhat easier feeling in most leading markets, while towards the close a little better feeling prevailed owing to higher Liverpool cables. The following is the Montreal *Trade Bulletin's* London cable of Dec. 14th:

"The market since my last cable has been firmer and higher, owing to lighter stocks and a better demand; parcels of No. 1 Manitoba hard have sold on the Baltic at 28s. 6d. to 29s., making an advance of 6d. to 9d. on the week."

Trading at Chicago has been of the speculative kind and a general indifference prevails. Reports from the Argentina have been somewhat conflicting, though it is expected that the crop will be saved in good condition. The movement of winter and spring wheat continues light.

Trading has been light at Montreal. The final crop report for Manitoba places the total yield of that province at 27,922,230 bushels, an average of 17.13 bushels per acre. This shows that actual yields have been less than was anticipated. Red winter wheat is quoted at Ontario points at 65 to 65½c. high freights. The market here is easier at 65c. for red and white west; goose, 69c., and spring wheat at 64c. east. On the Toronto farmers' market red and white bring 68 to 68½c.; spring five, 68 to 69c.; and goose, 69 to 72c. per bushel.

## Oats and Barley.

English markets for Canadian oats are easier. At Montreal business is quiet, though there is a fair enquiry. Oats are duller here at 25 to 26c. west. On the farmers' market here oats bring 28½ to 29c. per bushel.

The barley market continues dull at Montreal. No. 1 is quoted at 50c., No. 2 at 48c., and feed barley at 46 to 47c. per bushel. The market here is quiet at 38c. for No. 2 west, and 35 to 36c. for feed. On the farmers' market barley brings 42 to 43½c. per bushel.

## Peas and Corn.

Like other grains, peas are not brisk. The Montreal market is reported steady at 57½c. f.o.b. for export. The market here is steady at 57 to 58c. west. On the Toronto farmers' market peas fetch 60c. per bushel.

American corn is quoted here at 40c. on track in car lots.

## Bran and Shorts.

Ontario wheat bran sells in Montreal at \$15 to \$15.25, and shorts at \$16.50 to \$17.50, and Manitoba bran at \$14.50 to \$15 in car lots. City mills here sell bran at \$14 and shorts at \$16 in car lots f.o.b. Toronto.

## Eggs and Poultry.

The English market for Canadian eggs continues steady with stocks light. There is a better demand for new-laid stock at Montreal, with quotations at 22 to 22½c. in large lots, they being 21 to 23c. in cases. Receipts

are moderate here with prices steady, at 19 to 20c. for new-laid, and 15 to 16c. for held stock in large lots. On the Toronto farmers' market new-laid bring 30 to 35c. per dozen.

There is a good demand at Montreal for choice large dry-picked turkeys at 9½ to 10c. per lb. Chickens are in fair demand at 7½ to 8c. for choice dry-picked, geese, 6½ to 7c., and ducks 8 to 9c. per lb. Receipts have not been heavy here. Chickens are quoted at 25 to 50c., ducks at 40 to 60c. per pair, and geese at 6 to 6½c., and turkeys at 8½ to 9½c. in large lots. On the Toronto farmers' market, chickens being 40 to 75c. and ducks 60 to 80c. per pair; geese, 6 to 7c., and turkeys, 9 to 11c. per lb.

## Potatoes.

These are quiet at Montreal, where they bring 45 to 50c. per bag in car lots. Prices are somewhat nominal here at 38 to 40c. in car lots. On the farmers' market they bring 40 to 50c. per bag.

## Apples.

Since the decided slump in prices a few weeks ago the English apple market has shown a decided improvement, some choice quality of King's selling as high as 22s. to 23s. at Liverpool. Some choice Greenings have brought 16s. 3d. and Baldwins 17s. 6d. per bbl. Account sales have shown to \$2.25 and \$2.50 per bbl. at Ontario points. While this has been so with fine quality some serious losses have been sustained on poor warty fruit. Some cables of the week give 15s. to 22s. as quotation according to quality and variety. Apples at Montreal are unchanged at \$2.75 to \$3.50 for No. 1, and \$1.60 to \$2 per bbl. for No. 2. Apples have not been in very brisk demand here, where quotations are \$1.75 to \$2.50 per bbl.

## Hay and Straw.

The general hay market keeps steady, without any advance in values. In some localities in Western Ontario there is a great scarcity of feed on account of the drouth, and farmers will not have any hay to spare, and many will have to buy. In one locality as high as \$14 per ton is being paid for hay. Montreal prices are \$9.50 to \$10.50 for No. 1; \$7.50 to \$8 for No. 2 and \$7.50 for clover for baled hay. There is a steady demand here for hay at \$8.50 to \$9.75 in car lots on track. On Toronto farmers' market hay brings \$11 to \$12; mixed hay, \$8 to \$9; sheaf straw, \$8 to \$9, and loose straw, \$4 to \$5 per ton.

## Seeds.

The seed market are quiet. On Toronto farmers' market red clover brings \$4.25 to \$5; alsike, \$5 to \$7, and white clover, \$7 to \$8 per bushel.

## Cheese.

The cheese market is as firm as ever. The English dealer is no longer hanging back, and is more willing to pay holders' demands. The English market has advanced a shilling, and holders are firm at 60 to 61s. for finest Ontario Septembers colored, and 59 to 60s. for do. white; finest Quebecs, 58 to 59s.; fine, 55 to 57s. Sales have been made at Montreal of finest westerns at 11¾ to 12c. for Septembers, 11¾ for Octobers, and 11½c. for Novembers. The New York market is

also strong. The local Ontario markets have now closed down for the season.

## Butter.

There is a decidedly better feeling in the butter market, owing to improved cable reports. The *Trade Bulletin's* London cable of December 14th reads thus: "There has been a decidedly firmer market, despite liberal imports from Australia, and under a good demand prices have advanced 3s. to 4s. on the week, choice Canadian creamery selling at 10½s. to 10¾s. and fancy well-known brands 10½s. to 110s.; fine 9½s. to 10½s." Several sales of choice creamery have been made at 22 to 22½c. at county points. At Montreal, as high as 22½c. has been paid for choice quality. Exporters, however, claim they can pay no more than 21½c. for export. The market is 1c. higher than a week ago. There is a firm demand at Montreal for fine dairy butter at 17½ to 18½c., and 19c. for prints in large lots. Prices continue firm here, with a steady demand. Good to choice dairy tubs bring 16 to 18c., and pound rolls 19 to 20c. and large rolls 18 to 19c. per lb. in large lots. Creamery butter in boxes brings 21 to 22c. and prints 22 to 23c. per lb. On Toronto farmers' market lb. rolls bring 20 to 25c. per lb.

## Wool.

Canadian fleece continues firm. Toronto prices, as reported by James Hallam & Sons, are: Fleece wool, 15 to 16c.; unwashed fleece, 9 to 9½; and pulled wool, 15 to 16½c. per lb.

## Cattle.

Good prices continue to be obtained for really prime, well-finished beef cattle, suitable for export and the Christmas trade. At Chicago, during the week, some fancy Christmas beeves sold at \$8.50 per cwt., while the poorest quality sold at only \$4.30. There is a very valuable lesson in this for all cattle feeders and breeders. Cables have been firm and American markets active. On Toronto market on Friday there was a fair run of live stock. The quality of the fat cattle was hardly as good as earlier in the week, but several fine exporters and Christmas cattle were offered. Trade was good for the best, but other grades were slow of sale at 15 to 25c. per cwt. decline. Several large dealers had got their supplies earlier in the week, and were therefore not on the market to buy, which made things less active than the day previous.

**Export Cattle.**—Choice lots of these sold at \$4.75 to \$5 per cwt., while light ones sold at \$4.25 to \$4.50. Heavy export bulls sold at \$3.80 to \$4.75, and light ones at \$3.25 to \$3.50 per cwt.

**Butchers' Cattle.**—Choice picked lots of these equal in quality to the best exporters, weighing 1,000 to 1,100 lbs each, sold at \$4.25 to \$4.40. Choice picked lots of heifers and steers for the Christmas trade sold for \$4.25 to \$5.12½ per cwt. Good butchers' cattle brought \$3.70 to \$4; medium, \$3.40 to \$3.60; common, \$3.10 to \$3.30; and inferior, \$2.75 to \$2.90 per cwt.

**Feeders.**—There were a number of farmers on the market on Friday looking for heavy feeding steers. Choice well-bred steers weighing 1,050 to 1,200 lbs. each, were scarce and prices firm at \$3.85 to \$3.85, and \$4 for a few



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NATIONAL SUPPLY CO., 46-50 West Larned St., Detroit, Mich.



short keepers. Rough steers of the same weights sold at \$3.40 to \$3.60 per cwt. Light steers, weighing 800 to 900 lbs. each, sold at \$3.20 to \$3.40 per cwt., and bulls at \$2.75 to \$3 per cwt.

**Stockers.**—Yearling steers, 500 to 600 lbs. in weight, were easy at \$2.60 to \$2.75, with heifers and black and white steers of the same weight bringing \$2 to \$2.60 per cwt.

**Milch Cows.**—Prices were firm for these, ranging all the way from \$30 to \$50 each.

**Calves.**—These are in fair demand at Buffalo at \$7.50 to \$7.75 per cwt. for choice to extra, and \$7.25 to \$7.50 for good to choice. At Toronto market calves bring from \$4 to \$10 each as to quality.

#### Sheep and Lambs.

The Buffalo market is steady with an upward tendency. Receipts of Canadian lambs are falling off and it is expected that the bulk of these have been marketed. They were in good demand there on Friday on the basis of \$5.50 to \$5.60 per cwt. At Toronto market lambs sold on Friday at \$3.50 to \$4.12½ per cwt., with a few choice lots of ewes and wethers for exports at \$4.25 to \$4.50 per cwt. Prices were firm for sheep at \$3 to \$3.25 per cwt. for ewes and \$2.50 for bucks, butchers' sheep being \$2 to \$2.50 each.

#### Hogs.

The deliveries on Friday were large with prices steady. Best select bacon hogs, weighing not less than 160 nor more than 200 lbs. each, unad and unwatered (off cars) sold at \$4.37½; thick and light fats at \$4 per cwt. Unculled car lots sold at \$4.20 to \$4.30 per cwt., and Essex and Kent corn fed hogs at \$4.15 per cwt. As will be seen from the following quotation Buffalo prices for the same day are about on a par with prices here: "Heavy were quotable \$4.25 to \$4.30; mixed, \$4.25 to \$4.27½; Yorkers, \$4.25 to \$4.30; pigs, \$4.15 to \$4.25; roughs, \$3.50 to \$3.80; stags, \$3 to \$3.50." Prices at Montreal have advanced ¼ per lb. over last week at Montreal where packers are paying from \$4.25 to \$4.50 per cwt. The *Trade Bulletin* cable re Canadian bacon reads thus:

London, December 14, 1899.—The market has kept firm all week under light supplies, and values have undergone no change since my last. Pea-fed lean sides 39s. to 42s.

### Curious Mathematical Puzzle.

Following is a very curious puzzle. Try it, all of you.

Open a book at random and select a word within the first ten lines, and within the tenth word from the end of the line. Mark the word. Now double the number of the page and multiply the sum by five.

Then add twenty.

Then add the number of the line you have selected.

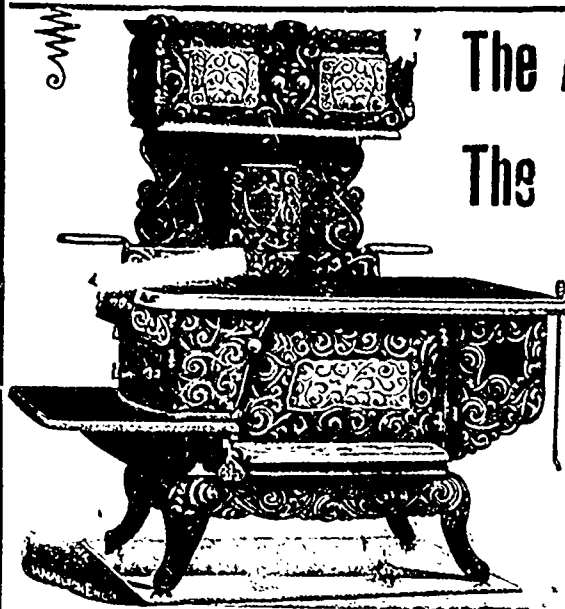
Then add five.

Then multiply the sum by ten.

Add the number of the word in the line. From this sum subtract 250 and the remainder will indicate in the units column the number of the word, in the tens column the number of the line, and the remaining figures the number of the page.—*Philadelphia Times*.

The man came out of an office building on the run and started down the street. "Here! Here!" cried the policeman on the corner. "What's your hurry?" "There's a man back there trying to sell me a book on twenty-eight weekly instalments of \$2.33 each!" cried the victim. The policeman instantly released his hold. "Run!" he cried. "Run like a white-head! Maybe you can get away from him yet."—*Chicago Post*.

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For Wood Only

**Comfort** because they're sure, quick and perfect bakers.

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And they're a handsome and imposing piece of furnishing for any home—beautifully mounted.

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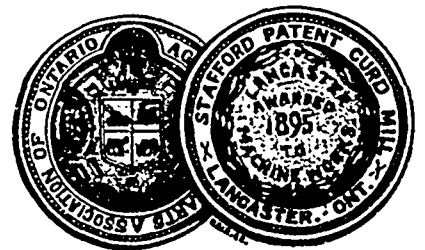
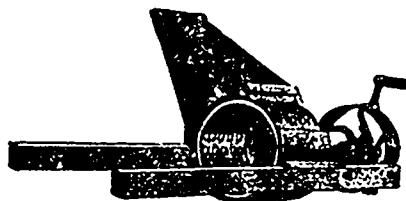
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This secret process of temper is known and used only by ourselves.

These saws are elliptic ground thin back, requiring less set than any saws now made, perfect taper from tooth to back.

Now, we ask you, when you go to buy a saw, to ask for the Maple Leaf, Razor Steel, Secret Temper Saw, and if you are told that some other Saw is as good ask your merchant to let you take them both home and try them, and keep the one you like best.

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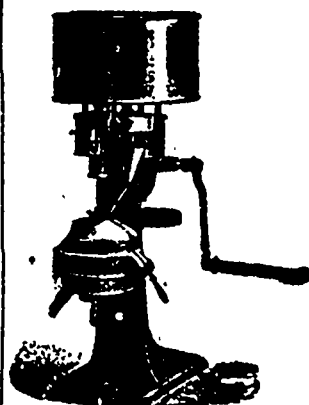
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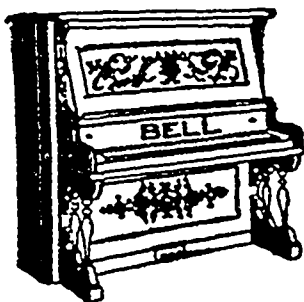
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