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OTTAWA, CANADA.



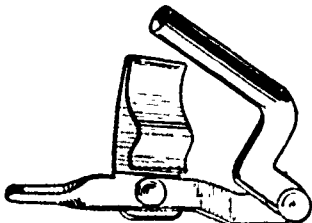
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...LEADING TOPICS FOR THE WEEK...

Live Stock Trade Returns. The Ideal Road Horse. Beet vs. Cane Sugar. The Bacon Pig at the Fat Stock Show. Corn-fed Bacon in Denmark. Pointers for a Fat Stock Show. The Bacon Pig. Suggestions on Shipping Poultry. Care of Breeding Swine. Feeding for Eggs. More Sunlight for Pigs. How to Boil Potatoes. A Cheap Feed Cooker. To Start a Baulky Horse. A Cleanly Way of Milking. Market Review and Forecast. Events of the Week in Brantford.

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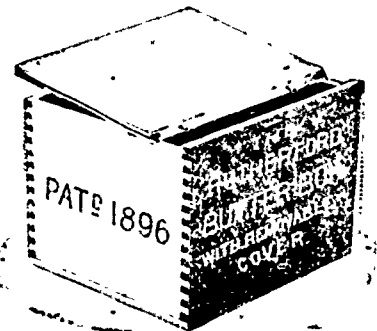
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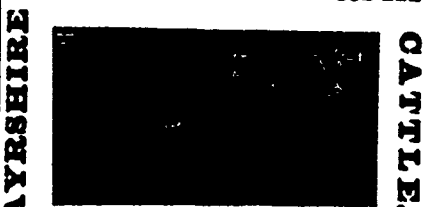
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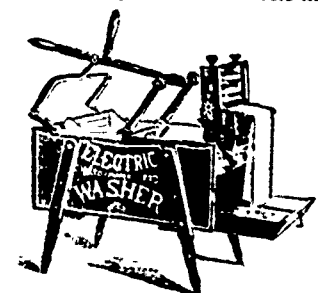
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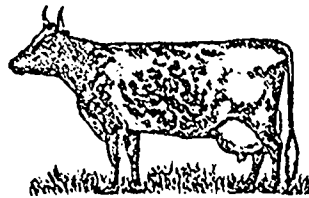


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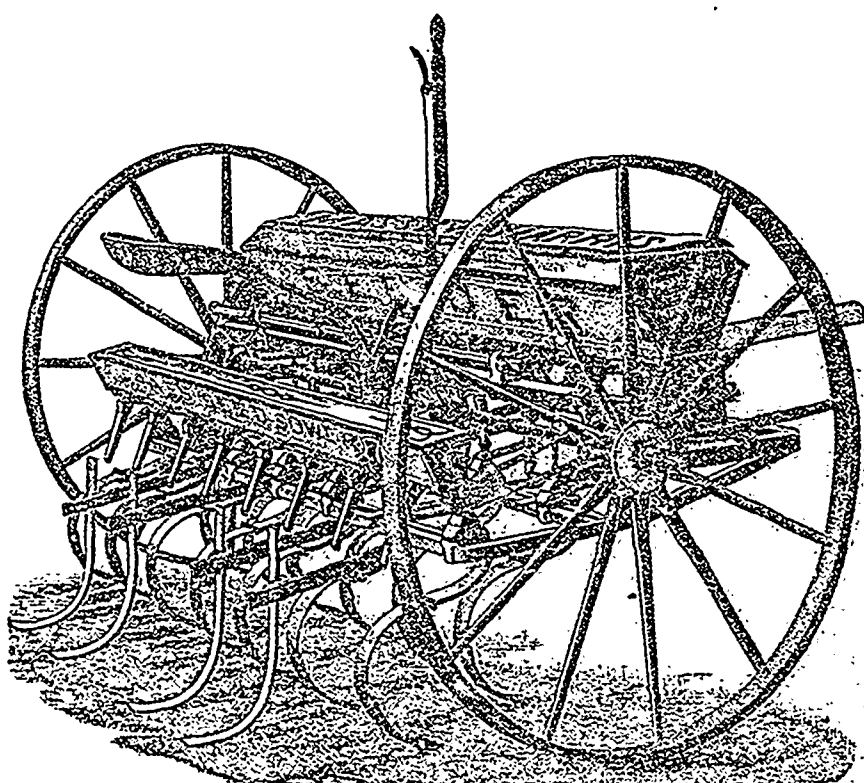


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FARMING

VOL. XV.

DECEMBER 7TH, 1897.

No. 14.

FARMING

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TOPICS FOR THE WEEK.

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These are all particularly low offers, but we would make special mention of our offer to send FARMING and the *Canadian Magazine* for one year for the low price of two dollars and fifty cents. This is Canada's greatest magazine, and we should like to see it in the home of every farmer. It contains what is best in Canadian literature and thought, and no young Canadian should be without it. Try it for one year.

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Live Stock Trade Returns.

The live stock export trade is practically over for this season. The last vessel left Montreal several days ago. With one exception, that of horses, the live stock export trade this year must be considered as a failure as far as profits to the shippers are concerned.

The cattle export trade has been the largest in point of numbers since 1890. The losses, however, have been heavier than they have been for a number of years, and are estimated to be about six dollars per head, or upwards of three quarters of a million dollars. To some extent the engineers' strike and the over supply for the Queen's Jubilee are responsible for this deplorable state of things; but the greatest contributing factor to the low prices was the inferior quality of the goods. The total number of cattle shipped was 119,188, of which 12,171 head were United States cattle 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, making a total value of \$7,151,280, to which add railway charges, ocean freights, etc., and the grand total expenditure amounts to \$9,514,084, showing an increase of \$1,500,000 as compared with last year.

One regrettable fact in regard to these returns is, that the losses sustained were nearly altogether due to the inferior quality of the goods. The cattle from the United States, sent through Canada, turned out well, and the result was that Canadian cattle, because of their inferior quality, sold throughout the season for from one to two cents per pound below United States cattle. This seems to bear out our contention as stated in our remarks regarding the quarantine regulations, in November 16th issue, that there are no good cattle in the country. The consumer in Great Britain is not going to pay a high price for inferior cattle from Canada when he can get what he wants elsewhere. If we continue to send forward an inferior quality of stuff, shippers will probably continue to experience the same losses, or will have to make the price to the producer so low as to render stock-raising in this country unprofitable. Two things seem to be necessary in order to put our cattle export trade on a good footing. First, we must have a good quality of young stock to begin with, and then we must be prepared to fit these young cattle so that they will meet the needs of the British market. We are inclined to believe that too many of those who feed cattle for the export trade do not know the kind of goods required for the market, or are ignorant of the methods required in putting an animal in proper condition for the export trade. This will also apply to fitting cattle for the dressed beef trade. The quality must be good or both the cattle and dressed beef trades will never be developed as they should be.

The exporters of sheep have suffered just as heavily as cattle exporters this season. But whether the losses sustained are due to the same causes or not, is not definitely known. In May last, prices in England opened at twelve and one-half cents for choice sheep and advanced to thirteen cents, but the market did not remain long at these figures, for in July prices declined to nine cents, and for the balance of the season ranged from ten to eleven cents per pound. The ship-

ments for the season were 61,254 head, showing a decrease of 19,417, as compared with 1896. Since the embargo was passed on Canadian sheep in January, 1896, this industry has fallen off 50 per cent. The exports for the season of 1895 were 136,728 head.

One redeeming feature of the situation is the horse export trade. Though the total shipments of horses have not been as heavy as last year, the prices realized have been such as to make the business profitable. The total number exported for this season is 10,051 head, as compared with 10,088 head last year, and as against 12,755 head for the season of 1895. The bulk of these shipments went to London, with odd shipments to Newcastle and Liverpool, and consisted chiefly of Canadian stock. The last shipment for 1897 left Montreal a few days ago, but shippers will continue to ship during the winter by way of Portland.

The prices realized during the past season for good suitable horses ranged from £20 to £36 per head. Stock that would command these prices would cost from \$60 to \$110 each in the country. Some sales of fancy driving, carriage, and thoroughbred animals were made in the London market at prices ranging from £80 to £150 each. The cost of handling horses, from point of shipment in the country to their destination, is \$35 per head, which includes ocean and railway freight, feed, and insurance.

Good horses for export have made good money all through the season, but common stock has not. Horse-breeders should make a particular note of this fact and breed only the very best. With horses, as with everything else that we export to Great Britain, the quality must be right or our trade cannot be developed.

Corn-fed Bacon in Denmark.

Of late years the Danes have imported largely of corn, chiefly from the United States. In 1896 the total number of bushels exported was 6,876,000, and the number this year will not prove less. A large share of this corn is used for feeding purposes, and the following quotations from one of Denmark's leading papers will show with what alarm this is viewed by those interested in the Danish bacon trade. These quotations are taken from a translation of the original by J. H. Monrad of Illinois, in the *Breeders' Gazette*:

"But—as with all other feed stuffs—the corn may be misused so that its advantage becomes a delusion and a snare. In feeding corn it is often neglected to balance the ration by adding the needed quantity of nitrogenous matter in order to get the most economic result as to power, flesh or milk. The most dangerous misuse is absolutely in feeding hogs when it is used so as to reduce if not altogether spoil the quality of the pork. We run the risk of spoiling or, at least, reducing our bacon exports to England."

The following letter from an English agent to the manager of a Danish co-operative bacon factory shows that Canadian bacon is growing in favor in England, owing to the excessive use of corn in Denmark:

"There is even now a tendency to prefer Canadian bacon owing to the excessive use of corn in Denmark, and the same prices are now paid for the former. It is difficult in the long run to fool the English buyer, and still more difficult to appease him when once fooled. It is a grievous mistake of the Danish farmers if they recklessly

throw away the reputation which has cost them so many years to build up, and I presume they do not clearly see the consequences."

Mr. Monrad then comments upon the situation as follows:

"The last government experiments have shown that corn is a very economic feed until the hog weighs about 120 lbs. as long as barley is then substituted (about two months before killing). It seems, however, that the author overlooks one factor which has also tended to the obliteration of the difference in price of Danish and Irish bacon on one side and Canadian on the other. The Canadian Government has worked hard to make the farmers comply with the English demand. If our large packers will not discriminate enough in prices paid to eradicate 300 lbs. or over standard from our farmers' brains, we must copy the Danes and start co-operative bacon factories."

The Bacon Pig.

The bacon pig, though of comparatively recent growth, in many ways belongs to a distinct breed of pigs. He is as separate and distinct from the old-fashioned fat hog as one purebred pig is separate and distinct from another. He bears no relation whatever to the kind of pig our fathers bred, fed, killed, and took to market once every year. He attains his growth in one-half the time, and is ready to pay for his board when he is six or eight months old. In order to fulfil his destiny the bacon pig must necessarily die young. In fact, he is a distinctly modern institution, adapted to meet the needs of these latter days, when only the finest quality of food products are wanted. His weight is circumscribed by regulations as binding as the laws of the Medes and Persians. He must neither be too heavy nor too light. His daily food must be so adjusted and of such a quality as will tend to produce in him an equal quantity of muscle and fat. These two parts of his make-up must so intermingle with each other as to produce a quality of food that will exactly suit the taste of the British consumer.

Such, in a few words, is a general outline of the modern bacon pig. That he has come to stay is established beyond doubt, and that he is about the only kind of hog that it will pay our farmers to raise is also beyond dispute. We have to depend upon Great Britain for a market for our surplus hog products, and therefore we must produce a kind of pig that will meet the needs of that market. The very existence, then, of our export trade depends, in a large measure, upon the kind of bacon pig our pork packers are supplied with. Swine breeders should note particularly the needs of the trade in this particular, and direct their energies towards producing a bacon pig that will command the highest prices in the market. Some breeds of pigs may be better adapted for bacon purposes than others. But by careful selection, feeding, and breeding, nearly all the leading breeds may be adapted to meet the needs of the bacon trade.

The Bacon Pig at the Fat Stock Show.

In the rules and regulations governing the awarding of prizes at the Provincial Fat Stock and Dairy Show, it is distinctly stated that all awards shall be given to the animal most valuable from a consumer's point of view. We take this to mean that all animals exhibited must be judged, not because they conform to a certain type, or the standard of a certain breed, but because of their utility and their adaptability to meet the needs of the trade from a consumer's standpoint. In all classes excepting, perhaps, the swine classes, this regulation is followed pretty closely. It is only of late years, however, that there has been any tendency to adhere strictly to this rule as regards swine. If all swine are to be judged from a utility or consumer's standpoint, the bacon pig should receive more attention than it is now getting. At the leading fall fairs prizes are awarded, and rightly so, for the best representative of the breed in the class in which the animal is shown. But we do not think it to be in the best interests of our pork

industry to follow the same methods at the annual Provincial Show. The breeder has the opportunity at the former of exhibiting his skill in producing an animal that may be looked upon as a type of that particular breed, but at the latter show we think the breeder should direct his efforts more towards producing an animal that conforms to the type required to meet the needs of our export trade, whether it belongs to the true breed type or not. If something is not done along this line, how can we expect to be able to supply the growing demand of our export trade for a typical bacon pig?

We notice in looking over the prize list for the show which takes place this week, that there is a section for bacon pigs in each of the purebred classes, but that in the grade class no such provision is made. If there is any class that should be judged because of its utility it is the grade class. There is no reason why in every section of that class every animal should not be judged as to his ability to meet the needs of our export bacon trade. This is something the swine breeders should have remedied before another year. In order to give the bacon pig more prominence, we would suggest that section seven of the purebred classes be put under one separate class, and headed "Bacon Pigs." This would give the bacon classes more prominence. The grade sections could with advantage be put under this heading, and award all the prizes in this class for utility only. By making this distinct division in the swine classes, the bacon sections would stand out more as a separate class, which would add very much to the utility of the show. If the prizes in this division were made equal to those in the other classes, there would be an inducement for breeders to give more attention to producing a bacon type of hog than the present arrangement affords. The present arrangement could be retained as far as the different breeds are concerned, and have prizes awarded in the various sections for the best bacon pig of the particular breed which the section represents. For instance, under Yorkshires six separate sections might be arranged as they are now, with the prizes given in each section for utility alone. Such an arrangement for bacon pigs alone would enable the judges to determine the particular qualities of each breed as regards their fitness for supplying the export bacon trade.

Pointers for a Fat Stock Show.

Canadian stock breeders will relish the following reflections from the pen of Mr. Richard Gibson, Delaware, Ont., upon the conduct of the recent Chicago Fat Stock Show. They are taken from the *American Sheep Breeder* to which Mr. Gibson is a contributor, and will be quite *apropos* at this time when our own Fat Stock Show is in progress:

"Never but once have I seen such dark, uncomfortable pens, and the building itself was dull, uninteresting and chilly, oft times cold enough to be a huge refrigerator. Why did the management allow all the flowers and bright lights, the music and banners, uniforms appropriate and ugly—why all this, I say, for the horse, and not even a sign over the entrance door to notify a stranger that without its portals was being held the Smithfield of America? Bad management on the part of someone. Another word from the exhibitors' standpoint, and that is, that the time chosen is too early for the Christmas trade, which is what all feeders depend upon for the extra fat show stuff. The horse show proper has to depend upon extraneous aid, such as the press, the most important (and one which the State Board seemed to ignore), a naval band from Washington, \$4,000 spent for flowers and floral decorations, jumping, cross-saddle lady riding, military exercises, packs of hounds, to say nothing of frills and furbelows, frankincense and myrrh, feathers and flummeries, diamonds and precious stones, besides the lovely creatures wearing them. How can a management expect to attract a crowd in such a dull, disheartening, blood-chilling place as was expected this year? Is there anything that would attract a

Chicago attendance? How would a bull fight take? Then a milking contest, maids to be young and good looking (could he engaged in Chicago, I presume), dressed a la Watteau, 'Where are you going, my pretty maid'? Then there could be a ram fight—Maine vs. Mexico. Lots of Marys with crooks and little lambs dressed a la Madame Pompadour. Oh, it would be glorious. Then a pig-sticking contest might be included. Get some Florida racers or Canadian Tamworths; not only music would be furnished by them, but racing could be watched also. The festive goat must not be forgotten—a prize might be offered for the best butter, though that would perhaps belong to the dairy display. At any rate the various secret societies might be induced to allow their lodge patriarch to see the light of day once more. Then, what with badger drowning, dog and cock fighting, an interesting show might be gotten up that would attract a crowd and if that would not do so, then send to Canada for a dozen pipers to interest the Scotchmen. Drape the building in green and have a Dan O'Connell for president to touch the Irish heart. Tell the Englishman that at the fat stock show he can get good ale and cheese, the American that there is a dollar in sight and that a live lord will be present, and I do believe with these adjuncts a fat stock show might be made to pay, even in Chicago. With these crude ideas, not yet elaborated, I sign myself, *Richard Gibson.*"

The Ideal Road Horse.

In an address delivered before the Maine Board of Agriculture recently, Dr. G. M. Twitchell, an authority on the subject, thus described the ideal road horse:

"The 15-2 to 16-hand horse of solid color, with broad forehead, ears of good size and well-proportioned, good length from base of ear to eye, eyes full and expressive, with lids free from meatiness, face straight, nostrils well rounded, full, large and thin lips, not thick, and well closed, neck of good length, shapely, clean cut at jowl and fitting well at shoulders, which can hardly be too sloping, the point of the withers being well back of the saddle, chest of good width, forearm long and heavily muscled, knees firm, broad, straight and strong, cannons short, flat, broad and flinty, pasterns good length, muscular and nervy, free from meatiness, the ankle from toe to ankle joint being about thirty-five degrees, feet round, of size proportionate to the animal, free from contracted heels, of good material and with elastic frog, barrel-shaped like an inverted egg, deep at girth as well as waist, allowing full use of lungs without infringing upon other organs, back short, the point of coupling on a line with that of hip, thus allowing for the extension of the muscles of attachment well forward over the kidneys, giving greater strength to the weakest spot in the animal anatomy as well as in man, quarters of good length, not too sloping, thus affording room for the free stifle action so necessary in the ideal driver, stifles and gaskins long, of good width, abounding in muscular attachments, hocks free from meatiness, sound, strong, neither straight nor having a decided angle, and not cut under too sharply at base.

"Such a horse, going smooth and true, neither paddling or toeing in forward, nor, as we say, straddling behind, will always command a top price in the market, provided he has been educated, and abounds in nervous energy. Form, size, color, symmetry and substance are essentials, but these do not insure the road horse. To these must be added individuality, the result of breeding. It manifests itself in what we term nervous energy, the up and get there power. It is the power of heredity, so desirable, so necessary. To secure this, there must be a high ideal and a fixed determination in breeding."

Beet vs. Cane Sugar.

The increase in the world's production of sugar from beets, as compared with that of the increase of cane sugar, is very striking, and is causing some excitement among the sugar-growers of the South. In 1887-88 the production of beet sugar

was 2,407,000 tons, and that of cane sugar 2,541,000 tons, making a total of 4,948,000 tons. In 1896 97, scarcely ten years after, the total production of sugar had increased to 7,204,000 tons, but of this amount 4,773,000 tons was beet sugar and 2,431,000 cane sugar. The growth of sugar has increased 50 per cent. in that time, and every ton of that great increase has been in beet sugar; the growth of cane sugar has been practically at a standstill. The production of beet sugar is nearly twice as much as it was ten years ago.

Germany is the greatest beet sugar producing country in the world. Under a bounty, given for all sugar exported, the industry has made rapid development. With this bonus to assist him the German exporter is able to undersell his competitors in every country in the world. To such an extent is this the case that producers in other countries are agitating to have all sugar imported from countries where a bonus is given heavily taxed. This bonused sugar seems to be the only drawback to the development of the beet sugar industry in Canada.

NOTES AND IDEAS.

Canadians are branching out in a new line in reference to shipments of fruit. An experimental shipment of apples and pears was made a few days ago to the West Indies by Messrs. T. Carpenter & Son, of Winona, Ont. The shipment went by way of Halifax, and consisted of two hundred packages. The packing was carefully done, and good results are expected from this venture.

A bonanza poultry raiser of San Francisco, who owns 10,000 hens, has put the X rays to a new use. In every poultry yard there are necessarily a number of sterile or barren hens. If the Roentgen rays will locate a farthing in a boy's stomach, why cannot they be utilized to "show up" a non-laying hen? Such was the reasoning of this poultry king. The thought was no sooner conceived than acted upon. A test case was made with twelve chickens, eight of which were found with eggs, and four barren. A subsequent post-mortem proved that the deduction of the X rays was correct. The result of this test was that an X rays plant was put in the establishment, and all the non-laying hens put upon the market. Now the owner is feeding only the hens that lay, and finds his profits from the business increasing.

The report of the Dominion Trade Commissioner to South America, which has recently been presented to the Minister of Trade and Commerce, with one or two exceptions, will not be of much interest to Canadian farmers. In Brazil the Commissioner states that agriculture is done by hand. Hoes, axes, rakes, spades, shovels and wagons have all a good sale. The indications are that Brazil must soon change from an exclusively coffee, sugar, cotton and tobacco growing country to that of general agriculture. When this takes place the Canadian farmer will have another competitor.

Prof. Robertson, Agricultural and Dairy Commissioner, visited Grimsby last week to confer with the fruit growers in regard to the shipments of fruit sent to Great Britain. No further shipments will be made this year. The results obtained from this year's trial shipments will be discussed, and plans laid for next season. The detailed statements regarding this year's shipments, and the plan of work for next year, will be presented to the fruit growers at their annual convention, to be held in Waterloo on December 15th and 16th next.

According to the estimates compiled by the Cincinnati *Price Current*, the export of beef from the United States this year will fall below that of 1896. For the ten months ending October 31st the aggregate of fresh, salted and cured beef exported is 305,000,000 pounds, compared, with

355,000,000 for the corresponding period last year, and a total of 429,000,000 pounds for the calendar year of 1896. The indications are that this year's total will be about 375,000,000 pounds. The exports of live cattle for the ten months have been 350,000 head, as compared with 335,000 for the same period last year, and 395,000 for the entire year of 1896.

During the ten months ending October 31st the United States exported to Great Britain 161,630 sheep, Argentina 317,253, and Canada 52,840. The number exported from the United States was about 82,000 less than the number exported for the corresponding period last year.

The United States seems to be recovering lost ground in regard to her export trade in cheese. During ten months of 1897 the total exports of cheese were 52,208,000 lbs., against only 37,516,000 lbs. for the same period of 1896. Of the first amount, 12,320,000 lbs. were exported through Canada. For the same period the butter exports were 29,199,000 lbs., as compared with 23,336,000 lbs. for the same period of 1896.

According to the *American Horse Review*, probably 75 per cent. of the horses exported from America to Great Britain are used for cabs and omnibuses. These horses are about the same sort that would be used in America for the same purpose, with the exception that they are on the whole a better lot of individuals. The London cab horse does not conform to any particular type or belong to any particular breed. He is a road horse whose value depends upon color, size, substance, soundness and gait.

The coming season is likely to be a good one in Australia, and the country is rapidly recovering from the prolonged drought of last year. Until recently the Australian farmer has sown his grain broadcast; but now he is quickly adopting newer methods, and the drill is more in use. By the old method a strip 60 feet wide was sown at once, and consequently, a large area could be covered with seed in a very short time. With the advent of the drill and better methods of cultivation, better yields are obtained. Fertilizers are coming into more general use.

A German pig farmer states that the best paying food for hogs is 13 lbs. of skim milk per day. Maise meal produced in flavor and mildness the best hams, but after a time they lacked keeping color. Potatoes and bran in every way proved a good feed, while half rice and half tubers or whole rice meal came respectively last. The pork butchers of Berlin and Hamburg ratified these conclusions.

At Dixon, Ill., there is a Farmers' Club and Reading-room Association. This organization has recently branched out on a new line. A handsome storeroom in the centre of the city of Dixon has been leased, and every convenience and comfort put in, so that when farmers come to town they will have a home of their own, where they may take lunch, meet with friends, read good books, magazines, and papers, and be as free to come and go as in their own homes. This is a right move. Will not some of our Ontario farmers take the matter up?

Free rural postal delivery will be put into effect in Delaware county, Ill., shortly. There will be four points of delivery in the county, which will be divided into four sections, with a delivery office in each. Each office will be required to give all farmers in its section a complete and free delivery. This service will be done by horsemen once each day. In addition to letters and papers they will be empowered to carry parcels and other articles bearing the government stamps. They will also sell stamps and post office supplies. Every house will be visited once a day at a certain scheduled time, and mail collected as well as left. Farmers

will be asked to put out letter boxes and to make other arrangements, which will reduce delays to a minimum.

As Others See Us.

This is what *The Western Canadian*, published at Winnipeg, Man., one of our live western papers, thinks of FARMING:

"We have received the November numbers of FARMING, the only weekly agricultural paper published in Canada. Its pages are replete with practical information on every phase of farm work. Its leading articles and editorial notes are excellent.

"It is perhaps the best farmers' journal in either Canada or the United States, and although an Ontario publication, contains a great deal that is valuable to western as well as eastern farmers."

Many others are of the same opinion. FARMING, as a weekly, takes the lead.

CANADA'S FARMERS.

James Tolton, Walkerton, Ont.

The subject of this sketch, Mr. James Tolton, was born in the township of Eramosa, near the city of Guelph, in 1839. He received his early education in the public schools of that vicinity, where at that time were taught many of the higher branches that are now taught at the high schools. In 1863 Mr. Tolton, then a young man of twenty-four years of age, commenced work on a bush farm in the township of Brant, in the county of Bruce. This farm now comprises 300 acres, and is a direct result of that energy and skill which have been characteristic of Mr. Tolton's farming operations.

Mr. Tolton inherited a native love for fine stock. His father was a breeder of good stock, and as far back as 1830 Mr. Tolton's grandfather purchased a purebred Shorthorn bull, which was one of two imported by the late Mr. Wingfield. In 1868, after having cleared a portion of his farm and after having erected suitable buildings, Mr. Tolton commenced the breeding of Shorthorns. His first purchase was that of a heifer from the late Thomas Arkell, of Arkell, Ont. As the business increased the herd was added to by purchases from other breeders in the province. Mr. Tolton always kept the best stock bull his means would afford, and thus was able to establish the fine herd of Shorthorns which he now possesses.

Besides being a breeder of Shorthorns, Mr. Tolton has won distinction as a breeder of high class sheep. It is perhaps as a breeder of Oxford sheep that Mr. Tolton has won his greatest distinction as a breeder of purebred stock. His first experience in sheep breeding was with Leicesters, his first purchase being made about the same time that he began the breeding of Shorthorns. After keeping Leicesters for a while he invested in Cotswolds. In 1881 he began the breeding of Oxfords and made his first selections from an importation made by Mr. Peter Arkell, of Teeswater. The following year other purchases were made from imported stock. Mr. Tolton now keeps only Oxford sheep and makes a specialty of that breed.

Mr. Tolton has made several large importations of Oxford sheep. In 1890 his son visited England and brought home with him forty head of Oxfords. Large importations were also made in 1892 and 1893.

In the show ring Mr. Tolton has confined his operations, as far as Shorthorns are concerned, to the local fairs of his own county, where he has always been successful in winning a large share of the prize money. But as an exhibitor of Oxford sheep at the leading fairs of the province he is well known to every breeder. Among his notable winnings are those of 1890, when he exhibited at Detroit, Toronto and London, and was awarded the flock prize at each of these fairs. He continued to exhibit at the leading fairs till 1895, winning many valuable prizes for his Oxford sheep. Since that time he has not exhibited.

Though Mr. Tolton has not made any notable sales that stand out prominently from the others, he has perhaps on the average secured as high prices for his sheep as any other breeder of Oxfords. The Americans have been his chief customers, and many of the large flocks of the Western States and the Territories have been replenished by drafts from Mr. Tolton's flock. Mr. Tolton's herd at present consists of twenty Shorthorn cows and thirty breeding Oxford ewes.

Mr. Tolton's business energy and integrity have been fully recognized by those who know him best. For the past seventeen years he has been a member of the council of his own municipality. During this time he was for four years deputy-reeve and for ten consecutive years reeve of his own township. He has also served one term as warden of the county of Bruce, and is at present President of the Farmers' Central Mutual Fire Insurance Company. In connection with the live stock associations of the province, Mr. Tolton has been honored many times by election to responsible positions. At present he is President of the Dominion Sheep Breeders' Association, and also a member of the executive committee of the Provincial Fat Stock and Dairy Show.

CARE OF BREEDING EWES.

It is not so necessary to have the quarters for the ewes warm as it is to have them dry and free from draughts. They should not be too crowded, either in the building or at the feed trough. Large ewes should have at least one and a half feet of space at the feeding rack; if they do not have this amount they are apt to crowd one another, which often results in the birth of dead lambs. Every ewe should have from ten to fifteen square feet of space in the building.

The amount of feed to be given during the winter will depend on the condition of the ewes when they went into winter quarters. If they were thin in condition they will require more feed than if they were fat at that time. It pays to keep the ewes in good condition, for then the lambs will come healthy and strong. Handling the ewes is the only way of telling what condition of flesh they are in, and from a knowledge of this the amount of feed to be given can be determined.

A breeding ewe weighing about 150 lbs. and in good condition should have about one-half pound daily of bran or oats. She should also have some succulent food, about two pounds a day, and the same weight of dry fodder, such as clover hay or cut corn fodder. It is a good plan to weigh the feed occasionally, and thus know definitely what is being fed. Many farmers only guess at the amount they feed.

Over-feeding is to be avoided, especially if the ewes do not get sufficient exercise. Disease is likely to occur, and the lambs will be large and weak. Under-feeding is also favorable to disease, and gives undersized, weak lambs. The condition of the ewes as regards flesh should be the controlling factor in feeding. Of course the quality of the fodder will determine to some extent also how much of it should be given, and it will also affect the amount of grain to be fed. When within two weeks of lambing time the grain ration should be doubled.

Breeding ewes should have a supply of succulent feed at all time. There is nothing better for them than turnips, though sugar beets, mangolds, and corn silage can all be used with good results. Immediately before lambing the quantity fed should not be too large. After lambing they may be fed unlimited quantities, as it tends to increase the flow of milk. Three pounds for each ewe per day will not be too much before lambing time. Corn silage is a good succulent food, and if not more than three to four pounds per day per ewe is fed, will give very satisfactory results.

The most satisfactory grain to feed is oats the first part of the winter, and bran as lambing time approaches. Say half a pound of oats per ewe per day until near lambing time, then one pound of bran. This will be sufficient for ewes weighing from 150 to 200 lbs. Corn is not a suitable food for breeding ewes, it is too fattening. For best results in general thrift, growth of wool and production of lambs the breeding ewes should get some grain during the winter. You can't withhold the grain all winter and expect to get as good results by feeding a short time before lambing time. Feed a little all winter, even if it is only a

quarter of a pound a day to each ewe. Among the coarse fodders for winter feeding, clover hay, pea straw, corn fodder, oat hay, oat straw, and millet rank in value in the order named, when everything is taken into consideration. Corn fodder (with the ears removed) is a very satisfactory food. From 1½ to 2 pounds of any one of the coarse fodders just mentioned, with from 2½ to 3 lbs. of corn silage or from 2 to 3 lbs. of roots and one-half lb. of oats will make a good day's ration for a good-sized ewe. If they waste too much of such a ration reduce the amount a little.

Give the ewes all the fresh water they want; keep salt in a box where they can get it at will, and with proper feed there will be little trouble at lambing time.

PREVENTING MILK FEVER.

Many a dairyman can testify to having lost his most valuable cow with milk fever. Where the cows are poorly fed nothing is known about this scourge of the dairy, but in those stables where cows are kept and fed to make a profit it is of frequent occurrence. We find a few dairymen are on the look-out for it, and the usual precaution that is taken is to withhold the greatest part of the rich, strong food for at least a week, often two weeks, before the cow is expected to calve. Some dairymen go so far as to reduce the feed to only straw and a little hay. As a general rule the cow is also well physicked a few days before and immediately after calving. This treatment tends to "cool the blood," or, in other words, a very large share of the rich, strong food that has been going into the blood is removed, and the cow's system is in a better condition to pass through the changes which occur at the time of calving.

A correspondent of the *North British Agriculturist*, in writing about a visit to Professor McConnell's farm, in Essex, mentions the way "coming in" cows are treated at this farm to prevent milk fever. All doubtful specimens are brought in and physicked, and if, after calving, there are unmistakable signs of milk fever, the following treatment is resorted to with a marvellous degree of effect:

FIRST DOSE.

Chloral hydrate..... 1 oz.
Potass bromide..... 1 oz.
Tincture aconite..... 15 drops.

SECOND AND FOLLOWING DOSES.

Chloral hydrate..... 6 drams.
Tinc. of aconite..... 2 drams.

A dairyman reports good results from giving a cow threatened with milk fever 20 drops of tincture of aconite once every two hours. In less than twelve hours the cow was alright.

Another treatment is to give ½ pt. of whiskey, ½ oz. fluid extract of belladonna, and 2 drams of tincture of nux vomica every three hours on the first symptoms of milk fever appearing.

In all cases of milk fever it is well to blanket and keep the animal warm. A mustard plaster along the spine is also good, so are injections of soap and water, but these alone are not enough.

HOW TO BOIL POTATOES.

Professor H. Snyder, the chemist of the Minnesota Experimental Station, has been conducting experiments in boiling potatoes in some five or six different ways in order to find out what loss of food value occurs in cooking. The cooking of potatoes so as to retain the highest amount of food value is a very important question.

One of the most common ways of boiling potatoes is, first, to peel the potatoes, soak them in cold water for an indefinite period, and boil them, starting with cold water. Another way is to omit the soaking, and to place the potatoes directly in either hot or cold water to boil. Sometimes the potatoes are not peeled, but, after cleaning, are placed directly into the kettle of either hot or cold water for boiling.

From a number of trials made at this station some time ago and reported in Bulletin No. 42, it was shown that the loss of albumen was found to vary from 2 to 80 per cent. of the total amount in the potato. Further trials were made in which different kinds of water, as hard lime water, alkali water, and distilled water, were used. In each trial from three to five fair sized potatoes were used, and in all twenty-eight separate trials were made. Both the potatoes and the water in which the potatoes were boiled were analyzed.

When the potatoes were peeled, soaked in water five hours, and started in cold water, over 57 per cent. of the total nitrogen was extracted and lost. In the earlier trials, reported in Bulletin No. 42, when the potatoes were cut into medium sized pieces, soaked and boiled slowly, 80 per cent. of the total nitrogen was extracted and lost in the drain water. The losses of nutrients are the heaviest when the potatoes are peeled, sliced, soaked and then boiled slowly, starting with cold water.

The losses of nutrients are the least when the potatoes are not peeled, and are placed directly into hot water, or even cold water, provided the water is warmed rapidly. The loss of total nitrogen is then reduced to about one per cent. When the potatoes are peeled and placed directly into hot water, about eight and a half per cent. of the total nitrogen is extracted and lost. If the potatoes are peeled and placed into a kettle containing cold water, the losses are much greater. The smaller the pieces and the slower the rate of cooking, the greater the losses.

The losses were about the same with hard lime water, alkali water and distilled water. The losses of starch and dextrin are insignificant compared with the losses of nitrogen and ash. When the potatoes are not peeled, the combined losses of starch and dextrin are less than a tenth of one per cent. When the potatoes are peeled, the loss of soluble starch and dextrin ranges from .63 to 1.50 per cent.

The loss of such a large proportion of the total nitrogen of the potato is a serious matter. Before cooking, there is about one part of protein to every ten or eleven parts of starch and starch-like bodies. After improper cooking, and losing half of the total nitrogen, the ratio is widened to one to twenty or more. In a bushel of potatoes a loss of 25 per cent. of the vegetable albumen is equivalent in food value to all of the protein in a pound of sirloin

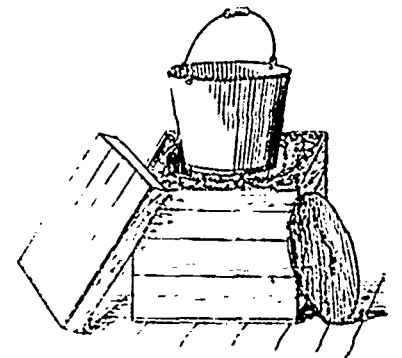
steak. In many cases the losses are even greater than 25 per cent.

These trials suggest, that in order to retain the highest food value: (1) Potatoes should not be peeled and soaked. (2) They should be placed directly into hot water. (3) The potatoes should not be cut into fine pieces. (4) An unnecessarily large amount of water should not be used for boiling.

A CHEAP FEED COOKER.

A warm breakfast is very desirable for the hens on the farm, also for the young pigs, but the trouble to get it is often so great that none is provided. Where there is a regular feed cooker there is no trouble, because if the food is cooked the afternoon before it will be just right to feed in the morning.

Where there is no feed cooker on the farm a very simple one can be made with a little labor, from a box and some straw or hay. Get a box a little larger in size than a vessel that holds the required amount of feed. Pack in four or five inches of straw in the bottom of the box, then place the vessel that is to contain the food in the centre of the box and pack around it with straw. Put in the meal and wet



it until sloppy with boiling water. Do this at night; cover tightly, and let stand until morning. The mass will cook during the night and be at the right temperature to feed in the morning.

If the quantity of feed wanted is small, a pail with a flaring side can be used. It can be lifted out and taken away, for the straw will keep its shape. If a larger quantity is wanted a permanent vessel had better be used, either a very large pail or half of a barrel. If the inside vessel is to be a permanent one, the packing can be made of chaff or cut straw. A close-fitting lid should be made for the inside vessel and another to cover the box.

A box made similar to this can be used for keeping cream warm so that it will ripen more quickly in the winter, and not have it standing beside the kitchen stove so long.

A CLEANLY WAY OF MILKING.

CLARENCE C. GATES.

The thumb and finger pressure on the cow's teat is not the cleanest way by which a cow can be milked, although it is the quickest and easiest. Indeed, a cow can hardly be milked in a dirtier manner, for all the filth on the teat must necessarily be scraped from it by the rapid, downward pressure. Neither is such a way of drawing the milk

nearest that of the calf. When the thumb and all the fingers are closed tightly about the teat, the grasp is nearer that of the calf than any other. Now, if the hand is drawn slightly downward, the milk is pressed from the teat in a steady stream.

Such a method of milking is the cleanest possible one. The least dirt falls, and the motion and grasp of the hand is similar to the action of the calf's mouth while sucking. This method of milking is slow and tedious, if the teat is short, but the cow can be milked dry, and the milk thus obtained is clean.

SUGGESTIONS ON SHIPPING POULTRY.

By W. R. GRAHAM, Bayside.

At this season of the year poultry is coming into the market in vast quantities, sometimes more than the local demand requires, and consequently very low prices are the result. True, prices are low at this season in the large cities, but still they may be sufficiently high to warrant shipping to them.

What is sought after—Small or inferior stock is not wanted at all. My experience is that either broilers or roasters sell well, but intermediate stock sells at a discount. Broilers weigh from 1½ to 2 lbs. each. The fancy prices for broilers begin in March. I have realized as high as 40 cts. per lb. for them at that season of the year; Roasters weigh from 4 lbs., and upwards. Smaller birds usually sell a few cents less per pound and so also do white fleshed fowls. In shipping two shipments of poultry early in August, one yellow fleshed, the other white fleshed, the former realized two cents more per pound, both lots were in similar flesh as regards fatness, etc. Well fatted and poorly fatted fowls usually sell at a similar ratio as compared with the above. Send what the market wants. Do not mix lean and fat, yellow fleshed and white fleshed fowl together and expect to get the top price, for often one party buys the lot at the going price for the inferior class. When shipping, bear in mind the results the apple dealers had when they put culls in among the good apples. The results will be the same in shipping poultry.

Fattening—Fowls to be fattened should be confined some ten days or two weeks before killing time and be fed all they will eat up clean, largely of corn. If it is convenient, give milk or meat. Be sure to give plenty of water and don't encourage exercise. Excess of either meat or milk is apt to cause disorder of the bowels which will retard fattening. One pound of meat every other day is sufficient for 16 fowls.

Killing and Dressing—Starve all birds at least 12 hours, 18 hours preferred, so that the crop may become empty. Pick dry, commencing immediately after sticking, which is done by making an incision in the roof of the mouth, immediately below the eyes, also sever the jugulars by sticking just behind the ears. Pick as rapidly as possible, taking care not to tear the flesh. If torn, sew with fine thread before the birds become cold. Don't take off the head and feet. The outer half of the wing should not be

picked, and also the upper half of the neck. Wash all blood from the mouth and hang up to drain and cool. When thoroughly chilled, pack as neatly as possible, in boxes or barrels. The weather at this season is cool and no ice is required.

FEEDING FOR EGGS.

SOMETHING WHICH EVERY POULTRY-MAN SHOULD BE POSTED ON.

The profit is always sure when every detail is correct. Cheap food must not be estimated by the price paid for it in the market. The cheapest food for the poultryman or farmer is that which gives him the largest number of eggs. It matters not what the food costs, so long as the eggs correspond. It is the product by which we should measure and estimate.

Green bones are not used as extensively as they should be, because grain can be obtained with less difficulty and at a low cost, but as egg-producing material the bone is far superior to grain; nor does the bone really cost more than grain in some sections. The cutting of the bone into available sizes is now rendered an easy matter, as the bone-cutter is within the reach of all. Bones fresh from the butcher have more or less meat adhering, and the more of such meat the better, as it will cost no more per pound than the bone, while the combination of both meat and bone is almost a perfect food from which to produce eggs.

If the farmer can get two extra eggs per week from each hen in winter, he will make a large profit. We may add that if the product of each hen can be increased one egg per week only, in winter, that one egg will pay for all the food she can possibly consume, and it therefore pays to feed the substances that will induce the hens to lay. If the hens are consuming food and yet producing no eggs, they will cause a loss to their owner; and this happens every winter on a large number of farms. The hens receive plenty of food, but not of the proper kind.

A pound of cut green bone is sufficient for sixteen hens one day, which means that one cent will pay for the bone for that number of fowls. If one quart of grain be fed at night to sixteen hens, and one pound of bone in the morning, it should be ample for each day in winter. In summer only the bone need be given. Such a diet provides fat, starch, nitrogen, phosphates, lime, and all the substances required to enable the hens to lay eggs. As an egg is worth about three cents in winter, it is plain that it is cheaper to feed bone than grain, as the greater number of eggs not only reduces the total cost, but increases the profit as well.

The bone-cutter is as necessary to the poultryman as his feed-mill. It enables him to use an excellent and cheap food, and gives him a profit where he might otherwise be compelled to suffer a loss. It is claimed that a bone-cutter pays for itself in eggs, and really costs nothing. Bones are now one of the staple articles of food for poultry, and no ration should have them omitted. They are food, grit, and lime, all combined in one, and the hens will leave all other foods to receive the cut bone. If cut fine, even chicks and ducklings will

relish such excellent food, while turkeys grow rapidly on it. To meet with success requires the use of the best materials, and green bone beats all other substances as food for poultry.—*Poultry Age.*

MORE SUNLIGHT FOR PIGS.

Judging from the dark places in which pigs are kept during the winter, a person would naturally come to the conclusion that they were a class of animals that differed materially in this respect from the rest of the farm stock. They, however, do not differ from other stock in their need of sunshine. A young pig is like a flower, it must have plenty of sunlight to enable it to develop and grow to perfection, and we believe that many a litter has been seriously injured through the lack of sunshine. This point was very forcibly brought out by one of our correspondents lately. We think a great mistake has been made in this respect in the building of many piggeries. Too often only meagre provision has been made for lighting the piggery, and none whatever for giving the pigs a sunbath during the winter months. The piggery should be situated in such a way that the sun can shine into the pens a good part of the day. It might be necessary to put in a few more windows to do this, but it will pay to do so. During the summer the glass can be removed and the opening covered with a piece of sacking as a screen to keep out the sun and the flies.

Many piggeries might be changed at small expense to admit of a plentiful supply of sunlight. A brood sow should always have a bright place in which to produce her litter, and the young pigs should have the brightest pen during the winter. A little attention to this question of light will save money, and prevent disappointment. Give the pigs and all the farm stock more sunlight in their stables.

THE GENERAL PURPOSE COW.

At the recent successful convention of the Iowa State Dairymen's Association Prof. C. F. Curtiss gave an interesting lecture, with illustrations of the various breeds of cows. While acknowledging that the specific dairy cow had her place where exclusive dairying is desired, he claimed room for the cow which may serve both beef and milk purposes, even if it be to a lesser degree. It is true the value of the carcass of an old cow is of no importance, but the point is to raise good steer calves. He thinks it requires more care in feeding the double purpose than the special purpose cow, and mentioned a case where a Jersey was completely spoiled for the dairy by feeding. He finished with a strong plea to go less by breeds or types, but to submit each individual to a careful test. We must not run away with the idea that the large or the small cow is the best for the dairy. Test your cows.

IT PAYS TO PLEASE THE COW.

The action of milking must be made pleasant to the cow. Necessarily, if the cow suffers pain or inconvenience, it must disturb the regular nervous action by which the flow of milk is caused. It, in fact, causes this nervous action to take quite another course, and leaving the effect on the udder unexercised, it disturbs the cow, and

the flow of milk is lessened. It should be the effort of the milker to make the sensation of it pleasing to the cow, as the sucking of the calf is unquestionably. The natural bunting of the calf, too, is imitated by the good milker, who, as soon as a teat is emptied raises the hand, and lifts the bottom of the udder with the teat, not only drawing down the teat and squeezing it gently, but he lifts it; and the raising of the hand, lifting the lower part of the udder, presses the upper part, and so excites the milk glands into effective action. Then closing the thumb and forefinger, and the other fingers downwards, successively, the milk which flows into the exhausted teat, as this by its elasticity opens and makes a vacuum, fills the teat, and immediately the closing of the hand forces the milk out of the teat into the pail.

HOW TO LINE BUTTER TUBS WITH PARCHMENT PAPER.

C. T. Almy in the New York *Produce Review* thus tells how he lines butter tubs with parchment paper.

After you have your parchment lining soaked and ready, take a roller fourteen inches long, two inches in diameter at the large end, one and one-half inches at the other, spread the paper out on a smooth board, being careful to have it smooth. Then roll it on the roller, keeping the small end to the left. Place roller in the tub and unroll to the left, following up with a paper-hanger's brush. You will be surprised how quickly and how smooth a tub can be lined.

CORRESPONDENCE.

MORE ABOUT THE DECADENCE OF THE FAIR SYSTEM.

Editor of FARMING:

SIR,—I cannot quite agree with Mr. J. E. Richardson in his remarks with regard to the decadence of the fair system. Now, if it were arranged as he suggests, to hold about three fairs in all, the raising of purebred stock would soon narrow down into the hands of a very few men who already have or could afford to buy prize-winners. It is a well known fact that quite a number of the prize-winners (especially the females) are practically useless as breeders, and, therefore, it is not from these that our stocks are kept up. Consequently the fairs would soon develop into a fat stock show, where a man would not stand any chance were he to take his stock in ordinary breeding condition. We all know it is an expensive matter to attend fairs at a distance. Unless a man had a full line, say at least a car load, he would lose money even though he won good prizes. Now, on the other hand, if a man has a few head of good stock (workers) he can take them to the local fairs, say within a radius of 100 miles, and perhaps win enough to pay expenses. His neighbors can then see the quality of stock he keeps. When the fairs are over the stock returns home to take up the duties it laid aside to attend the fair. Who can say as much for the majority of the prize-winners attending the large fairs? They are like the English hunter. When the season is over he is turned into a loose box or paddock, to rest until the next season commences.

E. EDWARDS.

Danville, Que.

The Ontario Agricultural Gazette

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

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

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

BENEFITS OF MEMBERSHIP.

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

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

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

The name and address of each member, and the stock he has for sale, are published once a month. Over 20,000 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 Breeders will be published in the first issue of each month, of Sheep Breeders in the second issue, and of Swine Breeders in the third issue. Members having stock for sale, in order that it may be included in the BULLETIN, are required to notify the undersigned, by letter, at least seven days before the date of issue, of the number, breed, age and sex of the animals. Should a member fail to do this, only his name and address will appear in the next monthly issue. The data will be published in the most condensed form.

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

THE DOMINION CATTLE BREEDERS' ASSOCIATION.

Shorthorns

Birrell, D.	Greenwood.	Jeffs, E. & Son	Bond Head.
Blyth, R.	Marden.	Linton, W.	Aurora.
Bonnycastle, F.	Campbellford.	Martindale, F.	York.
Brown, A. & D.	Iona.	Miller, J.	Markham.
Burrett, I. G.	Greenbank.	Miller, R.	Brougham.
Cooper, J. V.	Pictou.	Milloy, D.	Paris.
Cowan, W.	Guelph.	McCorkindale, J.	Guelph.
Davidson, J. L. & Son	Balsam.	Smith, W.	Columbus.
Douglas, J.	Caledonia.	Smith, W. H.	Hay.
Elliott, W. K.	Hesper.	Whitelaw, A.	Guelph.
Gardhouse, J. M.	Highfield.	White, R. F.	Perth.
Gibson, J. J.	Denfield.		
Barclay, I.	Port Hope.		
		Cow and bull, 2 years; 2 heifers, 2 years; bull calf, 10 months; 5 heifers, 8 to 22 months.	
Bolton, A. & F.	Armstrong's Mills.	Bull calf, 7 months; 2 heifers, 2 years.	
Campbell, J.	Woodville.	2 bull calves, 6 and 10 months.	
Davies, R.	Toronto.	1 red bull, 2 years.	
Fairbairn, H. K.	Theford.	Bull, 7 months; 5 heifers, 1 to 2 years.	
Grainger, W. & Son.	Londesboro.	3 young bulls; females all ages.	
Gorwill, S. B.	Fanshawe.	Bulls and heifer calves.	
Johnstone, A.	Greenwood.	14 bulls; 10 yearling heifers; 10 heifers, 2 years.	
Rusnell, D. H.	Stouffville.	3 bulls; 7 to 9 months; cows.	
Shaw, A. J. C.	Thamesville.	Cows, 2 heifers, young bulls.	
Sibbald, F. C.	Sutton West.	30 cows; 20 heifers, 2 years; 15 yearlings; 5 yearling bulls; 16 bull and heifer calves.	
Smith, A.	Trowbridge.	Bull calf, 8 months; bull calf, 6 months; heifer calf; heifer, 1 year.	
Smith, Jas. S.	Maple Lodge.	6 bulls, 5 to 9 months; bull, 28 months; heifers, 1 and 2 years; a few cows.	

Ayrshires

Anderson, J. A. R.	Hamilton.	Peterson, C. W.	Calgary, Alta.
Ballantyne, Hon. Thos. & Son.	Stratford.	Sorby, D. & O.	Guelph.
Guy, Thos., Estate of.	Oshawa.	White, R. E.	Perth.
McCormack, J. & Son.	Rockton.		
Dyment, N.	Clappison's Corners.	Bull, 15 months; bull, 3 months; a few females.	
Caldwell, Bros.	Orchard.	7 bulls, 5 months to 2 years; 2 heifers, 2 years; 2 yearling heifers.	
Clark, J. G.	Ottawa.	Bull, 4 years; 3 bull calves.	
Davies, R.	Toronto.	6 bulls (imp.), 1 year and under.	
Jamieson, R.	Perth.	Cow, 8 years; 2 cows, 7 years; 2 heifers, 20 months; 3 heifers, 8 months.	
Reid, R. & Co.	Hintonburg.	Bull, 15 months; bull, 27 months.	
Smith, W. M. & J. C.	Fairfield Plains.	Bull, 3 years; bull and heifer calves, 1 and 2 months.	
Yuill, J. & Sons.	Carleton Place.	3 bull calves, 3 months; females all ages.	

Jerseys

Gibson, R.	Delaware.	Smith, J. H. & Son	Highfield.
Snell, J. C.	Snelgrove.	Wood, W. J.	Cornwall.
Bull, H. H. & Son.	Brampton.	17 A. J. C. C. heifers and heifer calves.	
Dyment, N.	Clappison's Corners.	Bull, 2 months.	
Ele, L. & F.	Boxall.	Bull calf; grade heifers, 1 to 2 years.	
Jamieson, R.	Perth.	Cow, 3 years; 3 bulls, 4 months, 1 year, and 2 years.	
O'Brien, J.	London West.	A. J. C. C. yearling bull; A. J. C. C. bull, under 1 year; 2 A. J. C. C. bulls, under 6 months.	
Silcox, E.	Shedden.	Yearling bull, bull calf; high grade heifers.	

Durbams

Biggins, W. J.	Clinton.	Mutrie, J. M. P. P.	Oustic.
Gibson, R.	Delaware.	McCallum, J. R.	Iona Station.
Leak, J.	Greenbank.	Thomson, E.	Guelph.
Mariyn, J. W.	Canton.	Cow, 4 years; 3 yearling heifers, bull calf, 3 heifer calves, about 6 months.	
Shaw, A. J. C.	Thamesville.	3 bull calves, 6 to 8 months; 3 heifer calves, 6 to 8 months; 1 yearling heifer; heifer, 2 years.	
Tolton, Jas.	Walkerton.	4 bulls, 5 to 12 months; 3 yearling heifers; 3 heifer calves.	

Polled Angus

Bowman J.	Guelph.	McFarlane, J.	Clinton.
Jameson, W. S.	Dutton.	McGregor, I. D.	Brandon, Man.
Murison, J.	West Lorne.	Robertson, T.	Dunford.
Sharp, J.	Rockside.	4 bull calves, 7 to 12 months; 4 females, 2 to 8 years.	
Varcos, J.	Carlow.	6 bulls, under 1 year; 10 females, all ages.	

Holsteins

Clemons, G. W.	St. George.	Bull, 2 years; bull, 4 years; heifer, 2 years.	
Hallman, A. C.	New Dundee.	Bulls, 7 months and younger; heifer, 2 years; other females.	
Rice, A. & G.	Currie.		

Galloways

Shaw, A. M. & R.	Brantford.	Sibbald, J.	Annan.
McCrae, D.	Guelph.	Bull, 2 years; 6 bull calves; 8 yearling heifers; 12 cows and heifers.	

Highland Cattle

Peterson, C. W.	Calgary, Alta.		
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Devons

Rudd, W. J.	Eden Mills.		
Harper, S.	Cobourg.	Stock all ages, both sexes.	

Herefords

Smith, H. D.	Compton, Que.	Bulls, 8 to 10 months.
Stone, Alf.	Guelph.	15 bulls.

Guernseys

Butler, W. & Son	Dereham Centre.
McNish, C. H.	Lyn.

Grades

Hood, G. B.	Guelph.
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Miscellaneous

Wade,	Toronto.
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WHAT OTHERS SAY OF "THE ONTARIO AGRICULTURAL GAZETTE."

I have just been looking over THE GAZETTE published in FARMING. It will no doubt serve a very useful purpose.

SIDNEY FISHER,
Minister of Agriculture for the Dominion.

Allow us to congratulate you upon the carrying out of your scheme. No Jubilee medal could be more appreciated by the members of the Breeders' Associations than the weekly issues of THE GAZETTE.

C. & E. WOOD,
Freeman, Ont.

We have had a great many enquiries from the announcement of stock for sale made in THE GAZETTE, published by FARMING, and The Sun. I believe the scheme will prove a very good one.

O. W. SMITH,
Maple Lodge, Ont.

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 ONTARIO PROVINCIAL FAT STOCK AND DAIRY SHOW.

MORE ENTRIES THAN EVER BEFORE.

The entries for the "Winter Show," to be held in Brantford December 6th to 9th, are more numerous than ever before, and are as follows, for the years 1896 and 1897:

	1896.	1897.
Fat cattle.....	101	110
Dairy cattle.....	24	50
Fat sheep.....	303	344
Fat swine.....	183	226
Total.....	611	730

The total number of entries in 1896, including sweepstakes, was 658. The 730 for this year includes the sweepstakes entries. At the time of writing, December 1st, there are yet two days before the books are closed. Doubtless from 50 to 100 entries will be yet received.

THIS WEEK'S MEETINGS.

HELD IN BRANTFORD.

The Ontario Provincial Fat Stock and Dairy Show, December 6th to 9th.

The annual meeting of the Dominion Cattle Breeders' Association, December 6th, 7.30 p.m.

Public meeting, at which addresses will be delivered by noted Canadians and Americans, December 7th, 7.30 p.m.

Annual meeting of the Dominion Sheep Breeders' Association, December 8th, 7.30 p.m.

Annual meeting of the Dominion Swine Breeders' Association, December 9th, 7.30 p.m.

HELD IN GUELPH.

The Christmas Fat Stock and Poultry Show, December 9th and 10th.

The annual meeting of the Ontario Agricultural and Experimental Union, December 8th, 9th, 10th.

FARMERS INSTITUTE MEETINGS.

I am looking forward to the most successful meetings yet attended by me. My reason for such hope is that up to date I have received more programmes of meetings than I ever received before. This shows that the secretaries are waking up to their duties. The speakers can give better addresses if they know the topics selected, and the people know what to look for, if programmes are distributed.

H. H. DEAN,
Professor of Dairy Husbandry,
O.A.C., Guelph.

How is it that I have not received more copies of posters and programmes advertising the Farmers' Institute meetings to be addressed by Mr. A. Elliott and myself during December?

JOHN ROBERTSON,
Late Prof. of Dairy Husbandry in New Brunswick.

Mr. Robertson and Mr. Elliott visit the Institutes which compose Division IX., and Prof. Dean and Mr. John McMillan, M.P., the Institutes comprising Division X. These letters speak volumes.

The attention of the secretaries and officers of local institutes are respectfully called to clauses 30, 31 and 1 of the Act and Rules Governing Farmers' Institutes, which read as follows:

30. Every meeting of an Institute, except the annual meeting, should be advertised by issuing posters, not less in size than 15x20 inches, on which should be printed an attractive programme of the meeting, giving date and place of meeting, hour of opening, the name and address of the speakers, topics to be discussed by each, also the hour at which each speaker will address the meeting, the time to be occupied by each address, also the time allowed for discussion after each address, and such other information as the executive deems necessary. A copy of said bill should be sent at least two weeks previous to the date of meeting to each postmaster, each schoolmaster, each miller, each blacksmith, and to other places of public resort in the district, which are within a

radius of ten miles of the place of meeting, with a request to post in a conspicuous place. It shall be the duty of the officers and directors to exercise diligence to ensure the proper posting of said bills. In addition thereto, a programme of convenient size, containing similar information, should be distributed so as to reach its destination at least ten days previous to date of meeting. A copy of said programme should be sent to each member of the Institute, to farmers, journalists, public men and others in the district who reside within ten miles of the place of meeting. Such posters and programmes should announce that all interested are welcome, whether members of the Institute or not. Copies of said programmes should be sent to the school teachers in the district, with the request that they be carefully distributed among the children.

31. A copy of each poster and each programme shall be sent as soon as published to the superintendent and to each speaker advertised.

1. The Ontario Legislature has voted an appropriation for Farmers' Institutes for a grant of \$25 to one Institute in each district, on condition that an equal sum be granted by the county council or the municipalities in which the Institute is organized, and on such further conditions as may be imposed by regulations of the Minister of Agriculture.

Some Institutes are not complying with clauses 30 and 31. There is no reason why the form and wording of the posters and handbills issued should not meet the requirements here set forth. There has been a great improvement in the posters and bills printed to advertise Farmers' Institute meetings during the past three years. Still there are some Institutes very much behind in this particular. So far this year Peel County Institute has issued the best bill which has reached the superintendent. This county has an excellent secretary and president.

The members of each association are respectfully but urgently requested to notify the secretary each month regarding the animals they have for sale.

THE MOST SUCCESSFUL INSTITUTES.

In addition to 125,177 persons who attended the various sessions of the Institute meetings in 1897, excursions to the Ontario Agricultural College and Experimental Farm, Guelph, were conducted by various Institutes as follows:

Date.	Institute.	Number of Excursionists who visited the College Farm.
9.	S. Perth	450
	S. Ontario	350
10.	Prince Edward	300
	Dufferin	250
11.	S. Simcoe	900
12.	N. and E. Middlesex	1200
14.	N. Ontario	1200
15.	S. Simcoe	1400
16.	E. and W. Victoria	250
17.	N. Perth	1100
18.	W. Durham	350
19.	Haldimand	700
21.	Bruce	600
23.	N. Brant	600
24.	Wentworth	1200
25.	Halton	900
	Peel	700
	S. Waterloo	2000
26.	W. Simcoe	1600
28.	W. Huron	600
	S. Wellington	400
	Small excursions not included in above, say	1000
	Total	18050

The foregoing data were obtained from the officials of the Ontario Agricultural College, and are as accurate as it is possible to give. The total number of persons who attended, duly reported, Institute meetings and excursions in 1897 were 143,227. In addition to these, there were a number of meetings and excursions conducted by Institutes in Eastern Ontario, which were not reported to the superintendent and not credited in this report. The Institutes holding the largest number of meetings were:

Hastings North	20
Parry Sound West	15
York East	15
Grey North	14
Waterloo South	12
Ontario South	11
Simcoe East	11
St. Joseph Island	11
Middlesex North	10
Muskoka North	10
Simcoe West	10
Prince Edward	10
Durham West	9
Essex South	9
Kent East	9
Peel	9
Wellington South	9
Wentworth South	9

The Institute meetings which were the most largely attended were:

Institute.	Number of meetings held.	Total attendance.
Grey, S.	5	4240
Peterborough, E.	6	3895
Waterloo, S.	12	3545
Lanark, N.	8	3535
Simcoe, W.	10	2873
Middlesex, N.	10	2865
Middlesex, W.	8	2610
Dundas	5	2545
Wentworth, S.	9	2495
Simcoe, E.	11	2212
Lanark, S.	7	2195
Bruce, S.	5	2165
Perth, S.	5	2090
Victoria, E.	5	2090

The Institutes having the largest membership June 30th, 1897, are:

Name of Institute.	Number of members.
Waterloo, S.	465
Hastings, N.	390
Lanark, N.	390
Middlesex, N.	370
Ontario, N.	370
Peel	357
Middlesex, E.	331
Ontario, S.	326
Wentworth, S.	326
Grey, N.	305

Institutes having the smallest memberships are:

Name of Institute.	Number of members.
Algoma, E.	16
Addington	51
Manitoulin, W.	55
Brant, S.	64
Lennox	65
York, N.	69
York, E.	70

Though Algoma East has only sixteen members, it will be observed that Algoma Centre has 105 members, and Muskoka North, 128. The difference is entirely due to the efficiency or lack of efficiency of the local officers. This cannot be said of each Institute which has a small membership, but is generally the case. In a certain Institute district, east of Toronto, for several years no meetings were held and no members enrolled; the secretary being written to many times, finally replied, that it was no use writing to him, for he had tried to interest farmers, but found that they took no stock in Farmers' Institutes. Another person was asked to form an Institute, which he consented to do, and in less than two months a vigorous Institute was organized, and within four months the

names and addresses of 156 members were returned to the department. This Institute is now two years old, and is a pronounced success. The reason of failure and success in this district, was simply energy and efficiency in one case, and the lack of it in the other.

A number of the Institutes hold meetings every two weeks, excepting in July, August, and September. At these meetings in some districts, the proceedings are very informal. Each is a sort of experience meeting, where men who could not be persuaded to address a public gathering, or to prepare and read a paper are induced to reveal the secret of their success, and to meet neighboring farmers and enter into friendly and helpful discussion with them. These small meetings, which convene in the school houses or other suitable places, have proved of great value to those who attend, and also to the Institute system at large.

There are in every neighborhood clever and successful men and women, both old and young, whose experience and education renders them capable of imparting valuable information, or rendering pleasant entertainment.

THE FIRST WOMAN'S INSTITUTE.

The First Woman's Institute has been formed at South Wentworth in connection with the Farmers' Institute in that district. The following is the first annual report:

Report of the Woman's Institute at Saltfleet.

The Woman's Institute was organized February 19th, 1897, Mrs. Hoodless being the promoter. The officers elected were as follows:

Honorary President	..Mrs. John Hoodless.
President	..Mrs. E. D. Smith.
1st Vice-President	..Mrs. Melson.
2nd Vice-President	..Mrs. J. Dean.
Secretary	..Miss M. Nash.
Treasurer	..Mrs. J. H. McNeilly.

The object of this Institute is to promote that knowledge of household science which shall lead to improvement in household architecture, with special attention to home sanitation, to a better understanding of the economic and hygienic value of foods and fuels, and to a more scientific care of children with a view of raising the general standard of the health of our people. For the better carrying out of the objects of this Institute, it shall be divided into six divisions, namely: (1) domestic economy; (2) architecture, with special reference to sanitation, light, heat, etc.; (3) physiology, hygiene, medicine, calisthenics, etc.; (4) floriculture, horticulture; (5) music and art; (6) literature and sociology, education and legislation. One director is appointed for each division to arrange for papers, essays, addresses, etc., for each division at each meeting.

We have a paid membership of 76. There have been six meetings held, which have been found very interesting as well as beneficial. We have been favored with an excellent address from Mrs. S. T. Rorer, of Philadelphia, the great scientific cook of America; a very interesting paper by Dr. Mabel Henderson, also a paper on the value of foods by Miss Watson, a graduate of Mrs. Rorer's cooking school. Mrs. Hoodless has given very interesting talks, and the papers given on subjects in the different divisions by members

of the Institute, also discussions on the same, have made the meetings a great success.

(Signed.)

MRS. E. D. SMITH, M. E. NASH,
President. Secretary.

South Wentworth is the first Institute to take up this important department, but it is to be hoped that the day is not far distant when each local Farmers' Institute will have a Woman's Institute affiliated with it. The fact is now recognized that young women, as well as young men, require special training to fit them for life on the farm. Many thoughtful persons believe that a provincial school should be founded where farmers' daughters can receive a training suitable to their needs.

Ontario Agricultural College.

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

AVAILABLE POTASH.

By R. HARCOURT, Assistant Chemist, O.A.C., Guelph

It has been stated by those interested in the sale of potash fertilizers that the potash in wood ashes is not all in an available form, i.e., part of it is insoluble and is, therefore, of no use to the plant. To ascertain what truth there is in the statement we have, during this last summer, treated a number of ashes according to Dr. Dyer's method for determining availability of plant food. The following table gives the number of pounds of potash and the amount that would be immediately available in 100 pounds of the different ashes examined.

Table showing the availability of potash in a number of samples of wood ashes:

Name of ash.	Pounds of potash in 100 lbs. ash.	Pounds of potash available in 100 lbs. ash.	Per cent. of potash available.
White oak	9.39	7.64	82.33
Birch	8.58	6.82	79.48
Mixed ash	13.40	12.72	94.92
Walnut	4.62	4.61	99.87
Red Oak	5.75	4.72	82.09
Poplar	10.42	8.78	84.26
White ash	16.88	15.24	90.20
Butternut	3.99	3.56	89.22
Willow	9.59	8.19	85.40
Average	87.50

According to this method nearly 80 per cent. of the total potash of the birch ash, and, practically, all that of the walnut ash, or an average of 87.5 per cent. of the potash of all the ashes examined was found to be immediately available. In other words, an average of the nine samples experimented with shows that all but 12.5 per cent. of the total potash would be in a form in which the growing plant could make use of it at once.

Keep a slate or small note-book in a handy place, and make a memorandum of little things that should be looked after as they occur to you. Make a list of odd jobs to be done on wet and stormy days. In line with this pull out the sleighs, look them over, and have any repairs made that are necessary, so that they will be ready when wanted.

MARKET REVIEW AND FORECAST.

Office of FARMING,
Dec. 6th, 1897.

The cold weather and the fall of snow are having a good effect on the general trade of the country. The good price of wheat and the unusually good crop has greatly increased the amount of money in circulation in the country, and as a consequence cash sales in general business were larger during the past month than they have been for a number of years.

Wheat.

As predicted in our last review, the price of wheat has declined during the week. After all the rumors and despatches about the destruction of the Argentina wheat crop it seems to have come through these ordeals much better than expected. The *West despatches*, according to the *Montreal Trade Bulletin*, state that the crop will probably amount to 37,000,000 bushels. Contrary to expectation, Russia is shipping wheat, and has recently exported 3,250,000 bushels. It doesn't look as though Europe would soon be in a starving condition. Add to this the fact that Australia is likely to be an exporter instead of an importer of wheat, and it is likely that the new year will see lively changes in the price of wheat.

At Toronto the price of wheat dropped early in the week, and at the end of the week dropped another cent. For export wheat only 82c. is being offered by the ear lot for middle and north and west freights, spring wheat selling at 82c. and goose 77c. east. Manitoba wheat is somewhat easier, being 98c. at Sarina. At Montreal prices are only nominal at 91c. to 92c. for No. 2, red winter, and 90c. to 91c. for white.

Barley and Oats.

At Toronto the barley market is dull. Prices are nominal at 32c. for No. 2. For feed there is a little demand at 25c. to 26c. outside. At Montreal it is quiet at 32c. to 34c. for feed. Old barley, of good malting grades, 50c. to 55c.

At Toronto oats are a little easier than they were last week, and prices have declined a cent; mixed lots selling for 22c. and white at 23c. for ear lots north and west freights. On the farmers' market they are 25c. to 25½c. In Montreal the demand is steady. Local sales have been made at 27c. to 27½c. and these are about the figures for export trade.

In Manitoba the price of oats is away above the shipping basis, and a great deal of corn is being used throughout the country instead of feeding purposes.

Peas and Corn.

There has been really no change in the market for peas. They have been fairly steady at 44c. for ear lots, north and west freights. At Montreal prices are 50½c. to 51½c. in store.

At Montreal yellow Canadian corn is 35c. to 36c. in ear lots in store. American corn is about the same. At Toronto new Canadian yellow corn is dull at 25c. west. Old yellow corn is going for about 27c.

Rye and Buckwheat.

No change in the rye market; steady at 45c. west. At Montreal the receipts were nil, all the business being through shipments from western points.

Buckwheat is steady at 32c. west and north.

Milkfeed.

The market is unchanged at \$10 to \$11 for shorts, and \$7.50 for bran, west.

Potatoes.

The cold weather has lessened receipts, and prices are stiffer; 60c. in ear lots on the tracks, and 65c. and 70c. is being asked out of stores at Toronto. At Montreal prices are 55c. to 60c. on the tracks.

Honey.

Very little choice white clover comb honey is offering. Some poor comb honey was offered at Montreal, and sold for 10c. Quebec comb honey brings from 9c. to 12c.; extracted honey, 7c. to 9c.

Apples.

Reports from the shipment of apples to the old country reveal a large amount of fraudulent packing. This is to be deplored, and apple-growers and shippers will suffer in consequence. The *Trade Bulletin* says that a gruger in Montreal paid a high price for a barrel of choice apples; when he opened them there was a layer or two of good apples on top, but the rest of the barrel was filled with the poorest of culls and windfalls. Legislation is needed to make our fruit men honest. Apples are not keeping well; winter

fruit, and particularly Spies, are turning out very unsatisfactory. The poor-keeping qualities are attributed to the unusual rapid ripening of the fruit in the fall. Prices have not changed.

Eggs.

At Montreal the demand for new-laid eggs is firm. New-laid eggs 20c. to 21c. Good boiling stock has sold at 19c.; cold storage eggs, 12c. to 16c., and hined 12½c. to 15c.

The supply of eggs at Toronto is fair and the demand good. The market is steady at 16c. to 16½c. for strictly fresh gathered, 14c. for held fresh and cold storage, and 13½c. for hined.

Poultry.

The supply at Toronto has only been fair, the demand not much better. Turkeys are bringing 7c. to 8c., 5c. to 6c. for geese, 40c. to 60c. for ducks, and 20c. to 40c. for chickens.

At Montreal the supply was much in excess of the requirements of the Thanksgiving demands. Prices are a little lower. Turkeys have declined to 8c. to 8½c.; geese are slow at 5½c. to 6c.; ducks are scarce at 8c. to 8½c.; young chickens 6½c. to 7½c., and old fow now at 5c. to 6c.

Cattle.

Business at the Toronto cattle yards has been quiet during the week. Shippers are evidently holding for the Christmas markets. Hardly anything has been done in export cattle. Only a few are offering, and a few good ones sold for 4c. per lb.; a few old bulls changed hands at from 3½c. to 3¾c. per lb. Butchers' cattle continue low in price. The quality of those offering is not first class, consequently the market is dull, as the butchers are looking for prime stuff, and that will bring good figures. Good stuff brings \$3.60 to \$3.65 per cwt. quickly, but poor stuff is dull and sells below the \$3.50 mark. The price of stockers depends on the demand from Buffalo, and for some time this has not been heavy. Then, too, the quality offering is not as good as it was. Light stockers bring from 2¼c. to 3c., and feeders go for 3¼c. to 3½c. per lb. Farmers and distillery men are taking a few.

At Buffalo the cattle market has been very steady. Good fat to choice steers are bringing from \$4.50 to \$5; coarse rough steers, \$3.75 to \$4.30, and good butchers' cattle \$3.75 to \$4.50 per cwt. Canadian feeders \$3.25 to \$4.15, and stockers \$2.75 to \$4 per cwt.

Sheep.

The trade in sheep is much better than when last reported, and there is a much firmer tone to the market. On the Toronto market lambs bring from \$4.25 to \$4.40 per cwt.; extra good lots run up to \$4.50. The price per head ranges from \$2.50 to \$4.25 apiece; thus showing in a very marked way the advantage of raising good lambs. Shipping sheep are steady at from 3c. to 3¼c.; good ones may bring 3½c. Butchers' sheep are dull at from \$3 to \$3.50 per head.

At Buffalo choice Canada lambs bring from \$5.50 to \$5.80 per cwt., while lucky lambs will not bring more than \$5.50, and the poorer qualities drop away below \$5 per cwt. Good yearlings are bringing from \$4.40 to \$4.90, and culls drop to nearly \$4 per cwt.

Hogs.

There has been little change in the market; prices remained at the figures given in last week's report, although the offerings have been very small. The market is steady at 4½c. per lb. for choice bacon hogs. Light fat and thick fat hogs, \$4.10 to \$4.12 per cwt. Stags slow at from 2c. to 2¼c., and sows bring from 3c. to 3¼c.

May.

The market at Toronto remains practically unchanged; from \$8 to \$9 for ear lots on the track seems to be the ruling price. The report comes from Montreal that in the neighborhood of 200 carloads have been sold in Ontario for through shipment to the seaboard at from \$6 to \$6.50 f.o.b. It is also reported that some large quantities have been sold in Ontario for the lumber camps. At Montreal several car lots of No. 1 changed hands at from \$10.50 to \$11.

Cheese.

There has been no material change in the cheese situation since last week. The estimates of cheese in store in Canada have receded somewhat on closer inspection. The exact number of boxes on hand on this side will not be definitely known till the actual shipping returns are received. The market will probably remain inactive till after the holiday season, when a revival is looked for. Careful estimates place the value of the out-

put of Canadian cheese for 1897 at over \$15,000,000.

On the local cheese market not much business is being done. Most of the stock is out of the factory men's hands. Sales of some Eastern Octobers are reported as having been made during the week at from 7½c. to 8c. Some little interest is being taken by the dealers in the action of the factory men in the Campbellford district in shipping their own cheese direct to England. The outcome of their efforts will be watched with interest.

Butter.

Canadian butter seems to be gaining ground in England. Some recent quotations give American finest as selling at from 90s. to 94s., while Canadian finest is selling at from 96s. to 100s. Some one should draw Secretary Wilson's attention to these quotations. It is surely conclusive evidence that Canadian butter is looked upon as superior to American by those most capable of judging.

Choice late makes of Canadian creamery will give better returns just now if exported than if sold to the local trade. There appears to be very little life in the market here, and what little sales transpire are on the basis of 17½ to 18½c., earlier makes selling down to 17 and 16½c.

The supply of dairy butter is not very large east. There is a very good demand for rolls at from 15 to 16c. in Montreal.

There has been a good supply of dairy butter in large rolls at Toronto lately, and the demand for them has been good at 15c. Choice dairy tub butter is reported scarce, and prices are firm at from 15 to 16c.

Publishers' Desk.

Common Sense Ear Drums.—On another page will be seen the advertisement of Wilson's Common Sense Ear Drum. These drums are safe, comfortable, and invisible, and have no wire or string attached. Everyone troubled with deafness will consult their own interests by purchasing one of these valuable contrivances.

Maple Leaf Grinder.—The manufacturers of this improved grinder, the Gould, Shapley & Muir Co., Brantford, Ont., extend a cordial invitation to all visitors to the Provincial Fat Stock and Dairy Show to visit their works and see this grinder in operation. The factory is quite near the exhibition building. The Gould, Shapley & Muir Co. have shown their good will towards the show by donating one of their Maple Leaf grinders as a premium.

Smithfield Show.—The great Fat Stock Show of England is in progress this week from the 6th to the 10th. The number of entries at time of writing were 703, being 364 head of cattle, 199 pens of three sheep, and 82 entries of pigs, single entries and pens of two. For the carcass competition 24 cattle and 34 sheep have been entered.

Thorold Cement.—Our readers should notice particularly the advertisement of the Thorold cement, which appears in this issue. When a FARMING representative visited Thorold on Nov. 24th last, the steamer *Iona* was loading 3,000 blms. of Thorold cement to be used by the Dominion Government in building the Soulanges canal. This shipment completed an order for 22,000 blms. for this important work, and speaks well for the quality and reliability of this well-known cement.

Great Poultry Show.—The National Fanciers' Association, of Chicago, will hold their second annual show Jan. 24th to 29th, at the 2nd Regiment Armory Hall, on Michigan avenue, Chicago, Ill. The importance of this show is sufficient to secure excursion rates over the railroads, and anyone desirous of attending can arrange for cheap transportation by addressing the secretary, W. W. Hogle, 1015 Henson avenue, Evanston, Ill. Elaborate preparations are being made, and there is no doubt but what it will be the best show of the season in the central west.

Auction Sale of Jersey Cattle.—Messrs. Humphreys and Laitlaw, London, Ont., will sell by public auction on Thursday, December 9th, 1897, their entire herd of Jersey cattle. The sale will be held at "Etrick," six miles from London and one mile from Westminster Station, on the London and Port Stanley Railway, and will commence at 1 p.m. sharp. Dairy men should not miss this opportunity of securing

some high-class Jersey stock. Exhibitors at the Fat Stock and Dairy Show can leave Brantford on the last day of the show and reach London in good time for the sale. Catalogues giving full particulars regarding the sale will be sent on application.

The Farmers' Binder Twine Co.—The fifth annual meeting of this co-operative company was held in the Court House, Brantford, on the afternoon of the 10th of November. There was a very large attendance of representative stockholders from nearly every province and county in the Dominion, and individuals from a distance represented their neighbors. The meeting was one well qualified to impress upon those present that in co-operation there is tremendous strength. The financial statement was very satisfactory, and a dividend was declared the same as last year. Short addresses were made by leading shareholders, and some changes made in the by-laws. The work of the future was well outlined by the general manager. The officers for the ensuing year are: President, Hon. Thos. Ballantyne; vice-president, Robert Keith, M.P., Bowmanville; general manager, Joseph Stratford, Brantford.—Their factory is located near the building in which the Provincial Fat Stock and Dairy Show will be held, and a cordial invitation is extended to all visitors to inspect their establishment.

Ontario Fruit Growers' Association.—The thirty-seventh annual meeting of the association will be held in the Town Hall, Waterloo, on the 15th and 16th of December, 1897. The programme as arranged for promises to be a most interesting one. Mr. Orr, the Provincial Superintendent of Spraying, will give his report on and show samples of the results of spraying. He also reports on his work of inspecting the orchards of Ontario for the San José scale, and will have specimens of the San José scale on exhibition. Messrs. Woolverton and Fisher report on cold storage and results of trial shipments of fruit in 1897. Prof. Wm. Saunders, Ottawa, gives an address on "Methods of Maintaining the Fertility of Land in Orchards." Prof. L. R. Taft, Agricultural College, Michigan, is expected to be present and give an address. Dr. Jas. Fletcher, of Ottawa, is to speak on "Insects Injurious to Fruit in 1897." Prof. J. W. Robertson and the Hon. Sidney Fisher and others are also expected to address the meetings. The subject of packages and packing of fruit for export and similar subjects will be up for discussion. A meeting of the board of directors will be held at the Zimmerman House, the association's headquarters, on the evening of the 14th of December. Programmes and all information can be had from the secretary, L. Woolverton, Grimsby, Ont.

Stock Notes.

R. REID & CO., Hintonburg, Ont.: There has been a great shaking up among the dairy herds around Ottawa. The outbreak of tuberculosis at the Experimental Farm has set every dairyman to testing his cows. We had our herd of 66 head tested on November 3rd and 4th, by Dr. A. W. Harris, and we are pleased to report that he found the whole herd free from tuberculosis. The day is coming when every herd supplying milk to the city, or to the cheese or butter factory, will be required by law to have a certificate from a qualified veterinary that no disease exists in it. Our stock are doing well, and young heifers are developing into fine cows.

HENRY ARKELL, "Farmer's Farm," Arkell: This has been a very good season for Oxford down. I sold a car load of yearling ewes to Ed. Rice, Wyoming, U.S., and went out with them personally. A car load of yearling and ram lambs went to George McKerron, New-cx, Wis. A car load of ram lambs to R. Jones, Fort Steele, Wyoming, and 46 ram lambs to Donald McKerron, Calgary, Alberta. A large number have been sold in smaller lots to British Columbia, Manitoba, Northwest, and Quebec, and the United States. Also sold show lots to George McKerron, Ulrich Pruitt, Green-bury, Ind., and G. J. Campbell, Pittsfield, Ohio; all of whom write that they have been very successful in the show rings. When out west this fall for a month, I saw thousands of cross-bred Oxfords. They give great satisfaction there for their hardiness and early maturing qualities.

Maple Cliff Stock and Dairy Farm

AYRSHIRE CATTLE
BERKSHIRE AND
TAMWORTH PIGS

For Sale.—Two young Ayrshire bulls
15 and 27 months old. Also a number of
young heifers.

R. REID & CO.

One mile from Ottawa. Hintonburg.

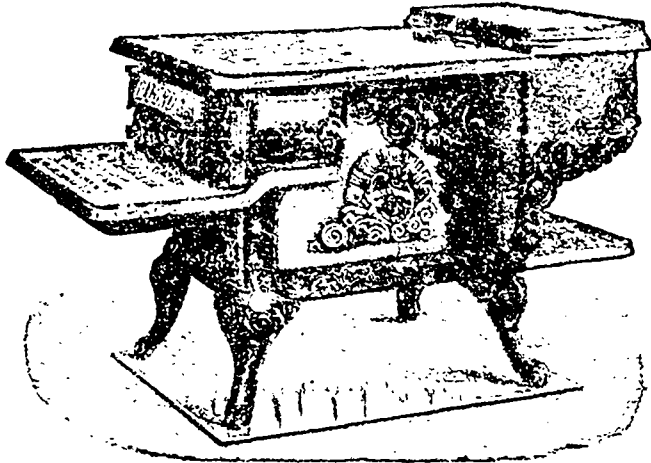
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Need a new stove?

.... You are sure of splendid satisfaction with an....

Oxford Wood Cook

It is a most popular stove in thousands of country houses, and its price is very low. Supplied in four sizes, with or without the reservoir and high shelf. It is a splendid worker, with a fine large oven and fire box. You'll be delighted with the comfort one will give.



OXFORD WOOD COOK EXTENSION

WRITE FOR FULL DETAILS AND ESTIMATE.

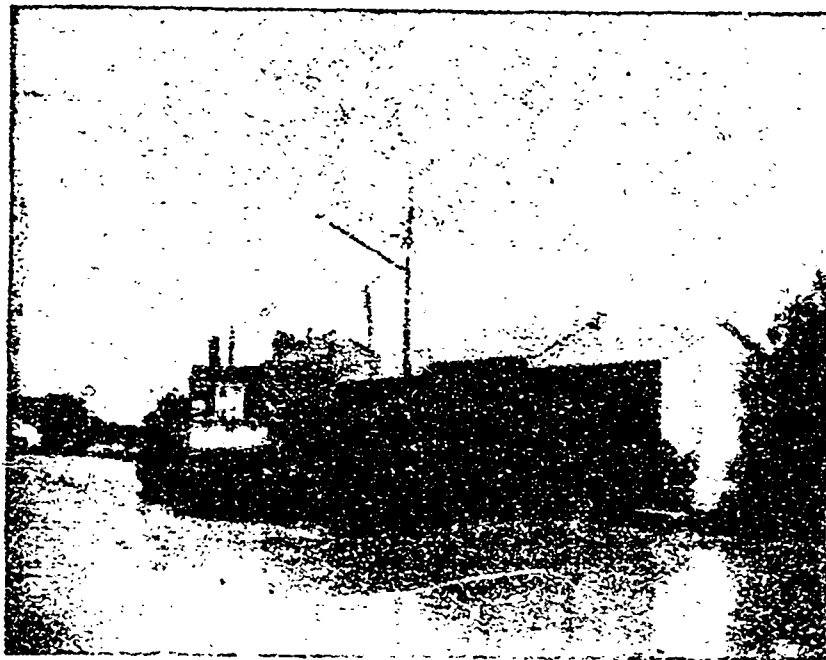
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THE Thorold Cement

High in Quality 56 Years in use.
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The Leading Cement for Building Bank Barns, Cement Floors in Stables, Silos, Culverts, Pig Pens, etc.



STEAMER "IONA"
Loading 3000 Barrels Thorold Cement for the Dominion Government, to be used on the Seelanges Canal.

Has been tested in every capacity. Most perfect Cement made.

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Windmills ---

Painted or Galvanized. The Great Economy for the farm is the



Canadian (STEEL) Airmotor

All Steel. Latest Improvements. POINTS: Power, Strength, and Durability

Power and Pumping. Steel Towers. Halladay Windmills Pumps (Iron and Wood). Grinders, etc. Water Supply Material a Specialty.

ONTARIO WIND ENGINE AND PUMP CO. (LIMITED)
Mention "FARMING."

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Robes AND Goats

have had eight years' experience in Canada, with an increased sale every year, which is the highest compliment to their merits. They have been in use by Liverymen, Doctors, Farmers, and hundreds of others from ocean to ocean, and one and all say that they are the robe of the future. The robe is made in one piece, therefore no seams to rip, and is as strong as leather. A superior class of lining is used, and it is interlined with rubber cloth, making it both wind and waterproof. It is also moth-proof, easily dried after being wet, does not get hard like a skin robe, and has no offensive smell.

Received medal and diploma of honorable mention at the World's Fair. For sale in all leading towns and villages in the Dominion. Beware of imitations, and see that every robe bears our name.

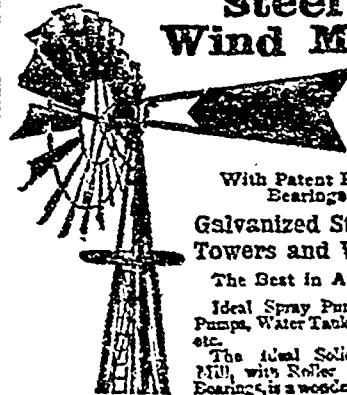
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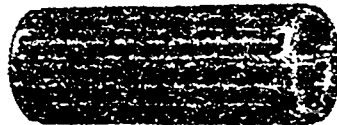
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Mann's hand or power bone cutter for sale, No. 10. Used one season; good as new. To be sold at once. Price, \$15.00
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With Patent Roller Bearings Galvanized Steel Towers and Wheels The Best in America Ideal Spray Pumps, Iron Pumps, Water Tanks, Piping etc. The Ideal Solid Power Mill, with Roller and Ball Bearings, is a wonder.



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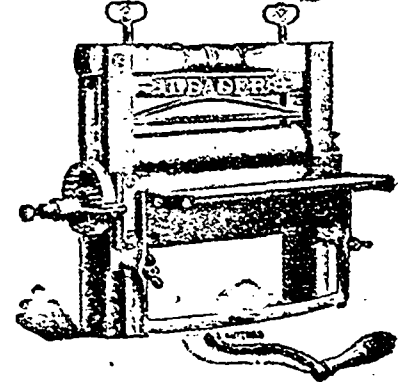
Trees and Vines become hardier, and their products better colored and better flavored when liberally treated with fertilizers containing at least 10% actual

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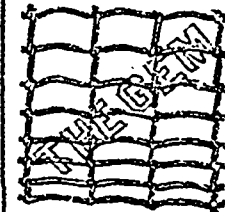
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BUY THE BEST. SAVE TIME and MONEY The NEW LEADER WRINGER is unequalled, and the quick clamping device and internal rollers are not found in any other wringer. See it before placing orders. THE DOWSWELL MFG. CO. (Limited), Hamilton, Ont.



Fence Machine

will weave your fence of any kind of wire. 40 to 50 rods per day. Price saved in one day's work. Agents wanted. Write for particulars. MCGREGOR, BANWELL & CO., Windsor, Ont.



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Made in 2 sizes: No. 1 Senior, with 10-inch reversible burrs, and No. 2 Junior, with 8-inch single burrs. Fine and coarse burrs. Ball Bearings for Plate Relief Springs. For any power or any work. Always guaranteed.

The Maple Leaf Grinder is given as a premium at the Provincial Fat Stock and Dairy Show. Our factory is near the Exhibition Building and all visitors to the show are invited to call and see this Grinder at work.



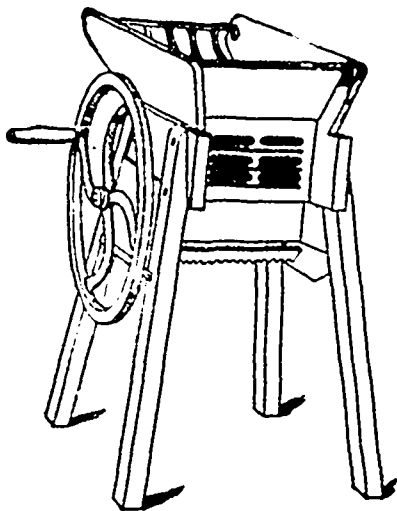
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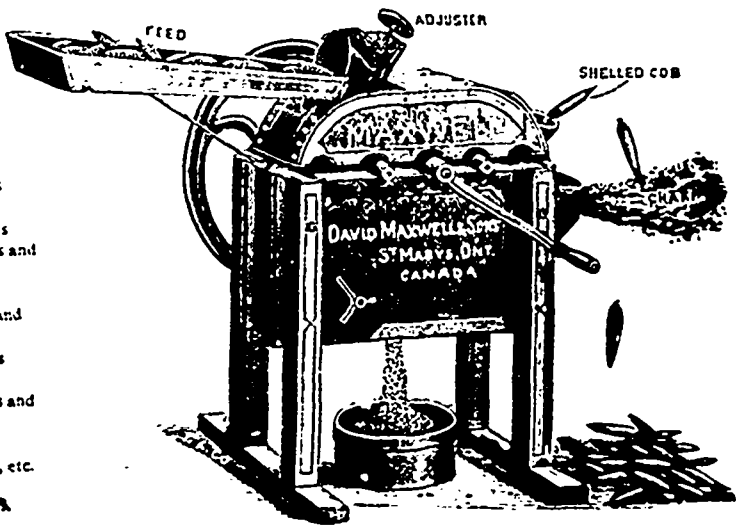
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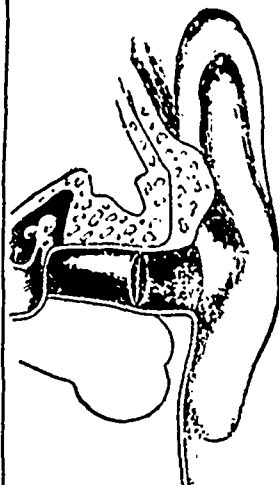


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They are safe, comfortable and invisible; have no wire or string attachments. Read this letter; it speaks volumes:

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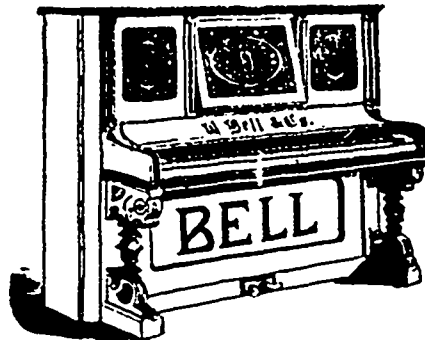
Dear Sir, Please send one of your little books to my friend, Mrs. Borden St., city. I have advised her to try a pair of your "Ear Drums" as mine are a great benefit to me and perfectly comfortable. I think she will be sure to take my advice, but I know she would like to see your pamphlet before doing so; I could not give her mine, as I had already lent it to another deaf friend. I have been deaf for forty-five years, caused by scarlet fever, but your Drums have helped me greatly. I shall take great pleasure in recommending them to any one afflicted like myself.

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We have found it, after thirty years of study and experiment.

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by a contrivance of marvellous ingenuity.

USED ONLY IN BELL ORGANS

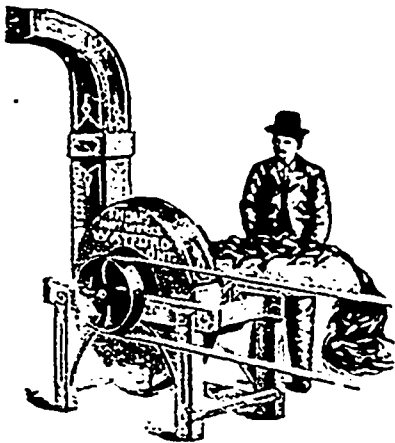
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BLOWER ELEVATOR



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It may be that some other make of Blowers have been tried in your neighborhood and proved a failure, the makers not understanding the A B C of the first principle of the construction of an Elevator Blower.

We claim to be the first and only successful makers of this machine.

ALL INFRINGEMENTS ON OUR PATENTS WILL BE PROSECUTED.

We manufacture the best line of Feed Cutters, Rippers, in 3 sizes, and Concave or Convex Knife Machines, Corn Shellers, 2 or 3 horse tread powers. All Latest Improvements.

THOM'S IMPLEMENT WORKS

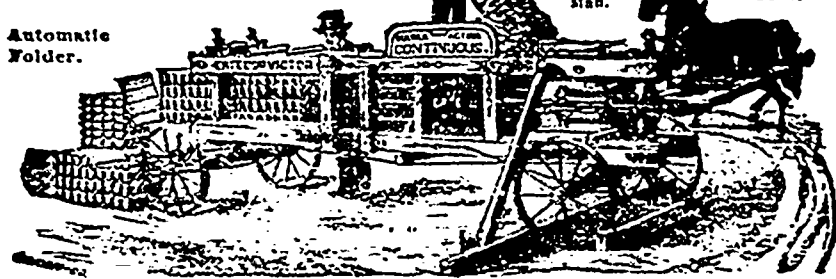
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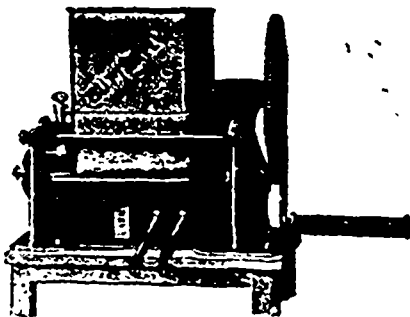
Double-Acting Perpetual Hay and Straw Press

One reason why these Presses are the Best. — It has an open bale chamber, admitting the bales to be tied up while in process of being made, without the least hinderance or bruising of bales, as experienced with others.

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The Butterfly Hand Separator



It is the latest, best, simplest, and cheapest machine on the market.

Why pay a HIGH PRICE for an INFERIOR machine, when you can get a SUPERIOR machine for a lower price.

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No. 1, Capacity 250 lbs. per hour
\$75.

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The Butterfly...

Runs easiest. A child can run it. Easily kept in order. Requires very little oil.

Write for agent's terms for county rights. They are being rapidly taken up. A quick seller and a sure winner.

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HATCH Chickens BY STEAM—
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Simple, Perfect, Self-Regulating, Thousands in successful operation. Lowest priced. Best-Kept Hatchery made. GEO. H. STAMM, 114 to 122 N. 4th St., Quincy, Ill.

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