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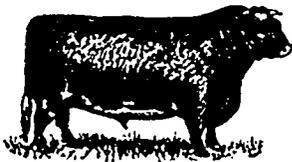
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RICHARD GIBSON, DELAWARE.

...LEADING TOPICS FOR THE WEEK...

Trade Returns. Export Poultry Trade. Sanitation in Cheese Factories. Tuberculosis and Veterinary Inspection. The Tuberculosis Scare. Our British Letter. Pound Butter Prints for the British Market. Report of the Western Dairymen's Convention. Wintering Colts. Smithfield Club Show. Inspector Miller's Report. Our Dairy Schools. Poultry for the British Market Questions and Answers. Stock Notes. Market Review and Forecast. The Ontario Agricultural Gazette.

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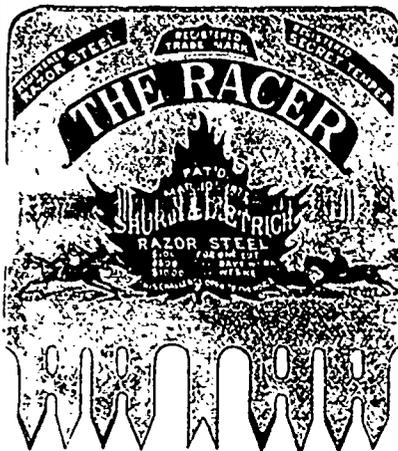
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FARMING

Vol. XV.

JANUARY 25TH, 1898.

No. 21.

FARMING

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TOPICS FOR THE WEEK.

Our Clubbing List.

We are pleased indeed to be able to offer the following low clubbing rates for FARMING with other publications:

	Regular price.	With FARMING.
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Family Herald and Weekly Star.....	1.00	1.75
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London Weekly Advertiser.....	1.00	1.40
Ottawa Semi-Weekly Free Press.....	1.00	1.60
Hoard's Dairyman.....	1.00	1.75
Rural New Yorker.....	1.00	1.85

Pound Butter Prints for the British Market

(From our Special Correspondent.)

LONDON, Eng., January 13, 1898.

Our imports of butter go on increasing merrily enough, and on this butter question I want to point out two or three things to those who have eyes to see and ears to hear.

Whilst it is perfectly true our imports of butter are increasing, it is none the less true that the public taste is getting educated to what good butter really is. Such being the case, it is undeniable that the complaints one hears on going about London and other parts of England in regard to French butter are more numerous than five or ten years ago. The fact is, whilst the best Normandy butter is a capital article, that which comes into second and third position does not have the hold it once had with us. I put this down chiefly to two causes. One of these is that the Danes and Swedes, by making a tip-top commodity, are developing the hold they have long had on the British public; whilst the other is that a second-rate blended butter, such as we get so much of from France, is bound to be found out sooner or later as being—after all is said and done for it—an inferior article. Another "cause" is that the British farmer himself is gradually making a better butter, and although it is not always of the same color (which it should be), it is, nevertheless, better than the particular blended stuff I am alluding to.

Now, you have some smart men in Canada, and I say to the "smart" farmers especially, "Keep your eyes and ears open these next few years." If this French butter, on the educated palate here, is beginning to pall, there is your opportunity,

seize it. The Canadian Government, I understand, is appointing—if it has not already appointed—officials over here to look after Canadian dairying interests. I throw out, therefore, the suggestion in question as one well deserving attention. We would, one and all of us—seeing that we are bound to import butter and other consumable commodities—rather purchase them from Canada and other loyal colonies than from European nations.

A good deal has been said by different people about how the butter should be packed. The Danes and Swedes send theirs to us in small casks, weighing about a hundredweight, and it is a thoroughly good article. The French send theirs—and it realizes the highest price, taking it all round—in boxes containing six to a dozen rolls. Each roll is two pounds in weight and, in point of color, it is very similar to a richish custard before the baking. I am not so sure that there is so very much in the roll being two pounds as distinct from one pound, unless the packing of the larger quantity is more convenient than the packing of the smaller, and on that point I am not an authority. I mention this particular phase of the matter, however, because the British people generally buy their butter in pounds. Now, it is nicer to buy a pound of butter in one roll, if possible, than a pound of butter cut off from a two pound roll, and, if good Canadian butter in pound rolls can be as easily packed and shipped as two pound rolls, it might be worth considering by your experts whether they will not make a reputation for their butter on the one pound roll system instead of copying the two pound roll system of the continent. You see I am anxious that there should be, if possible, something distinctively Canadian about what the Dominion farmers shall send us, because, once that is rammed well into the public—and quality will do it—the public eye will become associated with the pound roll in the shops and, in a measure, it will feel that in getting it it is really from Canada and not from Normandy.

I was over in France a few days ago, and whilst there I heard of some success attending the establishment of the co-operative system amongst the farmers of the Alps and of Provence which I should like to mention. The particular co-operative society in question was only established in 1895, with the modest capital of £880. After twelve months the capital was raised to £3,000, and at the present moment it is being largely increased. The society, or syndicate, consist of 5,000 members, representing eighty local syndicates that receive all their goods 20 to 30 per cent. cheaper than hitherto. The expenses of administration are less than 1 per cent. The parent society has twenty-five depots in different localities. All the profits, after the shares have been paid, and interest on them belong to the syndicate. In 1896-97 the total amount of its transactions was £40,000. It has sold 12,000 different kinds of implements and utensils and numerous other articles. Co-operation is almost a dead failure in Great Britain, though in every other country it is quite the other way about.

[NOTE.—The letter from our special correspondent in England contains a suggestion that it might be well for our exporters of butter and the Government to think about. Nearly all the butter that England imports arrives in tubs or casks. It will be difficult, of course, to move the conservative Englishmen out of the rut in this as in other things, and get him to take pound prints. But if the people buy by the pound and the pound prints can be supplied to them of as good quality as that

from a tub, we believe that it will only be a matter of a short time before there will be a great demand for the prints. In Toronto it was difficult at first to sell the pound prints because people thought they were made from packed butter, etc. Now they are preferred, and it is almost impossible to sell private parties a tub of butter for family use. The present print is so much more convenient. It will take a little time to establish a trade in pound prints. But we are opening up our market and why not have something distinctively Canadian about our butter trade? We like this idea of pound prints, and can see no valid objection or hindrance to its development. With cold storage in the creamery and in transit and with weekly shipments, there is no reason why it should not succeed.—EDITOR.]

Trade Returns.

The *Montreal Gazette* has compiled a very concise and valuable pamphlet showing the volume of export trade from the port of Montreal for 1897. All the steamship lines running from Montreal to British points report a larger volume of business and a more satisfactory season's work than for a few years back. This is almost conclusive evidence that Canada's trade is increasing and that an era of commercial prosperity has already set in.

Large gains were made in the exports from Montreal, more particularly in the shipments of wheat, corn, oats, rye, etc., while the decreases compared with last year are mainly seen in meats and fruits.

In the following table the shipments of the leading articles for 1896 and 1897 are compared:

	1897	1896	Increase
Wheat, bush.....	9,874,348	7,027,058	2,847,290
Corn, ".....	9,384,422	6,788,896	3,605,526
Oats, ".....	5,018,115	2,031,785	2,986,330
Pork, barrels.....	1,250	585	665
Eggs, cases.....	157,300	141,853	15,507
Cheese, boxes.....	2,102,985	1,726,226	376,759
Butter, packages.....	220,252	157,321	62,931
			Decrease
Meats, packages.....	98,798	228,752	129,954
Apples, barrels.....	168,448	725,010	556,568

Though the bulk of our exports go via Montreal, in fact, nearly all of some commodities, yet in some lines a considerable export trade is done from other seaports such as Quebec, St. John, Halifax and Charlottetown. With the shipments from these points added to those from Montreal our export trade will be considerably larger than the figures quoted. The Eastern Provinces are now exporting cheese direct, without sending it via Montreal. In Nova Scotia a large quantity of fruit is sent forward direct from Halifax.

Special reference is made to the cheese and butter trade. In cheese, there was an increase of 370,000 boxes from the 1st of May to the 20th of November in 1897, over the shipments for the same period in 1896, and 384,000 boxes over 1895. This shows a remarkable expansion of our cheese trade, and in some sections of the trade it is believed that there will be an over production very soon if the same rate of increase continues. There is no need, however, of taking any pessimistic view of the matter. It is a remarkable fact, and has been noted many times, that the cheese market is the most elastic of markets. When the supply increases the price drops. This causes a decrease in the output, and at the same time, an increase in the consumption of cheese, which tend to restore prices. We have had an instance of this during the past year or two. The season taken together has been a favorable one for the producer. During the earlier part of the season

high prices prevailed, which made up for the low prices of the fall makes. In 1897, on the cheese sent forward for the time as stated above, the farmers realized \$14,195,000, against \$11,625,000 for the same period in 1896, and \$10,264,000 in 1895. According to this statement, the producers have increased their business over two and a half million dollars in one year, and three million four hundred thousand in two years. This is a very satisfactory showing. When the complete returns are in from the other points of shipment for 1897, it is probable that the total value of the cheese output will approach seventeen million dollars.

The butter exports have not made as successful a showing as the cheese exports. During July, August and September, the expansion in the volume of exports gave promise that in 1897 the foreign trade in butter would be double that of the previous one. But this desired result was not obtained, and the increase in the number of packages was only 62,000 odd packages. The conditions of this trade, however, are reported to be very satisfactory, showing a return of two and a half million dollars for the season, or an increase of \$656,000 to the butter producers' revenue over that of 1896. Since September, the butter market has not been a very brisk one, the depression in connection with it commencing about the same time as with the cheese. Notwithstanding this depression, the profits to the producer have been greater than in 1896. The average price for 1896, was \$12 per tub of seventy pounds, as compared with \$12.25 for 1897. A business of \$2,000,000 is quite large, but it is very small as compared with the \$25,000,000 which Great Britain imports annually, and of which Canada should have a larger share.

The live stock export season of 1897, which ended November 23, was one of the most successful since 1890, as regards the volume of business, but probably one of the worst, if not the worst, in the history of the trade for the shippers' pockets. It is estimated by most of the prominent shippers that the average loss during the season was fully \$6 per head, and that exporters have lost in round numbers in the neighborhood of \$750,000. The reasons for this are given as being chiefly the Engineers' strike, which lessened consumption; the Jubilee celebration, which induced an extra supply; and the inferior quality of the stock sent forward from September to the close of the season, which had a depressing effect upon values on the other side, and shippers were obliged to stand the consequence. The total number of cattle shipped was 119,188 head, of which 12,171 head were United States shipped through in bond. These figures show an increase of 18,828 head, as compared with last year. The average cost per head is placed at \$60, which makes the total value \$7,151,280. The season opened with prices higher for export cattle than the market abroad warranted, the ruling price for stall fed at points of shipment being 5c. to 5½ cents, or fully ½ cent. higher than was paid in 1896. A striking feature of the trade is the number of stockers which have gone to the States, which will have considerable effect upon prices for choice stock next season.

Sheep exporters have shared the misfortunes of the cattle shippers. In May prices in England opened at 12½c. for choice stock and advanced to 13c., but declined to 8c. in July, and for the balance of the season ranged from 10c. to 11c. The shipments showed a decrease of 19,417 as compared with 1896, or only 61,254 head.

The horse trade was one of the most profitable to shippers, though the number sent over was less than in 1896 by 37 head. These cost from \$60 to \$100 at country points, and sold at an average of £20 to £36 per head. Some sales of fancy driving horses were made in London at prices ranging from £80 to £150.

All the great cereals show handsome gains, the most notable being wheat, corn and oats. The export poultry trade has increased, and when the season is over will show marked advance. Apples show a large decrease, over 500,000 barrels as compared with 1896.

Export Poultry Trade.

Canadian poultry is every year growing more in favor in Great Britain. The reports from the holiday trade this season have been very satisfactory and there is not the least doubt that if we only send over the right kind of fowls nicely dressed and put in packages suitable for the trade, the export trade for our poultry can be more than doubled in a very short time.

A lot of definite practical work is necessary, however, before we can accomplish any great results in this regard. In the first place our poultry raisers must have the right kind of poultry to begin with—a kind that will produce birds suitable for the English market. And then the poultryman must learn to fatten and prepare his poultry in the proper way. The trouble just now is, that there does not seem to be the right quality of stuff coming to market for the export trade. A Montreal dealer the other day stated that he had an order for from 20 to 50 tons of prime, fat turkeys, and he did not believe he could get 10 tons. This same dealer who has had large experience in the trade pointed out that there is big money in shipping poultry to England, not only during the holidays, but during February, March, April, May and June. These are the months when shipping poultry would pay best. The poultry could be put in cold storage as soon as the animal heat was out and would improve with age up to a certain limit.

What is required is good poultry for table use, and the farmer must be educated to select good birds for this purpose. Then the stock should be fed foods that will give the proper flavor, and the poultry should be dressed and fitted properly for the market. When this is provided we must give the English dealer to understand that we can supply him regularly with the kind of poultry he wants. With the poultry as with every other export trade we must be prepared to send over a regular supply, or all our efforts to build up a trade will be without avail. As a writer in the *Montreal Trade Bulletin* puts it, "This 'slapdash,' 'hit-or-miss' trade will not do."

Where are the farmers to get the kinds of fowls required, may be asked? This will not be difficult, as we believe that all the best breeds of poultry are kept by the poultrymen who make a business of it. There is, however, we think a tendency in many sections to breed entirely for show purposes and not as to suitability for the export trade. In fact, many of the poultry shows do not give as much attention to the market side of the question as to the fancy side in arranging the prize lists.

Tuberculosis and Veterinary Inspection.

A BREEDER EXPRESSES HIS VIEWS — VETERINARY INSPECTION A FAD.

Editor FARMING:

SIR,—“Veterinary inspection in regard to tuberculosis in cattle is becoming a nuisance, and it is time that something was done in the interests of the stockmen. Half a dozen more level heads along with the prudence and foresight displayed by Mr. Dryden in this matter and we would hear the end of this veterinary fad. The cattle of Ontario are healthy, our people are healthy, our food is of the best, and if those cranks who want to work up a job for themselves and a nuisance for others would begin at the right end of this matter the human family is the party to begin on. This would be much better than attacking our defenceless cows, and it might rid us of some of the humbugs who keep working up a fad that is so ridiculous that the most ordinary cattleman in the country could put all their efforts to naught. No man milks a diseased cow any length of time. She will very soon, if sick, show symptoms of sickness, and the milk yield will at once decrease and she could not be made a profitable cow to any man. Tuberculosis is now the predominant ailment with cattle if we would believe the vets. I have known four cases in widely separated places where tuberculosis was pronounced as the trouble. The first was simply a disordered stomach, and the animal did not react after being tested. An-

other young animal ate the twine out of its bedding every chance it got and it had to be bedded with hay. It was pronounced tuberculosis and failed to react. Another whole herd, whose owner thought, by reading so much trash as is printed and published on this subject, that his whole herd were affected, had them all tested, and not one reacted. Another case, a bull calf acted a little queer; its owner took the advice of the most eminent of our vets. Tuberculosis again, but it was not, and the calf (eight months old) was weaned and became as well as a calf could be. The milk and feed did not agree with him. We could go on showing the ridiculous nature of the fad those folks are nursing so well. Any fairly good cattleman can see trouble in his herd soon enough after it is there without meeting or trying to meet what is not there. As to cattle going from the United States to Canada or *vice versa*, there is nothing to hinder any one of ordinary intellect from passing almost the worst sort of a case if inspection were not well done, and even with close inspection ordinary cases of tuberculosis can be easily put through the test without any reaction. We hope the agricultural papers will keep their columns free from nonsense regarding this utter humbug. Just think of it, last winter that Toronto health officer made out that some cow had given the people on the farm consumption, and it turned out that the consumptive person had been on the farm long before the cow came, and the chances are that the man gave it to the cow. Another case came to our notice when a herd was tested, only two of the herd reacted, and those were two good cows for milk and butter that the owner always kept for the family use. Like a sensible man, he never stopped using the milk, for he had been using it for ten years and had raised a family of eight as healthy people as are in Ontario, and those two cows had done most of it and are still doing it. If I get the liberty to inspect the cow whose milk I shall use I will undertake to drink and use for an indefinite time, or long enough to prove that it is ridiculous nonsense saying that one will get tuberculosis from a cow that will react under the test. A clear udder, clear of lumps of any kind, and free of hard gatherings above the udder, and no swellings in her knee joints, her eyes full and healthy looking, and that will eat her feed three times a day as she ought to do, will give no one tuberculosis whether she reacts or not.”

STOCKMAN.

The Tuberculosis Scare.

As will be seen from the letter of "Stockman" in another column, veterinary inspection in regard to tuberculosis in cattle is exciting considerable interest among breeders. "Stockman" makes some pretty strong statements regarding the situation, and of such a character as would go to show that cattlemen have a serious grievance indeed. Though we do not believe, as he points out, that the system of veterinary inspection, as now practised, is operated for the purpose of giving our veterinarians something to do, yet, we do think, that as the laws now stand, our stockmen are being unfairly treated.

The chief difficulty seems to be with the law itself, and not with those who carry it into effect. As the law referring to contagious diseases now stands, the owner of a herd of cattle which reacts to the tuberculin test, though the Government may not order the cattle infected to be destroyed, is not allowed either to sell the milk from the infected cows, nor to dispose of the cattle for beef, under penalty of a fine of not less than \$200. In other words, he is forced to slaughter his own cattle, and lose their total value, even if they are apparently healthy and suitable for beef. This is unfair, and whether the Government order the diseased animals to be killed or not, the owner should be recompensed to some extent, if he is not responsible for their being diseased. If the Government ordered infected stock to be killed, the owner can claim compensation from the Government for his loss, but where stock are tested, and shown to be affected by tuberculosis, unless the Government order the stock to be killed they are not responsible, while the

owner of the stock is not allowed to make any use either of the milk product, or as beef, and consequently his affected stock are a total loss. This we think is unfair to the breeder, and that some legislation should be passed at the coming session of Parliament to remove the difficulty. If the law were so modified that animals which responded to the test, but were otherwise in good flesh, and apparently in good health, might be disposed of for beef purposes under proper inspection a large share of the present trouble would be overcome.

If the breeder were to blame for having tuberculosis in his herd the authorities would be perfectly justified in demanding that his herd be destroyed, if it were proven conclusively that the cattle were affected. But when the owner of the stock is quite innocent regarding the presence of the disease, it does seem unfair that he should go without some compensation for his loss. Laws are in force in regard to insects which injure fruit, etc., by which the owner of the trees destroyed is partially recompensed for his loss. Even the new law in regard to the destruction of the San Jose scale allows the owner of the orchard destroyed a compensation to the extent of one-fourth of the value of the trees destroyed. If it is right to recompense the owners of fruit trees destroyed in order to get rid of a pest, surely it is just that the stockman who suffers loss through the tuberculin test should receive some compensation.

Then again, it is open to question whether it is necessary to destroy all cattle which react to the tuberculin test. There are, no doubt, cases where an animal in ordinary good health will react to the test under certain conditions and not have a trace of tuberculosis. The person performing the test whether he be a veterinarian or not should be very sure of his ground when he gives orders that animals which react have the real thing.

In regard to veterinary inspection of herds supplying milk to the cities, we believe that it will not be many years before every large city in the Dominion will compel all those supplying milk for use by its citizens to have their herds submitted for veterinary inspection. Only recently the court decided that the law passed by the city of Winnipeg in regard to the inspection of the dairies supplying milk to the city was within its authority, and henceforth those supplying milk will have to submit to its regulations. Such a law may seem rather severe to many dairymen, but if they could visit some of the dairies near the outskirts of our large cities where cows are fed on brewers' grains and kindred feeds in the midst of surroundings that are anything but conducive to the health of the cows, they would consider that some kind of inspection, be it veterinary or otherwise, was absolutely necessary in order to ensure the good health of the citizens. Tuberculosis is now considered by the leading authorities to be more contagious than hereditary. Such being the case, an animal living in conditions that are not conducive to its good health is more likely to take the disease.

Our English Letter.

THE GOVERNMENT'S ACTION *re* THE QUARANTINE REGULATIONS MEETS WITH FAVOR FROM THE BRITISH BREEDERS.

(By Our Regular Correspondent.)

LONDON, Eng., Jan. 15th, 1898.

Your weekly issue of December 14th, 1897, contained the most important announcement in respect to live stock interests that has been made for a considerable time, it being none other than the removal of one of the great preventives of free importation from here of our pedigree cattle. Of course such a course as is now adopted could not be other than satisfactory to our breeders. But it must be equally so to your own farmers. The reason for this is clearly given in the same issue of your paper in the very able address given on the Beef Cattle Trade by Mr. John I. Hobson. That paper was one of not only interest but importance. A Canadian talking to Canadians, and thus without doubt being fully desirous of doing his best to promote Canada's welfare. There is no gainsaying

the fact that, no matter from whence it comes, this country must year by year increase its imports. Those imports will, of course, be of differential qualities, but to the finest and best the higher price will go. Hence it is for your breeders to determine which class they will send as the best or second rate. To succeed in supplying the former we are distinctly told by Mr. Hobson that they need fresh blood to renovate their herds. This is only as it should be. We take your beef; you take our pedigree stock. A still more satisfactory feature in respect to this announcement is that it signifies not only a theoretical, but that a practical and direct interest is taken in respect to the farmers' wishes and desires by those whose duty it is to legislate for the benefit of all.

The Southdown Society of England have recently taken steps of grave import. In the first place, Mr. W. W. Chapman, of Fitzalan House, Arundel street, Strand, London, has failed, after six years' continuous service, to secure re-election as secretary by a majority of one vote only in a large meeting of twenty. The council, however, fully, we think, recompensed Mr. Chapman for his loss of the secretarial office by making him an honorary life member of the society, with a seat in the council. Such a compliment as this is one no Southdown man will for a moment aver is not justly due to Mr. Chapman for his hard work during the long period he has been in office, and he has our hearty congratulations on his appointment. As to whether the course adopted by the society in changing its chief executive officer is right, time alone will show, but we are certainly of the opinion that there is every likelihood of the net result being a loss to the society. The second point was the adoption, by unanimous vote of the council, of a report of a committee appointed to consider and, if desirable, define certain defects that should debar otherwise good sheep from becoming prize-winners. The five points that were unanimously agreed to were as follows: 1st, Horns, or any evidence thereof; 2nd, dark poll; 3rd, blue skin; 4th, speckled face, ears and legs; 5th, bad wool; and, in addition to this, the council unanimously resolved that this report, as well as certain resolutions bearing thereupon, should be sent to all selected persons who are on the society's judges' list. For any society to take such definite action as this is a matter of importance. The need of some such definite and fixed rule is, however, plainly apparent to all who have watched the English show-yard award for the past few years. For the sake of the breed, and for the benefit of its breeders, we sincerely hope and trust that the judges of the future will enforce the recommendation of the report.

Sanitation in Cheese Factories.

We make the following quotation from the report of Mr. T. B. Millar, travelling inspector for the Western Butter and Cheese Association, presented at the London convention last week. Mr. Millar has for the past seven years acted as inspector for the Western Association, and during that time has visited nearly every factory in Western Ontario and many of them a score of times, and consequently is well able to speak in regard to this matter.

"I am sorry to report that the sanitary condition of a great many factories is far from being what it should be. In fact some of them are so bad that it is really alarming; poor floors and no drainage whatever, and with pools of rotten whey under the factory enough to create a disease. In such cases the curds are exposed to the worst forms of bacterial life, and who can tell what the result may be? As far as I am aware there is little or nothing being done to better this unsatisfactory condition of things. I would urge upon the directors of this Association to do their utmost to have sanitary inspectors appointed for the coming season with power to close such factories till they are made right."

In FARMING a few weeks ago we discussed this question and we are glad to have our views backed up by so good an authority as Inspector Millar.

There can be no question about it that the sanitary condition of many of the factories that are now engaged in making cheese is not what it should be. Those looking after the welfare of our dairy interests have a big task before them in regard to this matter. What the Associations should do is to agitate that the Provincial Board of Health should take this matter up and see to it that no factories are allowed to operate unless the sanitary conditions are right. By making the inspectors officers of the board of health they could visit factories and compel them to be closed unless the laws regarding sanitary conditions were complied with.

The enforcement of good sanitary laws is necessary both for the public health and for keeping up the quality of our dairy products. As Mr. Millar points out, these unsanitary conditions such as bad drainage, bad floors, etc., must affect the flavor of the cheese in the process of manufacture, and therefore, for the benefit of the cheese industry, something should be done. There is nothing to prevent any factory from having good sanitary arrangements. Only a little expense would be required to keep the drainage and floors perfect, and the surroundings of the factories clean. The difficulty is that the cost of production is being cut down so low that factories, whether owned by private individuals or by the patrons themselves, are loth to spend any more than they can possibly help. This is "a penny wise and pound foolish" policy.

Our Experimental Farms Commended.

In a recent number of the *Nineteenth Century Magazine*, the famous Russian scientist, Prince Kropotkin, contributes an article on "Recent Science." A good share of the article is devoted to a consideration of the scientific value of the experimental farms and agricultural colleges of Canada, which the Prince visited last summer while here attending the British Association. The views of so distinguished a scientist will be of great interest to the farmers of Canada. He likens the work on an experimental farm to a laboratory in the open air where the questions are put directly to nature. The experimental work, he claims belongs to the realm of experimental science and is conducted on a truly scientific basis by a small staff.

The Prince points out that the chief aim of these experimental farms seems to be to find out which varieties of the different grains, etc., give the best yields under the varying conditions as found upon the different farms. While this is the main object, the development of new varieties especially suited to each separate region was apparently better understood than in Europe where it had been so long neglected. He believes that many of the poor crops of Europe are due to simply a want of change of seed.

He feels sure that the time was rapidly coming when the Manitoba farmer with his wonderfully productive soil will have to study the question of manuring the land.

Another phase of the work on the farms that seemed to please him was the attention given to forestry, and the efforts that are being made to develop suitable trees for the prairies. He also points out that experiments are being conducted in British Columbia in the mountain slopes to find out how high up these slopes can be used for growing fruit trees successfully.

He mentions the good work done at the creameries on the Dominion farms and at Guelph, and points out that we are much ahead of the European agricultural experimental stations in our facilities for placing before the general public the results of experiments.

CANADA'S FARMERS.

We present this week the photo of a well-known stockman, Mr. Richard Gibson, of Delaware. For a sketch of Mr. Gibson's life and work we would refer our readers to the issue for March, 1897, where a very full account is given. Mr. Gibson has rendered good service to the breeders of Canada, in fact of America, both as a successful breeder and as an expert judge, and we are pleased to present him as one of Canada's Farmers.

BUTTER AND CHEESE ASSOCIATION OF WESTERN ONTARIO.

The new amalgamated association held its first annual convention at London, Ont., on Jan. 19th, 20th and 21st, 1898. The convention was a very successful one, both in point of attendance and interest. Never, at any previous convention, has there been such a large attendance of cheese and butter-makers. The past season has been a very good one for the maker. The make of cheese has been large, and as the maker manufactures by the cwt., his revenue has been larger than usual. This has enabled many of them to attend the convention this year, who otherwise would not have been able to do so. Besides, the interest in the annual convention has been increasing year after year. The cheese or butter-maker now feels that he cannot afford to remain away from the convention if he wishes to make the advancement in his business that he should. Every man in the business should feel the same way, the man who produces the milk as well as the man who makes it into cheese and butter. One feature of the convention was the comparatively small number of patrons of factories who were present. This is to be regretted, for if there is anyone who needs instruction and education in dairying it is the average patron of the cheese and butter factory.

The president of the association, Mr. A. F. McLaren, M.P., occupied the chair, and in his affable and considerate manner, contributed largely to the success of the convention. The Western Association has always taken the initiative in bringing new talent to its annual meetings. This year Dr. Jordan, director of the Geneva Agricultural Experimental Station, New York, was expected, but at the last moment telegraphed that he would be unable to be present. This was unfortunate, as Prof. Jordan's reputation had preceded him, and the dairymen were consequently disappointed because of his enforced absence. Mr. H. B. Gurler, of Illinois, however, was present and gave a couple of thoroughly practical addresses on butter-making, which were highly appreciated by the creamery men present. Other speakers who addressed the convention were Professors Robertson, Shutt, Dean, Dr. Connel, J. A. Ruddick, A. W. Campbell, Provincial Road Instructor, C. C. James, Deputy Minister of Agriculture, Toronto, and D. Derbyshire, Brockville. As many of these speakers were present at the Eastern Convention and delivered practically the same address, it will not be necessary to repeat what was given in last week's issue. In future issues we will publish in full some of the practical papers read before the convention.

The first afternoon session was taken up chiefly with the reading of the directors', secretary's, and instructors' reports and the president's address. In the directors' report it was pointed out that in March the former secretary, Mr. J. V. Wheaton, resigned, and was succeeded by Mr. Geo. Hately, Brantford, Ont. The instructors during the past year were T. B. Millar, Jas. Morrison, Alex. Clark. The applications for instructors were very numerous, showing that instruction was needed. The appointment of the butter instructor was made by the central

advisory board, and he acted as instructor for the whole Province. The secretary-treasurer's report showed that the total revenue was \$4,657.69, expenditure, \$5,849.15, leaving a deficit of \$1,191.46. It was recommended that efforts be made to have the annual report out earlier, so that it would reach the makers before the factories open, and that efforts should be made to improve the sanitary conditions in many cheese and butter factories. More instructors are needed, but unless the Government increase the grant or the factories pay more towards the support of instructors the association will not be able to do more than it is now doing.

The president's address was full of practical advice to every dairyman. He referred to the amalgamation, and believed that it had been in the best interests of the butter and cheese interests of Western Ontario. Many more factories were now making butter during the winter. He recommended the employment of a butter instructor all the year round. More instructors were needed for both butter and cheese. At least ten instructors were necessary to meet the needs for instruction in cheese factories, and a sufficient number of butter instructors were required to give each creamery at least three visits during the year. More work should be done towards getting a better flavored milk. He believed that no maker should be held responsible for the flavor of his cheese excepting where it could be proven conclusively that he was to blame. Every patron of a factory should be a member of the association. If this could be done the association would have ample funds for carrying on its work. He had during the past year visited every province in the Dominion. Dairymen in other provinces were watching the methods of the Ontario dairymen, and if we did not look out they would beat us in the production of fine dairy products. Canadians must not think that because they export annually 60 per cent. of the total cheese imported by Great Britain that we have nothing to do. Instructor Morrison visited 28 factories during the season, all of which returned the whey to the patron in the milk cans. Many of the factories were reported dirty. Instructor Clark visited 39 factories, two were clean, 19 fairly clean, and the balance dirty. Mark Sprague, butter instructor, besides visiting the summer creameries in the West, had spent the late fall in visiting some of the winter creameries. He had visited 32 creameries in Western Ontario. Though doing fairly well, there was room for improvement. He recommended taking advantage of the cold storage facilities, and that the makers should pay particular attention to securing all the fat in the butter.

During the convention Prof. Robertson discussed several important matters of vital importance to the dairymen. He pointed to the necessity of entire co-operation on the part of everyone connected with the business, and how the Department of Agriculture could co-operate with the dairymen to their benefit. Besides showing the need for cold storage and of adopting the very best dairy methods, which are given in the report of the Eastern Association in last week's issue, he gave particular attention to the short

selling of cheese. In this connection he explained the bill on the subject which will come up for its third reading at the next session of the Dominion Parliament. He showed how it would benefit the cheese industry if no "short" selling of cheese was allowed.

A very interesting talk was given by Miss Rose, instructor in the home dairy, at the Guelph Dairy School, on the methods of conducting an English dairy. In the comparison which she drew the Canadian dairies were in some respects superior to those she had visited in England.

In the absence of the Hon. John Dryden, Minister of Agriculture, Mr. C. C. James, Deputy Minister, gave an excellent address on the agricultural wealth of Ontario. A reasonable estimate of the amount of wealth which would be brought out of the gold regions this year in the far West and North would be \$10,000,000 and for this amount the country had gone wild. People never stopped to think what could be brought out of agriculture by a simple development of our resources. In Ontario we had 8,500,000 acres of land cultivated in grain. This gave 150,000,000 bushels of grain last year, worth \$40,000,000. If two bushels per acre were added to the average product, it would mean 17,000,000 bushels. This would be ten per cent. of the yield. If every farmer got the best seed and sowed it in the best way, this could be done. Referring to the fruit crop, he said that there were six million bearing apple trees in the province, and these at present did not average fifty cents apiece. This could be greatly increased by careful pruning and selection. Great increases could be made in the poultry, butter, and other industries, which, if done, would increase Ontario's wealth by at least \$20,000,000.

A stirring address on the subject of good roads in their relation to the dairy was given by Provincial Road Instructor Campbell. By improving the roads the dairymen could reduce the cost of production. Milk could be drawn greater distances and one factory in many cases could do where two are now in operation. The cost of hauling milk was on an average, \$1,000 for each factory. There are over 1100 factories in the province, and if the roads could be improved so as to reduce the cost of hauling a very small amount in each factory, see what a great saving it would be when applied to the whole province. He showed that by saving in this regard the cost of making and hauling the milk might be reduced to \$1 per cwt. The total value of the capital invested in the production of butter, cheese and milk was \$175,000,000, while the total annual production has an annual value of \$35,000,000. In addition to the loss to the butter and cheese industry by bad roads there is a still greater loss when the total amount of agricultural products is considered.

Prof. Frank T. Shutt of the Experimental Farm, Ottawa, gave an instructive address on the pure water supply. It was important that the farmer should have a good water supply, both for his family and his stock. Of 100 samples of well water sent to him for analysis, 50 samples were found unfit for family use, or for stock. The chief cause of pollution of the water was that the well

was dug near the barnyard or stables. The effect of the drinking of water polluted from such sources was a lowering of the vigor and tone of the system, and it frequently produced typhoid fever and such like. Pure water is necessary for use in the dairy. He gave instances where cheese makers could not keep cheese in proper condition owing to the impurity of the water. Impure water was not necessarily dirty looking. It might be bright and sparkling, and yet dirty. The well should not be used for a cold storage. When digging a well it should be put at a distance of ten times its depth from any polluting source.

Prof. Dean, in addressing the convention upon the secretion of milk, pointed out that the cheese and butter makers could make good cheese and butter if the milk were sent them in proper condition. There should be a strong sympathy established between the milker and the cow. The cow should be treated gently and kindly. Milk should not be sent to the factory till four or five days after calving. Pure water was necessary for the cow, as 87 1/2 per cent. of her milk was water. The secretion of milk was partly due to transudation, or part of the blood passing through the cells into the milk glands, and partly by the breaking down of the milk cells. The probable theory is that the water in milk comes from the blood, and the fat from the milk cells. He objected to the use of color in cheese or butter, and believed that the time would soon come when all the cheese and butter made would be white in color. The adding of color was a dirty practice, and was put in in order to deceive the people. He spoke strongly on the point of cleanliness, which should be practised in every detail of the work. In closing, Prof. Dean extended an invitation to the association to hold its next meeting in Guelph.

Mr. H. B. Gurler, Illinois, delivered a couple of thoroughly practical addresses on butter-making, and his own experience in dairying. As we were fortunate enough in securing a copy of Mr. Gurler's address, we will publish it in full in some future issue. We will also at some future date give in full the papers read by Mr. J. A. Ruddick, superintendent Kingston Dairy School, and Dr. Cornell, of Queen's University. These were practical and instructive. On the whole, the convention throughout was a practical and instructive one, and if it were not for lack of space we would like to give a more detailed report.

The officers of the association for 1898 are as follows: President, Harold Eagle, Attercliffe Station; 1st Vice-president, R. M. Ballantyne, Stratford; 2nd Vice-president, A. Wenger, Ayton; 3rd Vice-president, James Connolly, Porter Hill. Directors, John Prain, Harriston; J. N. Paget, Canboro; A. Pattullo, M.P.P., Woodstock; G. H. Barr, Sebringville; A. F. McLaren, M.P., Stratford; J. A. James, Nilestown, and Robt. Johnston, Bright.

One of the interesting features of the convention was the awarding of the gold medals presented to the association by the Windsor Salt Co. to be awarded to the winners of the prizes in the creamery and home dairy classes at the Industrial Fair, Toronto, and the Western Fair, London. Two of the winners were graduates of the Dairy School

Guelph. The medals were excellent in design and workmanship, and were valued at about \$50 each. The Windsor Salt Co. is to be commended for its interest in inducing a better quality of dairy products to be made. The same firm had a splendid display of their high-grade dairy salts at both the eastern convention at Lindsay, and the western convention at London. The same firm will give \$200 in gold, to be given in prizes for dairy products at the Western Fair and the Industrial Fair the coming fall, to be awarded as may be directed by the Western Butter and Cheese Association. The Canada Salt Association will also give a similar amount, to be awarded under the same auspices.

A HANDY RACK FOR HAULING ICE.

Most farmers draw their ice in a sleigh or waggon box and sometimes find it awkward work loading and unloading the ice. Unless the blocks of ice are of the right size to fit into the box there is much room lost and the teams are either drawing light loads, or there is a lot of extra lifting to make up a good load. Then the ice is very hard on the box, and many a stout box has been broken while harvesting the ice crop.

The most convenient way of hauling ice is to make a wide platform rack on the sleigh. Make bolsters six feet long and put them in the place of the regular bolsters on the sleigh. Now put on a covering of twelve foot plank about two inches apart, and bolt them to the bolster.

Across the ends and along the sides bolt on a 2 x 4 scantling as a border to prevent the blocks of ice falling off. It will be much easier to load and un-load ice on a platform like this and a much larger load can be drawn.

SPRAYING FRUIT TREES IN WINTER.

At the recent annual convention of the Fruit Growers' Association Prof. Fletcher strongly recommended spraying fruit trees during the winter. The spores of the various fungi rest on the limbs and twigs as well as on the leaves. When the leaves are on the tree it is impossible to get spray on to the limbs and twigs. The best time to do this spraying is during the winter. It could be done any time when most convenient, but the best time is towards spring when vitality is returning. If the trees are sprayed during the winter better results will be obtained as the result of spraying after the leaves are out. Prof. Taft, of Michigan, and others also very strongly recommended winter spraying.

WINTERING COLTS.

Horses are gradually bringing higher prices and soon old time prices will be paid for really good horses. In fact really good horses always will bring good prices. But at this particular time it will pay farmers well to take extra care of the young colts. The future of the colt depends very largely upon the care and feed given it during the first winter. If it is poorly fed and its growth checked it never seems to get over it, no matter how well it may be cared for later on.

As feed is plentiful this winter the colts should have plenty of it, and also

plenty of exercise. Look out for the colts with a staring, ill-kept coat. Such a coat is an outward indication that the digestive organs are not in good working order, and cannot prepare the food for the proper nourishing of the body. Give such colts a little flaxseed meal or succulent food of some kind. Keep them in a good thrifty growing condition. Good hay, cut cornstalks, or both, makes a good coarse food. For grain feed there is nothing better than oats and bran with a little flaxseed meal. Another good grain feed is a mixture of equal parts of oats, corn, barley and bran, with a little linseed meal. Give the colt a good start the first year and you give him a start that he will feel all through life. It may make the difference between a horse that will pass as only medium and sell for a low price, and one that will be a good one and sell for a profitable price. Don't forget the old saying, "Feed is half of breed."

OUR DAIRY SCHOOLS.

Mr. J. A. Ruddick, Superintendent of the Kingston Dairy School, reports that they have a very large attendance, some 127 in all having made application and been admitted. The new additions to the buildings give greatly increased facilities, and good work is being done.

Mr. T. C. Rogers, of the Guelph Dairy School, reports as follows:

"Our dairy school opened on Jan. 4th, as announced. We now have 100 students, and more are coming. Our equipment is complete for giving practical instruction, and we find it a pleasure to associate with the students, as their conduct and interest in their work and studies is most satisfactory to the staff of officers. Perfect harmony and good-will prevails, and we hope to accomplish much good. There is no just reason why all our dairy schools should not be filled, as the course of lectures and instruction given would be valuable to any person employed on the farm. The Home Dairy Department in our school is specially adapted for instruction in farm dairy work. We have a good attendance of ladies and gentlemen in this department. Our equipment for giving instruction is complete, and we intend to make our influence for good felt in the dairy industry."

CORRESPONDENCE.

HEATING ARRANGEMENTS FOR A PIGGERY.

Editor of FARMING:

Inclosed please find \$2.00 to pay for FARMING for last year and a year in advance. I have also inclosed \$1.00 for FARMING in advance for Mr. ——. A friend of mine, who is going into farming pursuits very extensively, and was looking for the best paper on the subject. Upon my introducing to him your valuable paper, FARMING, which I had just taken out of the P.O., he at once concluded that it was just the paper he wanted to make his undertaking a success. As he intends making the raising and fattening of pork one of his main objects, he would like to hear through FARMING if any of your subscribers thought it would pay to put up a good pig-pen, with room enough for 100 pigs, with cook-house and heating

arrangements combined, so that the pens could be kept warm all winter, and the feeding go right along. He has an idea it would pay and so have I, particularly if the waste wood, which is lying around most farms, could be utilized for firing.

JNO. W. HEMMING.
Welland, Ont.

POULTRY FOR THE BRITISH MARKET.

Editor of FARMING:

The true business man carefully studies the whims and fancies of the market without thought or regard to its capricious movements outside the business track.

To some of the many readers of FARMING it may seem somewhat strange that the English poultry market gives a decided preference for the fowl or chicken possessed of the white leg and skin. The Dorking holds an elevated and enviable position among poulterers and their customers. Crooked breast causes a "kick" from the buyer.

To ensure a profitable issue to the business of exporting poultry to the British market it should be borne in mind that nothing but the best is wanted there, as the market is always more or less flooded or glutted with inferior stuff; in fact, this applies to meat, fruit, butter, and, I may say, all produce. "SHEPHERD BOY."

Publishers' Desk.

Superior Dairy Salt.—The Windsor Salt Company, of Windsor, Ont., made a nice display of their superior dairy salt for butter-making and for cheesemaking at the Eastern Dairy-men's Convention. Their dairy salt is giving first class satisfaction wherever it is used, and we can recommend it to dairymen.

Keystone Dehorning Clipper.—The advantages resulting from dehorning cattle are many, and are going to be more and more appreciated. Cattle for the feed lot do better without them, and cows do better in the pasture field and drive together like sheep when the horns are removed. There is nothing that will tame a cross bull or a bossy cow so quickly and effectually as taking off the horns, and there is no better instrument for removing the horns than the Keystone Dehorning Clipper made by E. Brasius, Cockersville, Penn. Write him for circulars, price list, etc.

The Poultry Show of the Year will be held in Chicago, January 24-29, under the auspices of the National Fanciers' Association of Chicago. The Borden Building, 214-216 East Madison street, has been secured for the purpose (notice the change in location), and the number of entries promises to be very large. Every preparation is being made for the care and comfort of the poultry and pet stock when in the show room. Railways and hotels are convenient, and those who visit the show will find the surroundings pleasant and the exhibits highly entertaining. The secretary, W. W. Hogle, 1,015 Benson avenue, Evanston, Illinois (a Chicago suburb), will be glad to furnish particulars. Remember, railroads are making special rates for those outside of the city who desire to attend.

Eclipse Feed Mill.—Every farmer knows the superior value of ground grain over that which is not ground for feeding stock. Farmers are also looking for a simple, solid, compact, durable mill, one that runs easily, that will do good and rapid work, that can be operated in a convenient place and that is always ready for work. The Noxon Bros. M'Y' Co., of Ingersoll, offer such a machine to the farmers in their Eclipse Feed Mill. It will grind all kinds of grain singly or mixed, shelled corn, or corn on the cob. It is also claimed that this simple mill will grind new corn successfully. The mill is a very compact one, the power arm being fastened directly to the mill itself, the interior parts of the mill revolving as the arm goes round. It thus takes up small space and should meet with general approval.

Handsome Album.—The Scottish Farmer, Glasgow, has issued a most handsome album, containing numerous illustrations of prize animals, and a breeders' directory that will be much prized by those who receive it. Price, threepence.

Stock Notes

W. W. OGLEWIE, Lachine Rapids, Que., intends to import a number of Arabian cattle this spring. Mr. Robert Hunter, the able manager of the "Kapild Farm," has left for Scotland to purchase the stock. He reports that they have sold their herd of Polled Angus through their advertisement in FARMING.

CAPT. T. E. ROBINSON, Iderton.—Readers of FARMING will be pleased to know that Capt. Robison has sold his Shorthorn bull, Nominee, to Joseph Lawrence & Sons, of Manitoba. Nominee won the silver medal for best bull, any age, at both Toronto and Ottawa last fall, and headed the first prize herd at Toronto, London, and London. His daughter has now a herd of 93 females already headed by the same bull, and Indian Warrior, sweepstakes at the World's Fair, and imported Sittytown Stamp, and Nominee will make a good third. Mr. Lawrence lost his buildings in a prairie fire last fall, but has rebuilt again, and now his 110 head of pure bred cattle are in their fine new quarters.

W. J. BIGGINS, Elmhurst Farm, Clinton, writes: We have had a very active demand for both sexes, and have been made at a large increase in price over last year, among some of our recent sales of Shorthorns are Monaco, a Matchless, to Michael and Schwazne, Benmiller; Royal Mariner, a real good one and Scotch bred, to James Tabb, Auburn; Rufus, an Red Rose Miss, a Cruickshank, to Henry Cowan, Goderich. We considered the latter calf one of our best. Satisfaction, a beautiful roan of the Mina family, goes to John Biggin, Hullet; Valiant, a Village Girl, a fleshy, thick-set calf, to F. W. Johnston, Denbigh, Ontario; A. A.; Royal Baron, a large calf for his age, straight and with ribs, to Mr. W. J. B. Orange, to Thomas Lane, Brucefield. All the above calves were sired by the imported Kinellar bull, Royal Don (64717).

SIBTHY & GROGGS, London, Ont., write: Our returns from our " " in FARMING have been profitable to us, and we desire to continue the pleasant relations which we have had for the past two years. We have made several large transfers of stock during the past six weeks. We have sold our entire stock of Golden Wyandotters to Messrs. Wray Bros., of South London. These birds, with their own winners, make up a fine flock of Golden Wyandotters as are to be found in Canada. We have also sold to Mr. Wm. Thorn, of Lynedoch, Ont., our entire stock of Light Brahmas, among them some promising chicks, and as fine a pen of breeding hens as a breeder ever owned. We wish Mr. Thorn success. We intend to make a specialty of breeding D. K. Brahmas, Partridge Cochins, and R. C. W. Leghorns. We wish FARMING continued success and a prosperous New Year.

JAMES TOLTON, Walkerton, reports the following sales of calves in the middle of last September: To A. J. McArthur, Port Hope, Ontario, a yearling to Calgary, Alta., a 2 year-old Shorthorn heifer, 2 yearling heifers, and 1 bull calf; 1 bull calf to Wm. Cruickshank, Cruickshank P. O., Ont.; to Geo. Webster, Midway, Ont., 1 shearing Oxford Down ram; 1 ram lamb each to the following parties: John Bollinger, Maple Hill, Ont.; L. Parkinson, Greenock, Ont.; Jas. L. Tolton, Walkerton; L. Love, Port Sandfield, Muskoka; S. A. Lyon, Kingston; 2 ram lambs to Peter Arkes, Peterborough, Ont.; 3 yearling rams and 4 ram lambs to John Myers, Colborne, U.S.; 1 shearing ram and 3 shearing ewes to Daniel Strange, Grand Lodge, Michigan; 6 ram lambs to Geo. McCarrow, Sussex, Wisconsin; and to the same gentleman a cad of Oxford rams and ewes purchased from different breeders in this locality. There appears to be an unlimited demand, and at a material advance in price for both Shorthorns (of both sexes) and Oxford sheep. In fact, I have had many enquiries for Oxford sheep, both from Ontario and the United States, that I could not fill. At present we have on hand two last June lull calves and five red heifer calves, all of the best quality, kept by Earl Warwick, among them some promising calves. One silver medal bull, last fall, Messrs. Galt & Sons, St. Helen's, were the breeders of Earl Warwick as well as Nominee. It is my pleasure to report that all kinds of live stock are doing nicely so far this winter, feed of all kinds being abundant.

FOR IMMEDIATE SALE

- 5 JERSEY BULLS.
- 7 BERKSHIRE BOARS.
- 1 (Imported) TAMWORTH BOAR.

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CAMPBELL'S BANNER..
ROOT CUTTER.
HAND POWER
Turns all roots and vegetables into fine stock feed. It is the best and most economical and cheap rooter and of greatest value to general farmers and poultrymen. Cuts fine cooking, mottled, and white turnips, rutabagas, and all other roots. Fully warranted. Send for catalogue. The B. CAMPBELL FARMING MACH. CO., of Chatham, Ontario.

The Ontario Agricultural Gazette

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

Ontario Agricultural College.

Announcements concerning the College work will be published weekly under this head.

FEEDING THE HEN FOR EGG PRODUCTION.

By L. G. JARVIS, Manager and Lecturer Poultry Department.

When you wish hens to lay, you must, of course, be prepared to furnish them with the material wherewith to make eggs. They must be comfortably housed and given plenty of opportunity for exercise. They must, in fact, be compelled to work, and work hard for their food. How this work is to be done must depend on circumstances, but work they must in order that they may be in good condition for laying. Exercise is just as necessary as food in this direction. Unless they work they will grow fat, and this condition is not conducive to egg production. Too much stress cannot be laid on this. To have your hens in the best condition for laying, let your motto be, work, and make the hens adopt that motto. To do this all grain food should be thrown or scattered among chaff or cut straw on the scratching pen floor.

To obtain an abundant supply of eggs, as well as exercise they must have a variety of food, which should include meat bone, vegetable food, some green and some boiled, mixed with the soft food occasionally in the morning. Do not use any condition powders or drugs of any kind, but plenty of good, clean wheat, buckwheat, barley, oats and corn. A mixture of ground oats and barley, equal weights, with their weight of bran added, and the whole moistened with milk, sweet or sour, makes up the morning meal. To this add boiled vegetables two or three times a week, or cut clover hay steamed, when the vegetables are not used. Give skim milk for drink with a supply of good, pure water. Never use musty or impure food of any kind, as it is injurious to the health of the fowls, and it will also impart a bad flavor to the eggs. The object of feeding green food is to improve and keep in order the digestive organs, thereby increasing their power to assimilate more of the heavier foods which are necessary for egg production.

Fowls must be comfortable at night, as nothing retards the process of egg formation so much as worry and discomfort. Their perches should never be any higher than two feet from the floor; size of perch, 3x3, rounded at top. They must also be kept free from vermin. I find nothing better as a preventive from vermin than using kerosene oil on their perches, and occasionally in their nest boxes, and sulphur and insect powder in their dust baths. It is impossible to give full directions for caring for poultry, or lay down a set of hard and fast rules for everybody's guidance, as circumstances alter cases in this as in everything else. Some experience is needed, and that of the kind which can only be acquired by personal observation and practice. But there are some

rules which are good at all times, a few of which I give below, especially directed to beginners:

- (1) Select the best breed or breeds best adapted to your requirements and locality.
- (2) Provide them with clean, comfortable, dry quarters.
- (3) Admit plenty of sunlight into their feeding pens.
- (4) Provide as varied a diet as possible.
- (5) Do not feed too often or too much at a time.
- (6) Always supply plenty of clean, hard water.
- (7) Keep everything clean and avoid vermin.
- (8) Never allow stagnant water to remain where fowls can get at it. Much disease is contracted in this way.
- (9) Never keep hens for egg production after their second year unless they have proved excellent layers, when it would be advisable to breed from them.
- (10) Never allow a male bird with the laying stock after you are through breeding.

EXPERIMENTS WITH LUCERNE HAY.

By R. HARCOURT, B.S.A., Assistant Chemist.

With the object of determining, if possible, the best time to cut Lucerne clover to obtain the maximum amount of digestible matter, we had, during the summer of 1897, three cuttings of clover made at different stages of ripeness. These cuttings were carefully cured as hay and the fed to a shearing wether to determine the digestibility.

The first cutting was made when the blossoms were just appearing; the second, eleven days later, when the plants had nearly reached full bloom; the third, thirteen days later when most of the blossom had fallen. There was an increase in dry matter until full bloom was reached, after which there was a decrease, which can be at least partly accounted for by the large number of leaves which had fallen previous to the third cutting. Not only was there a decrease in dry matter as the plants matured, but the percentages of the most valuable food constituents also decreased as shown by the following table:

	Fat.	Protein	Nitrogen Free Extract	Fibre.	Ash	Amides
First cutting	4.09	20.12	37.88	28.47	5.51	3.73
Second cutting	2.89	15.54	42.90	31.57	7.08	4.51
Third cutting	1.98	13.28	37.54	40.46	6.22	2.88

It will be noticed that as the plant matures the percentage of protein decreases, while the percentage of crude fibre increases. The protein is the most valuable constituent of the plant for food, and the fibre that which is of the least value. It must follow that Lucerne deteriorates as it matures.

It is a matter of every day experience that only a part of the food eaten is actually made use of by the animal. It is, therefore, of importance to have a knowledge, not only of the chemical composition of the Lucerne but also of

the amounts of the various nutrients which are capable of being assimilated. Consequently a digestion experiment was made with each cutting, the results of which are given below:

Pounds of each Constituent Digested per 100 Pounds Fed.

	Dry Matter.	Protein	Fat.	Nitrogen Free Extract.	Fibre.
First cutting	60.62	28.97	71.49	70.63	37.11
Second cutting	59.47	20.78	41.69	70.50	50.39
Third cutting	49.38	16.68	48.02	61.73	36.45

It must be borne in mind that these figures are the results of single digestion experiments, and for that reason too much stress should not be put upon them. At the same time they indicate clearly that there is a deterioration in digestibility as well as in composition as the plant matures.

Using these digestive coefficients and the weight of dry matter cut from the several plots we get the following as the pounds of dry matter digested per acre: 1st cutting 1,932 lbs., 2nd cutting 2,271 lbs., 3rd cutting 1,654 lbs. These figures indicate that the maximum amount of digestible matter is obtained when the plant has nearly reached full bloom, and that there is a very rapid deterioration from that time on.

Farmers' Institute Department.

Reports concerning the work of the Farmers' Institutes in Ontario will be published weekly under this head; also papers prepared for this department by Institute workers. Secretaries and officers having announcements to make are invited to send full particulars to the Superintendent.

The following note has been received from C. A. Zavitz, B.S.A., delegate to Division I.

Since starting out on our Institute trip Mr. Thompson and I have attended every session for which we were advertised. So far, we have attended twenty-two sessions, and have ten more to attend. On the whole the meetings have been large, lively, and interesting. At some places the Institute has done well in mixing in local addresses, while at others no local papers were given. I must say, however, that the discussions have been good throughout. The best meetings have been held in those places where the Institute work is the best known. In several of the afternoon meetings there was not sufficient seating capacity for those in attendance, and in the evening meetings some could not get entrance in the halls owing to lack of room.

THE DIGNITY OF WORK.

By Mrs. R. C. Tye.

"Work! work! work!" to the farmer, his wife, daughters, or sons must be no dreaded word. It is the greatest mistake, though we are often inclined to think otherwise, that a great scarcity of work would bring happiness. The decree to earn our bread by the sweat of the brow was not the worst but the best, in our pres-

*Paper read at a Farmers' Institute meeting in Haysville, Waterloo County.

ent state, for God ever seeks man's best interest. Therefore let us be of those who are determined to do something useful, that whatever may be prepared for us hereafter or happen to us here, we will at least deserve the food God gives by earning it honorably, and that, however fallen from the purity or far from the peace of Eden, we will carry out the duty of human "dominion," and dress and keep the wilderness, though we may no more dress and keep "the garden."

A young lord was once visiting at a friend's in one of the large cities of this country. After being there some time his friend asked him how he liked the country. "Oh, very well, but I notice you have not many gentlemen." "What is your definition of a gentleman?" asked his host. "Why, one who has no work to do." "Oh, we have plenty of them, but here we do not call them 'gentlemen,' we call them 'tramps.'" I honor our young and stalwart Canadian farmers, who, though toilers, can be gentlemen, and especially would I offer to the veterans my highest tribute of respect.

I do not undervalue recreations for pleasure, but that we should take pleasure in our work also. Generally we are under the impression that a man's duties are public, a woman's private. But this is not altogether so. A man has a private duty relating to his home, and a public work or duty, which is the expansion of the other, relating to the state. So a woman has a private duty relating to her own home, and a public work or duty. Now, a man's work for a home is to secure its maintenance, progress and defence; the woman's to secure its order, comfort and loveliness. These duties are to be expanded into public work by both man and woman, but there is no arbitrary law in reference to these duties. A man may seek to make his home lovely; a woman may seek its maintenance and progress. These gentlemen (the speakers) do not come here merely to play a harp for us to dance to. No; what they tell us means hard and painstaking work. If we think new methods will bring a surcease of toil, we are much mistaken. Many of the new ways of working involve more labor than the careless habits they are intended to supersede, but it is because of the results brought about by the better methods that they are so insisted upon, for we require the best results obtainable in handling farm produce, in order to secure the maintenance and progress of our homes and nation, for on agriculture a nation's welfare largely depends. The careful experiments and intelligent application of what has proved to be the best, has brought about a much-needed change in many things connected with farm life. But all have not yet learned. Take, for example, buttermaking. I fancy our merchants could tell us there is yet a great difference in the samples brought to them. Yes, as much as there is in a recitation given by a cultured elocutionist and one given by the ordinary school-boy.

How is it

THAT THE CHEESE AND BUTTER MAKERS WHO USE . . .

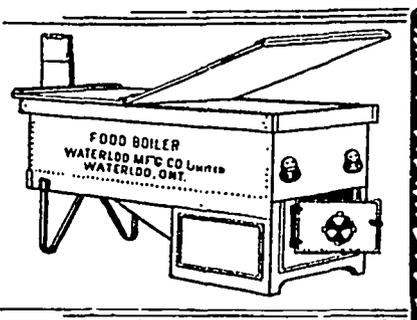
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Always get the HIGHEST market PRICE for their product? Simply because THEY USE salt that IS SALT—PROPERLY DRIED—and of NATURAL UNIFORM GRAIN, NOT salt that is full of impurities, half dried, full of lumps, dust, dirt, and foul odors. If you have never used RICE'S PURE SALT try it this year and note the increase at CREDIT your bank account.

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You save fifty per cent. of the feed, and produce double the growth and fat, when feeding boiled feed than when fed dry and raw.

The Waterloo Food Boiler is the simplest, cheapest, most convenient, and most economical Boiler in the market. Every farmer should have one.

Price \$25, Delivered at Your Station.

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Now is the time to decide what you are going to plant, and where you are going to get them.

Will it not be better to send direct to an old reliable Nursery and be sure of getting the varieties you want, free from San Jose Scale and diseases, than to buy of Travelling Agents who import trees often infected with these pests, and that you have no certainty of being what you want till they bear, and paying higher prices besides? Send for my catalogue, or send a list of your wants and see what I can do for you. Address,

A. M. SMITH,

Dominion Nurseries, St. Catharines, Ont.

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Dealers' and Jobbers' orders packed with care and dispatched cheaper than elsewhere. Stock guaranteed free from San Jose Scale. Let us price your wants. We guarantee satisfaction. All Canadian-grown stock.

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For Transforming Common Wagons into First-Class Spring Vehicles.



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Every Spring guaranteed. Will carry light or heavy loads. Especially adapted for marketing fruit, etc. Capacity up to 7,000 lbs. Write for particulars. In ordering give width between stakes and capacity required.

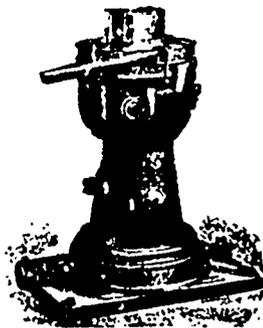
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Numbers Actual Capacity PRICE	1 2200 lbs.	2 1300 lbs.	3 850 lbs.	3 1/2 700 lbs.	4 500 lbs.	Numbers Actual Capacity PRICE
Belt	\$350	\$300	\$205	\$155	\$140	Belt
Steam Turbine	\$375	\$320	\$215	\$170	\$150	Steam Turbine
Horse Power	1.20	0.80	0.35	0.25	0.20	Horse Power

HAND SEPARATORS

Numbers Actual Capacity PRICES	7 1/2 500 lbs.	7 1/2 400 lbs.	8 300 lbs.	11 1/2 250 lbs.	12 160 lbs.	Numbers Actual Capacity PRICES
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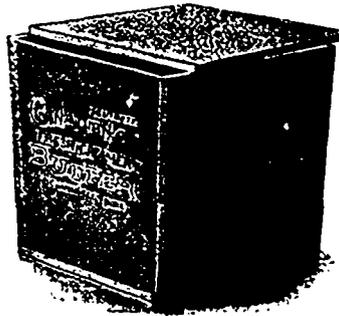
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A Beautiful Solid Gold Ring, Set with Genuine Garnet FREE!



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Plainly written, and we will send you 20 Packages of IMPERISHABLE VIOLET SACHET PERFUME (which for delicacy

of odor, natural freshness and inexhaustible character is unsurpassed) to sell for us (if you can) among friends at 10c. per package. When sold remit us the money, and we will send you free for your trouble the above described ring, which is stamped and warranted Solid Gold, set with Genuine Garnet. Send address at once, mention this paper, and state that you want Perfume, and we will send it. No money required. We take all risk. Goods returnable if not sold.

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No Machine on the Farm will give as good a satisfaction.

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Easy Running.
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MARKET REVIEW AND FORECAST.

Office of Farming,

44 and 46 Richmond street W., Toronto,
January 24th, 1898.

Trade during the week has been fully up to expectations. January is nearly always a dull month, but on the whole it has been a good month for general business, so far. The Canadian Pacific Railway are moving considerable freight for the Klondike, and have recently accepted five carloads of groceries and provisions by rail and steamer for Dawson City.

Wheat.

The janicky feeling that prevailed when the last market report was written has passed away. It was due to lower cables from England, arising from an increase in the visible supply of American wheat and increased offerings of Argentine wheat. Cables last week, however, were stronger; this, with a decrease in the world's visible supply of about a million bushels, steadied the market, and the price of cash wheat has advanced in Chicago to 94c. The Leiter crowd are still buying wheat, and are now thought to hold about fifteen million bushels. This is an easy factor in the situation that promises trouble sooner or later.

The market for wheat at Toronto opened steady last week at 81c., and has advanced steadily in correspondence with the advance at Chicago, until at the close of the week holders were asking 84c., but buyers were only offering 83½c. Spring wheat is quoted at 83c. east, and goose wheat at 80c. On the local farmer's market white wheat brings 87c. and red 88c. Manitoba wheat is quoted at 90c. at Narnia.

At Montreal, Ontario red winter wheat is quoted at 92c. to 93c., and white wheat 91c. to 92c.

Barley and Oats.

Good malting grades of barley are scarce and wanted. No. 2 brings 33c., while feed barley is a little higher at 27c. to 28c. At Montreal good malting grades are firm at 32c. to 35c. for bright No. 1. Feed barley is 30c. to 30c. per bushel.

The market for oats has been steady at an advance of over a cent a bushel. White oats east of Toronto bring 27c., and mixed lots 26½c. in car lots. White oats west are quoted at 26c. to 26½c. At Montreal the market is steady at 28c. to 28½c. out of store.

Peas and Corn

The higher market reported for peas last week has continued firm, and has even advanced a little. East of Toronto 53c. seems to be the ruling price, while west of Toronto 52c. to 53c. is quoted. At Montreal the market has not advanced as much as it has in the west, but holders are asking 64c. for May delivery. The corn market has been steady at 28c. to 28½c. for Canada Yellow west. At Montreal it is 37c. to 38c.

Rye and Buckwheat

Rye is inclined to be firmer, at 45c. west. Holders are asking 46c. At Montreal the market is firm at 52c. to 53c. in car lots.

Buckwheat is firm at 32c., while at Montreal it is quiet at 35½c. to 36c.

Timothy and Clover Seed.

Red clover seed is quoted at from \$3.40 to \$3.60 per bushel; alsike clover at from \$3.25 to \$4; timothy at from \$1.25 to \$1.35. At Montreal red clover is reported in fair demand at \$3.75 to \$4.25; alsike is quiet at from \$3 to \$4.75; and timothy \$1.50 to \$2.25, according to quality and quantity.

Mill Feed.

Bran has been quoted for a long time at \$7.50 to \$8 per ton, but this week the quotations run up to \$8.75 to \$9, in car lots west. A local dealer tells us that he cannot get it for \$10. It seems to be very scarce at present, and difficult to find. At Montreal, \$11 and \$11.50 per ton by the car lot has been secured by some dealers, while others say that they can make no sales at that figure. On the local market bran is bringing from \$14 to \$15. Shorts are quoted at \$11 to \$12 by the car lot, west; while at Montreal they are \$12 to \$13.

Potatoes.

The market for potatoes is weakening. Potatoes are now offered here on the tracks, in car lots, at 57c. to 60c., while out of store they are 65c. to 75c. At Montreal sales are reported from country places equal to 55c. on the tracks in the city. The sale of one choice car lot is reported at 57½c.

Cheese.

Considerable cheese has been shipped since

the close of navigation. Up to date the returns show that we have shipped 410,248 more boxes of cheese than we did for the corresponding period last year. From New York the report comes that the United States has sent an increase of 145,034 boxes during the same period. So that England has this season taken from Canada and the United States 628,561 boxes more than she did last year. This proves that the consumption of Canadian cheese in England has been phenomenally large, in spite of the largely increased shipments.

There is no doubt that the low price has had something to do with this, as it allows the retailers to sell the cheese for from 10c. to 12c. a pound, a popular price in England. Stocks are not thought to be any too large to meet the demands for the next four months. At the rate England has taken our cheese for the past nine months the present stocks would be exhausted in less than six weeks. It appears from reliable figures that the average weekly consumption demand for Canadian, and American cheese is about 65,000 boxes when it can be sold for the popular price of 5½ and 6½ per pound.

Top price is 83c. for white and 84c. for colored, with the majority of the sales under these figures.

Butter.

Butter is a little easier, due to the falling off in the export demand. Fresh creamery brings from 18c. to 19c., according to quality and quantity. Early makes go slow at 16½c. to 17½c. At Montreal packed dairy butter is scarce at 15c. to 16c. Low grade butter is scarce. Winter creamery goes for 19c. to 20c. in small lots. Koll butter is in good demand at 14c. to 15c.

At Toronto the receipts of dairy butter are not heavy, and the demand is good; 14c. to 15c. for large rolls and 15c. to 16c. for choice dairy tubs seems to be the ruling price, while low grade, medium butter brings from 11c. to 14c.

Poultry.

The stock of fresh poultry at Toronto is not large, and the demand is steady. Turkeys are in fair demand at from 90c. to 10c. per pound, 6c. to 6½c. for geese, 50c. to 75c. for ducks, and 35c. to 50c. for chickens. At Montreal more poultry is offering than will supply the demand. Nice, fresh-killed, dry-picked turkeys have sold in cases at 94c. to 10c. Frozen stock bring 8c. to 10c. Chickens are scarce, and fresh killed stock have brought as high as 7c. to 7½c. per lb. Ducks sell for 8c. to 9c., according to quality, and geese at 6c. to 6½c.

Eggs

The demand for new laid eggs is good and the market steady at from 20c. to 22c. Some what higher prices can be obtained for really fresh new laid stock. Late gathered bring 15c. to 16c., held fresh 14c. to 15c., and lined 13½c. to 14c.

At Montreal new laid eggs are strong at 27c. for half cases. Choice candled fall stock sell for 18c. to 20c. Cold storage eggs 12c. to 15c.

Cattle.

The lot of the cattle exporter since navigation closed, and, in fact, nearly all last season, was not a happy one. Signs of some improvement are noticeable, however, and will be gladly welcomed. Recent cables show sales at an advance of 3c. a pound on cattle, and 1½c. to 1½c. on sheep. Considerable space has been engaged on steamships from Portland to Liverpool for February and March.

The demand for export cattle is slow, still, a few are being picked up at prices running from 37c. to 4½c. per lb. for shipments by way of St. John.

Good butchers' cattle are in good demand, and will bring as high as 4c. a pound. Too many of the common sort are offering. The general run of cattle bring from 3c. to 3½c. The Harris abattoir took quite a few cattle during the week. Quite a number of car loads were also taken for the Montreal market and a few for Buffalo. At Montreal choice animals bring from 4½c. to 4½c., while pretty good ones bring from 3½c. to 4c. Stockers and feeders bring from \$2.80 to \$3.20 for the Buffalo market, where feeders sell at from \$3.40 to \$4.15, and prime stockers \$3.60 to \$4; common grades \$2.75 to \$3.50.

Sheep.

There is no change in the price for export sheep, being 3c. to 3½c. per lb. Lambs move freely at from \$4.40 to \$4.80. Butchers' sheep bring from \$3 to \$4 per head.

Hogs.

The market for choice sangers advanced ½c. early in the week, and has continued at that

figure. Choice selections weighed off the cars bring from 5½c. to 5½c. Thick, fat hogs and light hogs are firm at 4½c. Sows bring 3½c., and stags 2c. to 2½c.

Dressed Hogs.

Local dealers are giving \$6.25 to \$6.50 for choice, light weight hogs delivered; and \$6.00 to \$6.20 for heavy weights. Prices at Montreal are about the same, but these prices are believed to be plenty high enough when compared with Chicago prices which are about \$4.70 to \$4.75.

Hay.

There has been no change in the hay market. No. 1 brings from \$10.50 to \$11 at Montreal, and from \$7.75 to \$8.50 on the tracks at Toronto.

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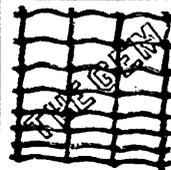
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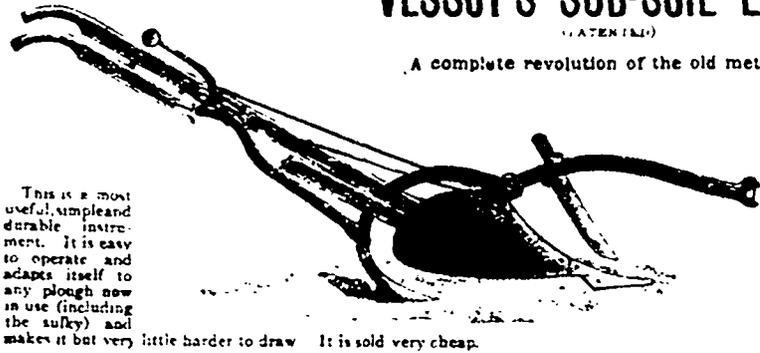
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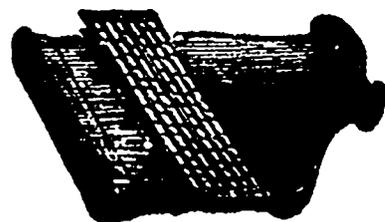
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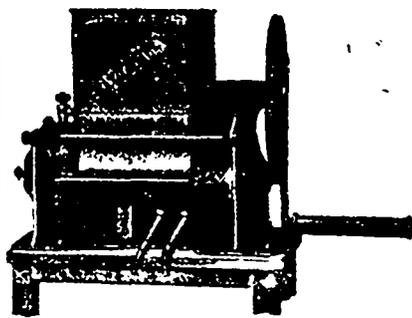


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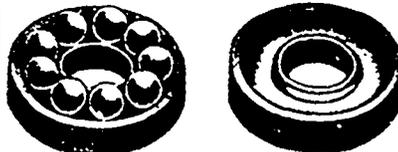
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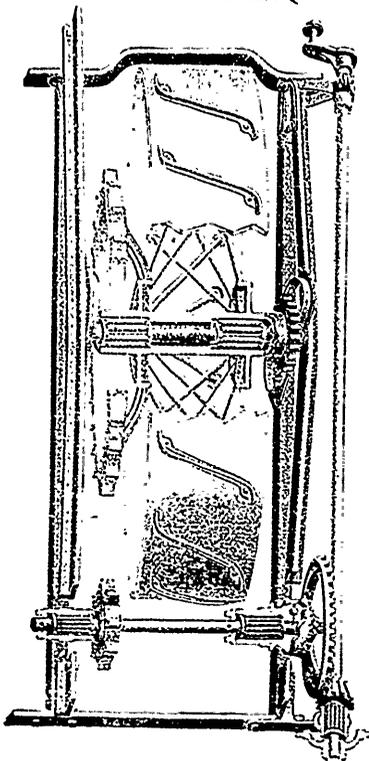


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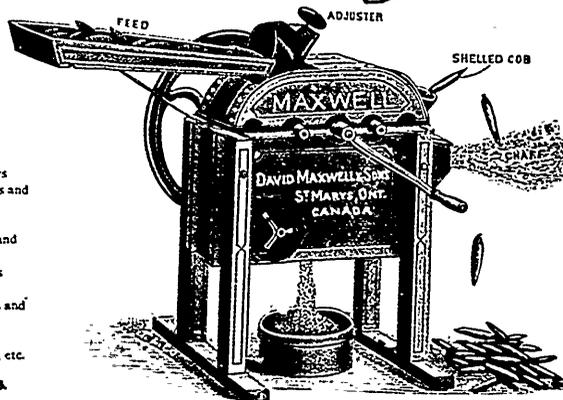
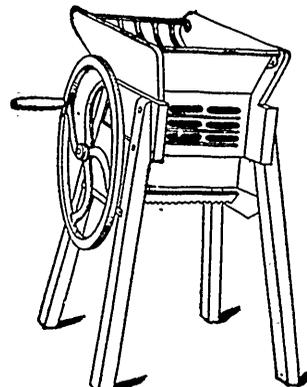
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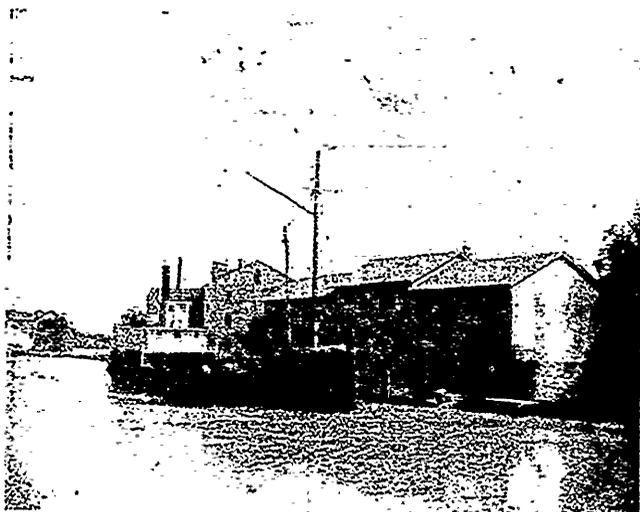
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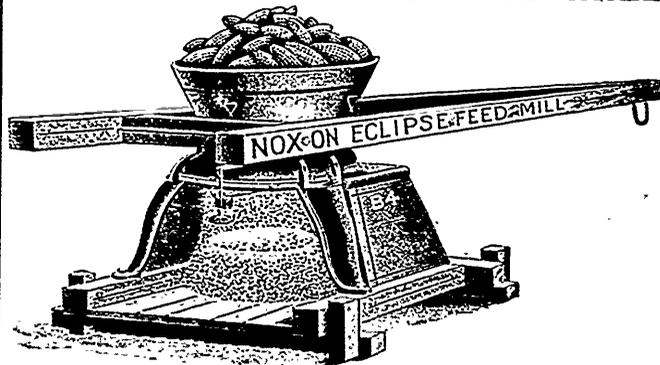
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