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THE CANADIAN CHEESE AND BUTTER MAKER.

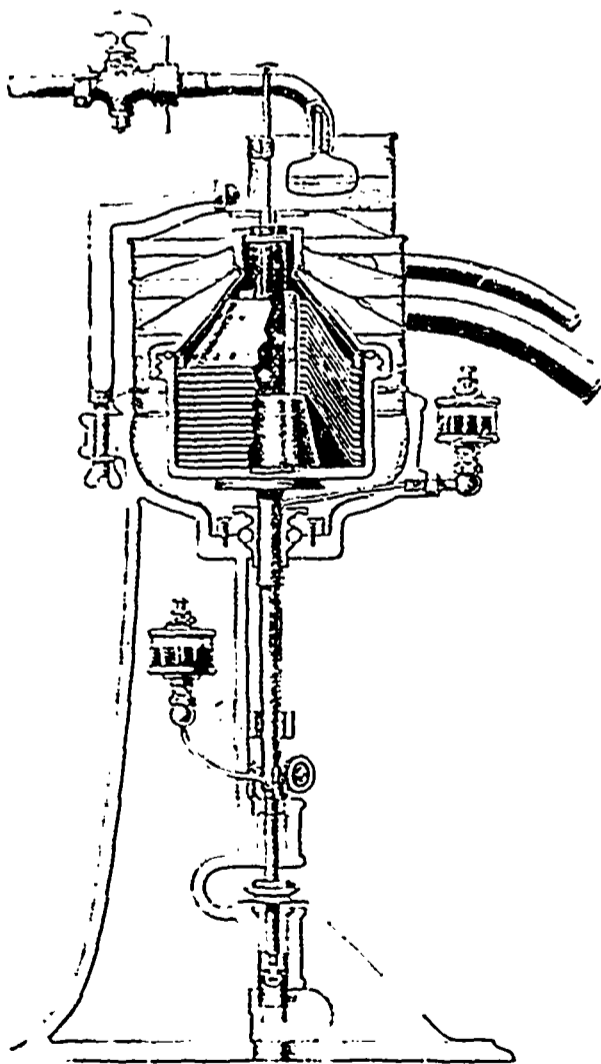
Vol. 1. No 6.

KINGSTON, ONT., CAN., DECEMBER, 1898.

50c Per Year.

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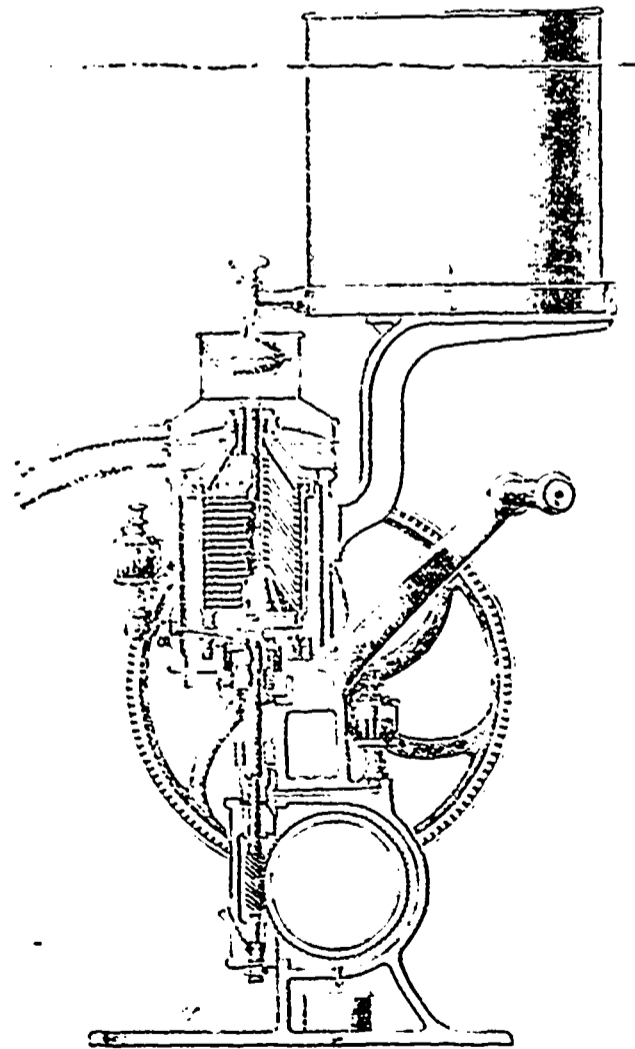
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The unqualified superiority of the "Alpha-De Laval" to all other cream separators in thoroughness of separation, actual capacity, necessary power, greater "churnability" of cream, and in all other essential respects, is the universal basis of its sale, and is subject to practical demonstration in actual test or otherwise.

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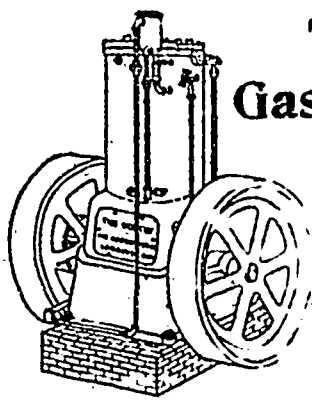


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CANADIAN DAIRY SUPPLY CO.,

SOLE AGENTS FOR CANADA.

MONTREAL.



## THE NORTHEY Gas or Gasoline Engine

Has proved of exceptional value in Cheese Factories and for users of power in a small way, takes up but little room, needs no experience to run, and the expense is but 1½ cts. per h.p. per hour, with Gasoline as fuel. The handiest form of power in the market. Sold on the most Liberal

Terms. Send for Illustrated Booklet.

The Northey Mfg. Co, Limited, 182½ King St. TORONTO, Subway,

## LAND FOR EVERYBODY.

Free Grants of Government Land

Cheap Railway Lands for Sale on Easy Terms.

Good Soil

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THE construction of the Calgary and Edmonton Railway, and the Qu'Appelle, Long Lake, and Saskatchewan Railway, has opened for settlement two new districts of magnificent farming land, viz. that between the North and South Saskatchewan Rivers, and that between Calgary and Red Deer. Full information concerning these districts, maps, pamphlets, etc., free

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## Very Important to Buttermakers!

## FENNER'S REVOLVING

### SIX-SIDED CHURN.



Churns, Washes, works without removing. Nine dairy sizes. Complete

stock at all times. A specialty of

### FACTORY CHURNS.

Any Size Made to Order.

Have been in use thirty years.

New Catalogue in Feb. '99.

R. W. Fenner,

So. Stockton, N. Y.

## A. W. GRANT. BRICK.

33 and 35, William St., Montreal.



This Blanket Molder is expressly designed for use in the spring. It is the best of its kind. It is made of the best material and is guaranteed to last for years. It is the only one of its kind in the world. It is the only one of its kind in the world. It is the only one of its kind in the world.

## FORWARD OR BACKWARD.

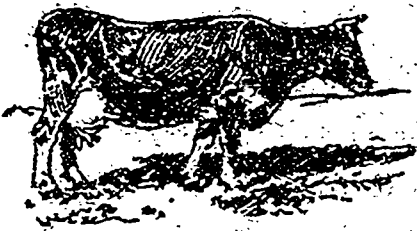
Impossible to Keep a Dairy Herd at a Standstill.

A dairyman has no choice in the matter, says Hoard's Dairyman. He can't stand still with his stock. The tendency is always to retrograde, to return to the original type, where only enough milk is produced to feed the calf. Remember that the modern dairy animal is the result of long continued selection in one direction, and in so far as we have deviated from the normal animal and succeeded in raising her above the normal standard of milk production, just that proportion have we increased the tendency to return to the lower level. The production of a special purpose animal in whatever line is a long, tedious process. Careful selection, training and feeding through many generations will often produce wonderful results, but when we have arrived at what seems to be the goal just ahead we can often see still further improvements to be made, still higher results to be obtained. On the other hand, the process of retrogression or atavism is both rapid and easy. Given poor feed, carelessness and neglect, and Brown Bessie herself will slide down the heights so painfully attained with a rapidity a little less than marvelous. Neglect for a few generations will undo the work of many years of the utmost care in breeding and selection.

A poor farmer can take the finest type of dairy or beef animals and bring their progeny back to their original nondescript condition in but a few generations. The cattle of such a farmer are doubtless better adapted for the struggle against wind, weather and starvation, but they are not adapted for increasing the contents of his pocketbook. On the other hand, the keeping the animals at their highest capacity means careful, intelligent selection and feeding. It is harder work than the first method, but the results are commensurate. The dairyman can choose for himself the road he desires, butter or beef. But if through neglect in breeding and feeding he arrives at that mongrel result known as the special dual purpose animal and finds that her returns are not encouraging it is only because he has taken the wrong road, and his results follow as a consequence. There is no business where results follow so directly the conditions, nor where the carelessness of the producer can have such a decided lowering of results as the dairy, and the neglectful owner feels his neglect in the most tender spot—his pocketbook.

### Champion English Milker.

This Guernsey cow, Bon Espoir V, won the first prize and Lord Mayor's cup in the recent milking trials at the London dairy show. She has also car-



GUERNSEY COW BON ESPOIR V.

ried off several other first prizes this year. Naturally, her owner, E. A. Hambro, is proud of her.—London Sketch.

### Effect of Food on Butter.

The solidity of butter is affected to a certain extent by the feed of the cows. As nearly all dairymen know, when cows come from dry winter feed to fresh grass in the spring the butter has less "body." The difference caused by the different kinds of winter feed is very

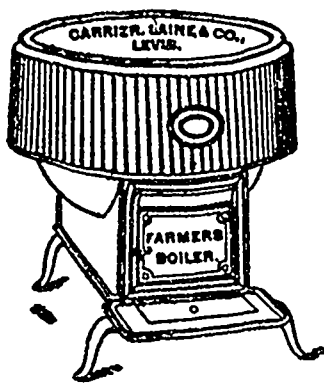
marked. This is evidenced by the arrangement of dairymen on this point. For instance, one is positive that cornmeal will make harder butter than wheat bran, while the next one you ask will tell you the opposite is true—that oatmeal makes the softer butter of the two. In my experimenting there were only two feeds that I could say with any certainty affected the solidity of the butter, and they did not to a very great extent. When in making up a grain ration two or three pounds of cottonseed meal a day was used, it hardened the butter slightly; when the same amount of oilmeal was used instead of cottonseed meal, the butter was a little softer. An experiment was tried at the Iowa experiment station in 1895 with the object of determining the effect of cottonseed meal on butter the details of which are published in bulletin 89 of that station. Professor Curlliss found that feeding as high as five or six pounds a day per cow of cottonseed meal had but a slight effect on the flavor or solidity of the butter, though it must be said that at some other experiment stations a greater effect was noticed where a large amount of the meal was fed. But I must repeat that with the quantity that any careful dairymen would feed the effect of the different kinds of meals or grains on the solidity of the butter would be scarcely noticeable.—C. P. Goodrich in Breeder's Gazette.

### Experiments with Milk.

The Kansas college dairy took three cans of milk as they came from the barn. The first was left standing in the milkhouse without aerating or cooling. The second can was cooled to 62 degrees and left standing by the side of the first. The third can was treated the same as the second, except that after cooling it was placed in a tub of cool water and covered with wet gauzy sacks. The next morning samples were taken from each can and submitted to Dr. Fischer, the bacteriologist, who determined the number of bacteria. The milk placed in cool water contained 8,837,428 bacteria per cubic inch; the can aerated, cooled and left standing in the milkhouse contained 24,678,103 bacteria per cubic inch and the can left standing in the milkhouse, as it came from the barn, contained 124,057,972 bacteria per cubic inch.—Hoard's Dairyman.

### Very Old Cows.

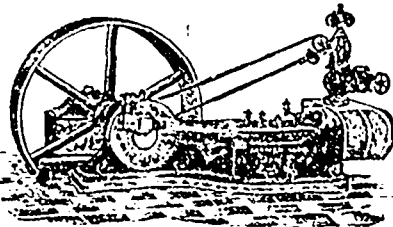
Has the cow, under domestication, ever lived beyond the age of about 35 years? asks the London Live Stock Journal. The writer recalls to memory three recorded instances of cows living to the ages exceeding 30 years. The first in order of time is mentioned in the "General View of the Agriculture of the County of Norfolk," written for the board of agriculture in the year 1804. The author states that he saw upon Mr. Money's farm at Rainham a Norfolk horned cow which was then undoubtedly 35 years old. She had not bred a calf for about ten years, and although "old to the eye," was in good condition and had no marks of age excepting stiffness in moving and a halting gait, as if her feet were sore. As she was one of the then remaining specimens of the old horned breed of that county, her horns, unless cast off by accident, must have been sufficiently large to show tokens of age by the annual rings, the first of which, in that not particularly early maturing breed, would have been shown at the age of about three years. But of this test we have no mention. Of course we should not expect, at that great age, all the rings to be perfectly distinct and it would be interesting to learn whether they are still increasing in number by one added each year to the very end of so long a life, which indeed may have continued for some time beyond 1804.



**The Farmer** Who is up-to-date in modern scientific methods of securing all there is to be got out of his stock will have a feed boiler on his farm.

Quebec.

**The Cheese and Butter Maker** knows the advantage of a **Space Saving, Power Giving, Fuel Economizing, Boiler and Engine.**



**CARRIER,**

Our facilities for making these boilers are such that we defy competition in Quality and Price.

We make three sizes. Write us for particulars.

Mention this paper

**LAINE & CO.,**

The Now Celebrated

**UNIT ENGINE**

Was specially designed by us for Cheese and Butter Factories. Our One Piece **BOILER** is without exception the most economical and satisfactory boiler ever placed on the market.

Levis.

**Twenty-Second Annual Convention of the Eastern Ontario Butter and Cheese Association.**

To be held at Kingston, Ont., Tuesday, Wednesday and Thursday, January 10th, 11th, 12th, 1899.

**PROGRAMME,**

**TUESDAY, JANUARY 10TH, 1899.**

Opening Session, 10 a.m. City Hall.  
President's address.  
Short Addresses by Prominent Dairymen.  
Appointment of standing committees.

Afternoon Session, 2 p.m.

Address, Hon. W. D. Hoard, ex-Governor of Wisconsin.  
Address, Prof. H. H. Dean, Director of Dairying for Ontario.

**TUESDAY EVENING, JANUARY 10TH**

Evening Session 8.00. Citizens' Meeting

Chairman, D. Derbyshire.

Opening address, Mayor.  
Music, by orchestra.  
Address, Dr. Mills, President Ontario Agricultural College, Guelph.

Music.  
Address, Prof. Fletcher, Entomologist and Botanist, Experimental Farm, Ottawa.

Music.  
Address, Hon. W. D. Hoard, Ex-Governor of State of Wisconsin.  
Address, Hon. John Dryden, Minister of Agriculture for Ontario.

God Save the Queen.

Ladies especially invited to attend this meeting.

**WEDNESDAY, JANUARY 11TH**

Morning Session, 9.30 o'clock.

Address, Prof. J. W. Hart, Supt. of Dairy School, Kingston, Ont.  
Address, Prof. Saunders, Director of Experimental Farms, Ottawa.

Address, Hon. Sydney Fisher, Minister of Agriculture, Ottawa.  
Address, Hon. W. D. Hoard, ex-Governor Wisconsin.

Afternoon Session, 2 o'clock.

Address, Dr. W. T. Connell, Bacteriologist Dairy School, Kingston.  
Address, Prof. Robertson, Commissioner of Agriculture and Dairying.

Address, Prof. Fletcher, Entomologist and Botanist, Ottawa.  
Note.—The two Gold Medals presented by the Windsor-Salt Co. for the best Cheese and Butter, will be presented by the President.

Address, Prof. Dean, Ontario Agricultural College, Guelph.

**WEDNESDAY EVENING, JAN. 11TH**

Evening Session, 8 to 10 o'clock.

Address, Hon. Sydney Fisher, Minister of Agriculture, Ottawa.  
Address, Prof. Robertson, Commissioner of Agriculture and Dairying.  
Address, Hon. John Dryden, Minister of Agriculture, Ottawa.

**CITIZENS' BANQUET.**

After the close of the meeting the Citizens' Banquet to the Dairymen will be tendered.

**THURSDAY, JANUARY 12.**

Morning Session, 10 o'clock

Election of officers.  
Receiving and disposing of auditors' report.  
Reports of all dairy instructors.  
Note.—Discussion for Cheese and buttermakers for balance of this meeting.

Afternoon Session, 2 o'clock.

Address, Hon. W. D. Hoard, ex-Governor of Wisconsin.  
Address, Prof. Robertson, Ottawa.  
Address, Dr. Mills, President Agricultural College, Guelph.

**OFFICERS FOR 1898.**

President, D. Derbyshire, Brockville.  
First Vice-President, John McTavish, Vancamp.  
Second Vice-President.  
Third Vice-President, Alpin Campbell, Ormond.

**DIRECTORS.**

Division No. 1—Edward Kidd, North Gower.  
Division No. 2—William Eager, Morrisburg.  
Division No. 3—John R. Dargavel, Elgin.  
Division No. 4—James Whitton, Wellman's Corners.  
Division No. 5—T. B. Carlow, Warkworth.  
Division No. 6—Henry Wade, Toronto  
Secretary, R. G. Murphy, Elgin.  
Treasurer, P. R. Daly, Foxboro.  
Auditors—Morden Bird, Stirling; F.

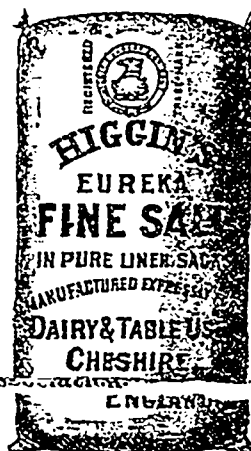


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Have Always Been, and Still Are the **Two Best Salts** in the World

Purest, Strongest,  
Go Farthest.

Finest Flavor to Butter and Cheese.



Other "fancy brands" spring up, have a pleasant but brief existence, and drop out of sight. The "Old Reliable" ASHTON'S and HIGGIN'S are still in the ring. "The fittest only survive" Butter and Cheese Makers of the first-class are using the salts. Prices low for value. Write for quotations and terms to

**Gilmour Bros & Co.,** DISTRIBUTING AGENTS FOR CANADA.

185 St. Paul Street, Montreal.

W. Benton, Belleville.  
Official Stenographer, T. McGillucuddy, Toronto.

**HONORARY MEMBERS.**

Hon. Sydney Fisher, Minister of Agriculture, Ottawa.  
Hon. John Dryden, Minister of Agriculture, Toronto.  
C. C. James, M.A., Deputy Minister of Agriculture, Toronto.  
Prof. Robertson, Dominion Dairy Commissioner, Ottawa.  
Dr. Mills, President Ontario Agricultural College, Guelph.  
Prof. Dean, Director Dairy School, Ontario Agricultural College.  
Prof. Hart, Director Dairy School, Kingston.

**WEALTH FROM MILK.**

Municipal Debt Rate of the Province Increases—An interesting Bulletin.

Toronto, Dec. 28.—A bulletin issued yesterday by the Department of Agriculture gives a number of figures of interest concerning the agriculture in the province. The report shows that in the 1161 cheese factories 1,455,937,148 lbs. of milk was used, and 137,362,916 lbs. of cheese was made. There were 66,104 patrons, and the value of cheese produced was \$11,719,468. This is about \$8,000 more than the amount for 1898.

The amount paid to patrons for milk supplied was \$9,709,064, as compared with \$7,040,927 the year before. The creameries show even a great-

**PURE BRED COLLIE PUPS FOR SALE.**

From Sire and Dam imported direct from Scotland, with Grand Pedigree. Don't pay \$25.00 when you can get better for half the money.

**PHILLIP HART,**  
BELLEVILLE,  
ONT.

When writing mention paper.

or decrease. The quantity of milk sent was 7,708,265 lbs., and the value of the butter produced was \$1,403,609. This is almost three times as much as was produced in 1898.

Other statistics of interest may be summarized as follows:

Total farm property value, \$905,098,613, which is five millions less than 1896.

Live stock, \$98,622,804, which is also less than 1896.

Implements, \$51,209,098.  
Buildings, \$206,090,159.

The chattel mortgage list decreased a small amount during 1897, from \$18,561,716 to \$18,382,195.

The bonded debt of the municipalities has increased from \$26.51 per head to \$26.84 per head.

The population is rated at 1,990,977 an increase over 1896 of over 18,000.

A good increase is reported in the hog, poultry, wool, and honey business.

## The Canadian Cheese and Butter Maker.

A Monthly Journal for Dairymen, Cheesemakers, Buttermakers and the trade.

Take good care of your Hogs and Cows, and they will take good care of you.

Devoted to milk, and its manufactured product.

PUBLISHED MONTHLY BY

**J. O. LINGENFELTER,**

62 Brock St., Kingston, Ont., Can.

50 Cents Per Yr. in advance.

The postage to all parts of Canada and the United States is prepaid by the Publishers.

Subscriptions in England, Australia and other parts of the postal union 75c. Postage paid by Publishers.

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No. 62 Brock St., Kingston, Ont., Can.

Advertising rates made known on application.

### DECEMBER.

Eastern Ontario Butter and Cheese Association meets at Kingston, Jan. 10, 11 and 12, 1899.

This is a "pointer for the successful dairyman": Milk should never be used until five days after calving and 30 days before.

In Logere, France, there are herds of goats and cows which seldom drink. Yet they produce the milk from which Roquefort cheese is made.

The immutable law of supply and demand applies to the price of butter as much as to any other farm product. A first-class quality, however, will get the highest price regardless of demand.

There is a much better tone to the cheese market, and as soon as the British dealer fully realizes that this year's make is very much shorter than that of last year, an active export demand is looked for.

A visionary Canadian has suggested that the Canadian Government offer a bonus of 5c. per lb. to all families who consume 150 lbs. of cheese a year or more. He thinks consumption would be increased so much that the production would have to be doubled.

The average farmer knows as much about a dairy animal form as a swine knows about Blackstone. But it is gratifying to learn that many are dis-

covering the fact, by the aid of dairy journals and experience, that extra good beef animals are extra poor dairy animals. The latter are usually of a more delicate build and not so stout as the former. The dairy cow, unlike the coarse beef breeds, has a large, well developed udder—it isn't a little two by four. Keep an eye on these brief points.

Says F. W. Gilbertson, of the Monmouth Creamery, of Monmouth, Maine: "Always remember that it is impossible to get a fair sample of cream when it is sour, as when cream is sour it gets lumpy, and when the sampling tube is inserted in the space pail it will lodge between these lumps of sour cream and take the thin part. Hence, there will be a kick by the butter maker's poor test, and cause dissatisfaction all around. Remember that the sooner and more thoroughly the milk is cooled the longer it will keep sweet and the better quality of butter it will make—thus increasing the profits and your returns."

### A SIMPLE PROBLEM.

Some one has fittingly said: "As the strength of a chain is governed by its weakest link, so the quality of creamery butter is governed by the dirtiest milk sent to the vat." It is admitted that the most serious drawback to the creamery is that it matters not how skillful or how careful the manager may be, he is at the mercy of the laziest, dirtiest and most careless of his milk suppliers.

### A DOUBLE ROOT CUTTER.

Tolton Bros. of Guelph, Ont., are to be congratulated upon the success, which they have achieved with their No. 1 Double Root Cutter, having won all the first prizes last year, and succeeded in demonstrating to everyone the superiority of the machine. The fact that it will do the work of two separate machines—a pulper and slicer—is sufficient alone to give it a decided advantage; but, when it is compared to any single machine, then that advantage is enormously increased. In fact, it is without a rival.

### FROZEN MILK.

There is no reason, practical or theoretical, why the freezing of milk should have any effect on the flavor or quality of the butter made from it. In fact, in many cases where patrons do not take the best, or any care of their milk, it would be an advantage if it could be immediately frozen, and so kept until the butter maker could get it in his control. Of course, where the milk is frozen, all ripening is at once stopped, and cream from such milk needs a longer time for ripening, or the use of a starter.

### WHAT COW MANURE IS WORTH.

The entire manure product of the dairy herd kept at Cornell University station was kept in a covered barnyard during one winter. Samples were taken from time to time, and analyzed. The results, based upon the market price of the then principal fertilizing ingredients, showed the manure of the herd to be worth, per cow per day, 8.62 cents.

### NOW IS A GOOD TIME.

To look after the barn; make it comfortable for the stock; stop cracks that the wind whistles through, preventing the cow from doing her best. The floor may need attention; there may be a leak in the roof; you may not have plenty of bedding, and if you look closely you may find other things that require attention before the blasting winter fastens itself upon us. Don't undertake to keep more stock than you are prepared to give good attention to, and be sure they are where they will do best. These are only suggestions; each and all will need to study their own environments and then act accordingly.

J. M. T. WELBORN,

In the "Practical Dairyman,"  
Bridgeport, Ind.

### FINDING THE ROBBERS.

A Canadian dairyman milked 24 cows, which required two lads besides himself. He got after the cows with a Bilcock test, and found 8 robbers. These robbers and one lad went. At the end of the year he found that the 16 had paid as great a profit as the 24, and he finally got down to 12 good cows, that made just about as much money for him as the 24 formerly did.

### PASTEURIZED CHEESE.

The Montreal Trade Bulletin says that "J. A. Vaillancourt, produce commission merchant, of this city, has just received a sample of cheese from the Government Dairy School at St. Hyacinthe, P.Q., made last winter from pasteurized milk, and it certainly is a remarkably fine flavored cheese. It is of a light, natural color, solid texture, and as fresh flavored as if it had been made this fall."

### THE HOGS THAT PAYS BEST.

"What breeds are the best?" asked an auditor.

"Among the hogs that pass our inspection," was the reply, "there are more improved Yorkshires than of any other class. Tamworths come next; then a York and Tam cross and then a York and Berk."

### TWO CHURNS BETTER THAN ONE.

F. A. Leighton, in Chicago Produce, says: "It is a bad thing when you have a combined churn, and only one, in case it breaks down. I think if some of the creameries were fitted up with two small-sized churns instead of the large, unwieldy affairs that one sees in some factories, it would be a great deal better; and, instead of having to hold the cream two or three days for repairs on the churn, it could be divided up into small churnings and churned out with one."

### PASTEURIZATION.

The following sensible resolution was passed at the annual meeting of the creamery on the 30th of Nov:

Now, after one year's experience as your directors and knowing well your aims and desires for your creamery, before retiring from the position with which you have honored us, we beg to submit the following recommendations, namely:

1. That whereas, in order to secure the top price in the British market, we must send an article of uniform quality and light color throughout the whole year, and whereas, we in Canada from climatic conditions and other causes, in reality manufacture three kinds, namely, light-colored in winter highly colored during the first months of grass, and medium in other months, and whereas, we have learned that other places have overcome this difficulty by a system of pasteurizing and chemical refrigeration, we therefore recommend, that such a plant be introduced into our system.

### GREAT FALLING OFF.

Shown in the Cheese Exports to Britain This Season.

Montreal, Nov. 28.—Canadian cheese shipments for the past season amounted to \$1,900,000 boxes, at a cost value of \$12,065,000, as compared with 2,102,985 boxes at a cost value of \$14,195,000, in 1897, a decrease of 13.14 per cent. The decrease is attributed to lower prices and to the greater attention devoted to butter making, for which the margin of increase is considerably greater. The season has thus been a poor one for the producers. Not counting the \$50,000 lost in the Warrington failure, the factorymen, it is estimated, will be \$2,000,000 out of pocket as a result of their labors since last spring.

### A NEW SYSTEM OF CHEESE INSPECTION NEEDED.

Mr. Editor,—I wish you would advocate another system of cheese inspection for 1899. There certainly is great need for a change from the present. If you understand it you know, something of the injustice cheesemakers suffer from buyers inspecting, also

the difficulty a maker has in his own defense. There is room for much injustice, and is taken advantage of too often. Please look into this and become our friend. I would suggest an inspector appointed by a cheese board, or by the Government for a certain section, which would give uniform inspection and a fair one under ordinary condition of market, etc. This man could inspect the cheese when a certain age and put his mark upon them, etc.

Yours truly,  
S. R. P.

NEEDED! Well, certainly, a new system is needed; and the plan as proposed by our friend, "S. R. P.," who has had 19 years practical experience in cheese and butter making, is only an echo of what is ringing in the ears of all cheesemakers. Let us agitate this subject, and good will come out of it. We would be pleased to have all the cheesemakers state their grievances and send to us. We will not publish the names, if you so wish.

EDITOR C. C. & B. M.

### ATTENTION, DAIRYMEN!

Our butter and cheese have been finer this season than ever before; we have sold them more regularly; they have gone forward in nicer condition, and have given better satisfaction than in any previous year. Thanks are due to the Government for giving us better facilities for shipping our goods in refrigerator cars and cold storage compartments on steamships. We have been enabled to sell 70,000 packages of butter more than last year and nearly as many cheese up to the 1st of November, and all must agree that this is a good record.

If we could get all our manufacturers to make no November or April cheese, we believe we could increase our sales of butter to the Mother Country 100,000 another year more than this.

What we want, above all things else, is unity of action—all working for the one object, namely, to maintain and keep our position as manufacturers of the finest goods on this continent.

D. DORRYSHIRE,  
President.

R. G. MURPHY,  
Secretary.  
Eastern Ontario Butter & Cheese Association.

## The City Hotel

Most central house in Kingston, Ont.

Three minutes walk—or electric cars from the door of the Hotel to the Kingston Dairy School.

Large and commodious reading rooms and offices entirely separate from the bar.

A Comfortable, Homelike Hotel with written bill of fare, (each meal)—

Open night and day, on the arrival of all trains or boats—situated on the fashionable promenade.

Rates for each week, month or season during the winter months very reasonable.

Correspondence in regard to rooms and board solicited.

Peculiarly adapted to the needs of Dairy Students, Dairy Men, Cheese Makers, etc.

**J. S. RANDOLPH.**

### A SPECIAL REQUEST.

It is specially requested that all persons knowing of those who suffer from cancer or tumor, send their names to the undersigned who will send full particulars of a new and painless method.

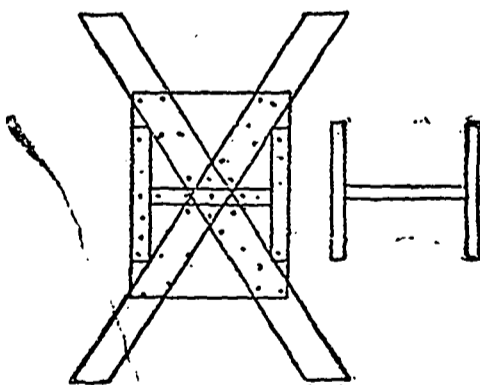
**STOTT & JURY,**  
Bowmanville, Ont.



FEEDING SHEEP.

**A Simple Trough Which Overcomes Many Difficulties.**

In a recent address before the Ohio Farmers' Institute S. H. Todd said: The arranging of the sheep troughs will have very much to do often with the success of keeping the sheep on the farm. I will venture to say today that there will be several thousand dollars lost to the state of Ohio from feeding sheep out of that old V shaped trough—that I presume Jacob fed his sheep out of—in preference to changing to a better trough. What are the conditions of that trough? It is built exactly in the form of a sheep's mouth. They can eat the grain in one-fourth the time that they could eat it out of a trough that would be practical for feeding sheep in. The result is they cannot digest and properly assimilate the food which is thus carried into their stomachs. Besides, usually, these troughs are left down nearly on the surface of the yard or the surface of the ground. The lambs when they are fed commence at one end and follow the feeder as he puts the food into the trough, winding back and forth from this side to that side, and by the time the feeder gets to the other end of the trough he looks around, and what does he see? He sees one-half of the lambs standing there looking him squarely in the face. Why? Simply because the refuse that is dropped from their feet in passing over the trough has been deposited in the feed,



THE TODD SHEEP TROUGH.

and as a result the sensitive and timid sheep will not touch it, while the stronger lambs will finish it up. Thus, with that kind of feeding, he is killing his sheep at both ends. He is starving them to death at this end and overfeeding them at that end, both of which evils we should avoid. If you are going to use the V shaped trough, put a board over the trough so that they cannot jump into it.

I would recommend, however, the use of a trough which I am going to describe. This trough is made from three boards 8 inches wide and an inch thick. I put the boards together so as to form two troughs with the three boards by running the side boards as far below the center board as we do above the center board, placing an end

and 3 feet long and providing it with legs at the end of these end pieces, so as to keep the trough from turning over. The length of the logs should be 20 inches, as they should be placed on the trough, so that when ready to use the top of the trough will be 14 inches from the ground. In this way I have two troughs. Now, you may ask me the advantage of that? It costs but a trifle more than it does to make the V shaped trough. It has a larger base, and the sheep rarely if ever jump over it. Then it takes them, as I said, four times as long to consume the food out of a trough constructed in this way as it would out of a V shaped trough.

Then again the farmer goes out to feed his sheep, and he sees a little filth here and a little filth there in the trough. Rather than go and get a broom and sweep it out he will risk putting the food upon that filth unless there is an easier way to obviate the difficulty. But if he knows he can turn the trough over, then he will do so, thus providing the sheep with a clean trough in which to deposit their food. Again, if it should rain and partially fill the trough with water, which, with the dirt that would naturally get into it, it might render the food distasteful, so that the tender lamb just commencing to feed would refuse it, he can turn the trough over and have a dry trough ready for use without further trouble or delay. As I said, he will do that when he would not remedy the trouble if he had to go and get a broom and sweep it out. You will find that very much benefit will arise even from this.

**Training to Balk.**

Many colts are actually taught to balk, kick, scare and many other bad habits that render them almost worthless. This usually results either from carelessness or trying to crowd too much instruction into a little time. Man with all his intelligence requires from two to five years to become skilled in any trade. Some never learn. How can we expect the horse, that is guided only by instinct, to know everything after being hitched half a dozen times? This would be presuming him to have more sense than his driver, and many of them have more horse sense than the driver has of man sense.—National Stockman.

**IDEAS ABOUT MILKING.**

First, twenty pounds of milk drawn at the beginning of milking will produce only about one-half pound of butter, while the same amount drawn at the end of milking yields nearly two pounds of butter. A Danish experiment in the same line shows as follows:

1. Milk from the first streams, 172 lbs.—gave 1 lb. of butter.
2. Milk from the middle streams, 88 lbs.—gave 1 lb. of butter.
3. Milk from the last streams, 27 lbs.—gave 1 lb. of butter.
4. Milk from the last drops, 12 lbs.—gave 1 lb. of butter.

This shows that the after milk is very rich in butter elements, and therefore very valuable.

Whenever a "hard milking" cow is found, the narrowness of her milk canals may be obviated by rolling the teats between two hands. The passing a straw into the milk canal is disastrous to the animal and may cause an inflammation of the udder. On being milked after the first calf, many cows are very sensitive to the milker's touch. Nothing but patience and gentle treatment will avail in such cases.

The Frontenac Cheese Board have a hustling committee appointed to make all the necessary arrangements for the big meeting.

Western Ontario Butter and Cheese Association at Guelph, Jan. 17, 18, 19, 1899.

**ROBERTS'**

**ANTI-ABORTION SERUM**

Hypodermically administered is a **POSITIVE CURE** for Abortion in cows. Testimonials furnished on application.

**Dr. D. Roberts,**

Veterinary Surgeon,

Address, Waukesha, Wis., U. S. A.

**THE**

**CANADIAN RUBBER CO.**

OF MONTREAL.

Rubber Shoes. Felt Boots Belting  
Rubber and Cotton Hoop,  
Packing, Etc.

333 St. Paul Street, Montreal.

Branches—Toronto and Winnipeg.

**THE BEST**

is the **CHEAPEST**

BE SURE AND BUY

**C. C. MORRISON'S**

(Patented) Everlasting Seamless

**RANGE BOILER**

Only Boiler Made that

CAN BE DEPENDD ON.

Guaranteed ten Years.

Will Last a Lifetime.

Standard Sizes, 30, 35 and 40 gallons  
Always on hand. For prices apply

**C. C. MORRISON,** Engine and Boiler Works,  
Hamilton, Ont.

Near G.T.R. Station.



**CONSUMPTION!** Send \$1.00 for

"Nature's Cure For Consumption," or the Natural Air Treatment. With this treatment all lung troubles are curable. "A copy should be in every home." Address

**SHAFTSBURY DRUMMOND,**

15 Bald street, Hamilton, Can.

**TRUCKS AND SACK HOLDERS.**

IMPROVED TRUCKS.

Combination Truck and Step Ladder combined. Price \$2.50.

Single Truck, \$1.75, with sack holder, \$2.50; Eureka Sack holder, 50 cents.

Receipt.—Best boiler compound for removing scales in steam boilers. The right to use and manufacture, with instructions, \$1.00.

Prices for larger numbers given. Write for Prices and Circulars.

**PEERLESS MFG. CO.,**

Springfield, Ohio, U. S. A.

TELEPHONE 2578 ESTABLISHED 1870

**VERNOY ELECTRO-MEDICAL SANATORIUM,**

231 Jarvis St. - Toronto.

Electricity used in its various modifications suited to any case or weakest organism

NERVOUS, CHRONIC, ACUTE, SPINAL, OBSCURE, AND DISEASES OF WOMEN A SPECIALTY.

Hospital Surgeons in Consultation, in Surgery and Diseases of Women.

Massage-Electro-Thermo

and Galvanic Baths, etc.

Prof. Verney's Unique Complex Medical Battery \$25 and \$50, with Hand Book for Home Use.

**PROF. VERNOY**

Electro-Therapeutist.

Mrs. S. K. Verney

Assistant.



For Years in succession Butter made with

**GENESEE SALT**

has won the Sweepstakes Premium at the Convention of the

National Creamery Buttermakers' Association.

At the Trans-Mississippi and International Exposition, held in Omaha, Neb., 1898, the Gold Medal was awarded to The Genesee Salt Company for Dairy and table salts.

At this Exposition the Highest Average score in the Butter Contests was won by John Turnbull of Atlantic, Iowa; and the Second Highest Average by F. S. Hurd, of Meriden, Kans., both of whom used Genesee Salt exclusively in their exhibits.

For further information address,

**The Genesee Salt Co.**

6 Harrison Street, New York City.

**FREE FORTUNE**

For Every one, in Country Villages and Towns in Canada,

For doing light work in their spare time. For particulars, by mail only, address

**D. GRAVEL,** 998 Berri Street, Montreal, P. Q.

**THE ST. ELMO,**

Corner of McGill and Recollet Streets,

Montreal, Que. Thos. Lynch, Prop.

The Best 25c DINNER in the city.

BEST ALES, WINE and PORTER

on draught or in bottle.

Polite Attention. - Prompt Service.

## DONT'S FOR DAIRYMAN.

M.E.K. in "Michigan Farmer."

Don't keep cream after it is ripe, but churn at once.

Don't send it to market wrapped in parts of cast off clothing.

Don't mix sour and sweet cream; keep it separate until all is ripe.

Don't exercise your cows by sending the dog to bring them from pasture.

Don't try to work the butter milk out of the butter; wash it out while in the granular stage.

Don't think that because some men say so a cow is merely a machine. She is the most nervous animal of all animals.

Don't be too aristocratic to associate with the growing calves. Keep on friendly terms with them, so they will need no introduction when they come to work.

Don't think that three or four degrees difference in temperature in the cream will make no difference when churning.

Don't think that because a cow is a good looker she is a good cow; the reverse is invariably true.

## ONTARIO AGRICULTURAL COLLEGE APPOINTMENTS.

Owing to the resignation of Mr. T. B. Miller as cheese instructor in the Dairy School, and the continued illness of Mr. J. H. Findlay, it has been necessary to appoint two new men to the staff of 1899. These are:—Mr. James Morrison, Stratford, who for eight years owned and managed the Silver Corners cheese factory, Perth County, and who for the past two years, has been employed as instructor and inspector by the Western Butter and Cheese Association, for cheese instruction, and J. A. McFeeters, of Bonnaville, as home dairy instructor. Mr. McFeeters is a graduate of the '97 dairy class, and has been employed in the dairy of the "Fowler farm," near Cobourg, for one year, and latterly he has been on the Detonia Park Farm, owned by Mr. Massey, of Toronto. Both are bright young men. Mr. Morrison was a graduate of the Dairy School of 1899.

## POINTERS.

Feed a well balanced ration.

Warm stables in winter save food.

Letting the cows get chilled costs.

Large fat globules make the best butter.

Discomfort always costs in extra feed.

Cream rises best when the temperature is falling.

Corn and cob meal mixed with bran is a good milk ration.

It is not necessary to let butter stand after churning by the granular method.

The production of fat depends on the temperament of the cow, her food and handling.

If the butter does not float readily in a mass on the top of the buttermilk stir in a little salt.

Nothing is more injurious to the keeping quality of butter or to its flavor than working undissolved salt into it.

The influence of the sire in a dairy herd is greater than that of the dam in determining the future character of the herd.

One advantage with the separator is that the cream is separated from the milk immediately after the milking.

By the use of the separator all animal matter, dirt and impurities found in the milk are removed and may be found in the bowl.

Mr. J. O. Lingenfelter, Kingston, Ont.:

Dear Sir,—We think you have gotten out a very attractive edition of the paper, and do not see why an ad. in your paper will not bear fruit.

Yours very sincerely,

CHARLES W. GAY,  
Brockville Business College.

Mention this paper when answering ads.



## FALL CALVES.

Many Advantages if Properly Cared For in Winter.

The greatest yield is obtained from cows that calve in the fall, if proper care, feed and shelter are provided during the winter. The prices of butter fat and butter are higher during the winter and with cows fresh in the fall or early winter this higher price comes during the period of greatest yield.

A cow owned by the college gave the following yields of butter fat in pounds, by months, for ten months: 21.3, 31.9, 31.2, 30.5, 32.9, 29, 28.7, 23.8, 26.2 and 22.2. If this product had been sold to one of the leading Kansas creameries at the prices paid last year, and the cow had calved April 1, the returns would have been \$44.80, while if she had calved Sept. 1 the same product would have brought \$49.41—a difference of \$4.64 for a single cow.

A cow that calves in the early fall while on grass is in the best condition to make a high yield when fresh. Good feed and care through the winter will maintain a good yield, and when the cow is turned to pasture in the early spring a fresh flow will be started that will considerably increase the year's yield.

A cow that calves in the spring has the best milk producing feed at a time when she will do well with any good ration. As the flow begins to slacken, the quality of the feed grows poorer and flies and heat help to cut it down still lower. In the fall, when the milk begins to drop rapidly on account of the time from calving, the cow goes from green pastures to dry feed—a change that tends to reduce the yield and dry up the flow entirely. Winter dairying avoids injury to flavor of butter from weeds in summer and fall pastures.

Cows, with fair surroundings, can be made more comfortable in winter than in summer, and with fall calving will be dry when heat, flies and drought are severest, and when butter prices are the lowest.

Winter dairying furnishes profitable employment for the farmer and his men at a season of the year when without it farm forces are either idle or work for low wages.

Another advantage of fall calving is that the calves can be raised at a season when there is time to give to them that careful attention which is so great a factor in calf raising by hand, when losses from heat, flies, diarrhea and sour milk can be avoided and when at weaning time the calves can go from milk to green pasture without a check in growth.—Bulletin Kansas Experiment Station.

## PURE BRED

## TAMWORTH PIGS,

Bacon curers choice; Pure Bred

## AYRSHIRE :: CATTLE.

Largest imported herd in America.  
Stock all ages for sale.

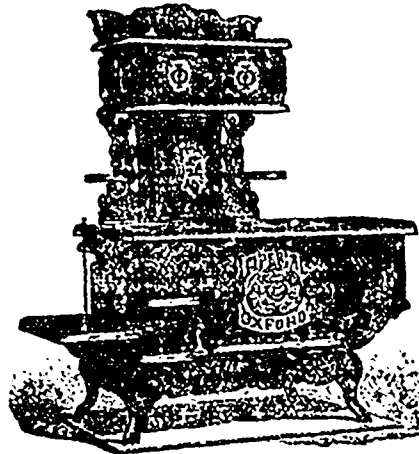
R. G. STEACY,

Box 720 Brockville, Ont., Canada.

## Got to Eat

Haven't  
You?

## Rather Like It



But you'd rather eat appetizing, well-cooked food than not. Then . . . buy the new . . .

IMPERIAL  
OXFORD

## KITCHEN RANGE.

And be sure of 21 well-cooked meals every week of your life.

It is a splendid stove, can't be equalled, has every possible new wrinkle to add convenience and save time and fuel.

You don't buy a new range every day. Better avoid back numbers and see the new Imperial Oxford. After you've examined it for yourself you'll know its superiority.

Inspect at **Simmons Bros.,** Kingston.

The Gurney Foundry Co., Limited,  
TORONTO.

## HELP WANTED.

WANTED—AN EXPERIENCED BUTTER-MAKER—The undersigned will receive bids. Give experience, references and wages expected. CYLINDER BUTTER & CHEESE ASS'N., Cylinder, Ia.

WANTED—AN EXPERIENCED BUTTER-MAKER—Give experience, references and wages expected. CYLINDER BUTTER & CHEESE ASS'N., Cylinder, Ia.

CHEESE-MAKER WANTED—TENDERS will be received by the Pine River Cheese and Butter Company, of Huron township, in the County of Bruce; applicant to furnish testimonials and security, and to furnish all the material connected with the manufacture of the cheese; the average cheese manufactured per season is about one hundred tons; there is a dwelling house for the cheese-maker convenient to the factory. Address JOHN BALLANTYNE, President, Pine River P. O.; DONALD BLUE, Secretary, Amberly, P. O.

## Howard's Heart Relief

FOR ALL HEART WEAKNESS OR PAIN.

HOWARD'S HEART RELIEF is a perfect heart tonic—causing blood to flow naturally, evenly, unnoticed, relieving stagnation at head or feet—taking up the blood accumulated at inflamed parts, particularly in the digestive organs, liver, kidneys, or in the brain.

For all Female Weakness and Nervousness connected with defective heart action it cannot be excelled.

At druggists or by mail with full directions and advice at 50c per box, 6 boxes for \$2.00.

S. W. HOWARD, 71 Victoria St.,  
Toronto.

## THE ODORLESS



## CREMATORY CLOSET

Features Connected With This Closet Which Make it Superior to ANY-THING in the MARKET.

ADAPTABILITY—It is adapted to private residences, public buildings, hotels, school houses and summer resorts.

PORTABILITY—It can be placed in attic or cellar, bath-room or outside kitchen, or in any place where there is a flue or chimney.

ECONOMICAL—It requires no disinfectant. The strong current of air passing through it, during accumulation, carries off all odors.

FIRE—Is only necessary once in fifteen or twenty days, when used by a family of from four to six members, to burn it out.

APPLICATION—For villages or towns, where there is no sewerage, it ends the career of the filthy, unhealthy, uncomfortable, out-door affair, which more than any other single agent, has been responsible for disease and death.

The Odorless Crematory and General Heating Co., Hamilton, Ont.



Sold by all druggists.

FREE SAMPLE by addressing Hayes & Co.,

Simcoe, Ont.

# THE Canadian Cheese and Butter MAKER

KINGSTON, ONTARIO, CAN.

EDITION SPÉCIALE FRANÇAISE.

## The Canadian Cheese and Butter Maker.

Journal mensuel consacré à l'Industrie Laitière et au Commerce.

PUBLIÉ PAR

J. O. LINGENFELTER

20, MARKET Sq.

KINGSTON, ONT., Can.

50 cents par année, payable  
d'avance.

DECEMBRE

### Un Appel Personnel en faveur d'une Edition Francaise

Comme nous vous l'avions promis, nous vous présentons aujourd'hui dans notre journal seize colonnes de matière en langue française.

Nous les envoyons comme échantillons gratuits à ceux qui s'intéressent aux centres français.

Si les lecteurs français veulent bien nous aider, par l'envoi de leur souscription—qui n'est que de cinquante cents par année—nous leur donnerons 24 colonnes françaises chaque mois, faisant 408 colonnes par année des nouvelles les plus récentes concernant l'industrie laitière, le commerce de beurre et de fromage.

Si nous recevons au moins cent souscriptions françaises, nous continuerons la publication de cette édition. A l'oeuvre immédiatement s'il vous plaît. Ne retardez pas. Envoyez votre souscription: en l'envoyant non seulement vous nous aiderez, mais vous vous aiderez vous-même.

A vous sincèrement,

J. O. LINGENFELTER,

Editeur.

### RECONNAISSANCE

Nos plus vifs remerciements à M. J. C. Chapais, député commissaire de l'Agriculture, pour les nombreuses preuves d'amabilité qu'il nous a données.

Il est à espérer que les services qu'il rend à l'industrie laitière ne seront jamais méconnus par ceux qui ont à coeur le réel intérêt du Canada.

L'EDITEUR.

## M. J. C. Chapais

M. J. C. Chapais, de St-Denis, comté de Kamouraska, province de Québec, assistant-commissaire d'industrie laitière pour le Canada, est le fils de feu l'honorable J. C. Chapais, sénateur. Il est né à St-Denis, en 1850. Il fit son cours d'étude au collège de Ste-Anne, et est gradué de la Faculté de Droit de l'Université-Laval.

M. Chapais est considéré comme l'un des fermiers les plus pratiques de la province de Québec parmi ceux qui

agriculture de Québec. Comme créancier, horticulteur et agriculteur en général, il a été appelé à remplir plusieurs charges importantes dans sa province natale. Il fut successivement président de la "Pomological and Fruit Growers Society", de Québec, vice-président de la Québec Dairyman Association, directeur de l'école provinciale d'industrie laitière à St-Hyacinthe, secrétaire de la "Dominion Dairyman Association", et secrétaire-trésorier de la Québec Forestry Association. M. Chapais a acquis une juste réputation comme conférencier sur l'agriculture, l'horticulture et l'industrie laitière, et ses discours

efforts ont été entièrement couronnés de succès, car dans aucune partie du monde l'industrie laitière chez les fermiers n'a fait plus de progrès depuis ces derniers douze ans que dans la province de Québec, en aucune partie du monde, l'industrie laitière n'est pratiquée sur une plus grande échelle par les fermiers qu'en certains districts de cette province.

En 1881, M. Chapais ouvrit à St-Denis, comté de Kamouraska, la première manufacture de beurre et de fromage dans la partie est de la province de Québec, et pendant dix ans cette manufacture reçut une subvention du gouvernement local comme étant la première école d'industrie laitière d'Amérique.

C'était le premier pas dans ce grand mouvement en faveur de l'industrie laitière en Canada.

BIENVENUE AU

## Canadian Cheese and Butter Maker.

L'organisation de l'industrie laitière comme branche spéciale de l'agriculture, dans la Puissance du Canada, présente un système qui se rapproche passablement de la perfection. Pour ce qui concerne la Puissance en général, nous avons d'abord le commissaire d'agriculture et d'industrie laitière, avec son assistant et ses aides qui s'occupent de tout ce qui se rapporte à l'industrie laitière, au point de vue fédéral. La province de Manitoba a un surintendant spécial d'industrie laitière.—de même que les provinces de la Nouvelle-Ecosse et du Nouveau-Brunswick. De plus chacune des provinces suivantes de la Confédération a des écoles de laiterie, savoir: trois dans Ontario, une dans Québec, une dans Manitoba. On compte deux sociétés d'industrie laitière dans Ontario et une dans chacune des autres provinces. La province de Québec a un système de syndicats de fabriques de beurre et de fromage qui lui permet de faire inspecter chacun des trente-trois syndicats par un inspecteur spécial diplômé. Les autres provinces ont aussi des inspecteurs spéciaux.

Il manquait à toute cette belle organisation un trait-d'union pour en relier tous les éléments, un organe qui permit à tous ceux qui font une spécialité de l'industrie laitière, de correspondre entre eux, de se communiquer leurs idées, de se faire part de leurs observations, de leurs découvertes.

Jusqu'à juillet dernier, nous avions bien un département spécial d'industrie laitière dans chacun de nos journaux agricoles, voire même dans quelques-unes des feuilles de la presse quotidienne, mais pour ce qui est des journaux d'industrie laitière proprement dite, il nous fallait aller aux États-Unis ou en Angleterre pour ceux de langue anglaise, et en France pour ceux de langue française, si



M. J. C. Chapais

s'occupent d'industrie laitière. Il possède à fond toutes les méthodes modernes de cultiver le sol et ses entreprises les plus audacieuses sont toujours couronnées de succès.

M. Robertson, parlant un jour de M. Chapais devant le comité de l'agriculture de la chambre des Communes, disait: "Je ne sais pas où l'on pourrait trouver un homme possédant aussi bien que lui la science théorique et pratique de l'agriculture."

M. Chapais a aussi une grande expérience dans la culture des fruits. De 1879 à 1890 il fut assistant rédacteur du "Journal d'Agriculture Officiel", publié par le département d'a-

griculture de Québec. Comme créancier, horticulteur et agriculteur en général, il a été appelé à remplir plusieurs charges importantes dans sa province natale. Il fut successivement président de la "Pomological and Fruit Growers Society", de Québec, vice-président de la Québec Dairyman Association, directeur de l'école provinciale d'industrie laitière à St-Hyacinthe, secrétaire de la "Dominion Dairyman Association", et secrétaire-trésorier de la Québec Forestry Association. M. Chapais a acquis une juste réputation comme conférencier sur l'agriculture, l'horticulture et l'industrie laitière, et ses discours



nous voulions nous procurer ces journaux spéciaux. Aujourd'hui, grâce à l'esprit d'initiative et à l'énergie du propriétaire du "Canadian Cheese and Butter Maker", cette mauvaise position n'existe plus. La lacune qui se constatait dans l'organisation de notre industrie laitière est comblée. Je dis lacune, car, souvent nous avons senti la nécessité d'un journal où l'on peut discuter librement et sur notre propre terrain, les nombreuses questions qui s'imposent pour ainsi dire tous les jours à ceux qui sont désireux de faire faire à notre industrie laitière tout le progrès possible. Et parmi ces questions, il en est qui nous sont tout à fait spéciales. Notre climat, notre position géographique, nos races particulières de bétail, font que bien des règles, que bien des principes qui sont bons dans les pays avoisinants ou d'outre-mer ne le sont plus, ou demandent de profondes modifications pour être appliqués ici. Maintenant, ces règles, ces principes, nous pouvons les étudier, les discuter chez nous dans notre journal d'industrie laitière. Les quatre numéros qui ont paru en anglais nous montrent qu'il sera lu avec avantage non seulement par les propriétaires de fabriques de beurre ou de fromage et par les fabricants, mais encore par tous les industriels qui s'occupent d'industrie laitière et par tous les cultivateurs qui élèvent des vaches laitières, et qui fournissent du lait aux fabriques.

Ce que je viens de dire de l'utilité générale de ce journal était cependant sujet à une restriction importante à venir jusqu'à aujourd'hui. Il devait bien être l'organe de tous ceux qui, à un titre quelconque, font de l'industrie laitière, mais à une condition; celle que tous puissent lire et comprendre l'anglais. On voit de suite qu'il ne pouvait être aucunement utile à la grande majorité de ceux qui se livrent à l'industrie laitière dans la province de Québec, ne possédant aucune notion de langue anglaise. Cette restriction disparaît aujourd'hui puisque le présent numéro nous arrive avec une notable partie de sa rédaction et de sa matière en français. Il devra donc être maintenant permis au "Canadian Cheese and Butter Maker" d'espérer devenir l'organe de tous les producteurs de lait, de tous les fabricants et de tous les industriels faisant des affaires en industrie laitière de la Puissance, y compris le grand nombre d'entre-eux qui sont des Canadiens et des Acadiens français. Nous comprenons que ce n'est qu'à cette condition qu'il pourra supporter les frais d'une double rédaction, frais qui sont toujours onéreux et que bien peu de journaux publiés dans les deux langues ont pu supporter pendant une période de temps raisonnable, à venir jusqu'à présent.

J'ai mis en tête du présent article le mot "Bienvenue." J'espère que ce sera le mot qui viendra aussi à l'idée d'un bon nombre de ceux qui liront le présent numéro et qui tiennent à avoir dans la Puissance un journal représentant directement les intérêts de l'industrie laitière qui est devenue pour nous une industrie nationale.

J. C. CHAPAYS,

Assistant-Com. fédéral d'industrie laitière.

St-Denis de Kamouraska,  
9 novembre 1898.

## Le Parfait Bonheur En Industrie Laitière.

Un Echange Australien dit: Un laitier qui a une bonne femme, un bon séparateur et un bon troupeau, n'a besoin d'aucune récompense dans l'autre monde.

## L'industrie Laitière En Hiver.

C'est une nécessité pour la continuation profitable de l'industrie

(Prof. ROBERTSON)

Pour rendre son commerce profitable le laitier doit le propager durant toute l'année. Le lait et ses produits ont été, d'ordinaire plus chers l'hiver que l'été. Un fort capital est investi dans les vaches, étables, constructions de fromageries et de crémeries. C'est une politique très inutile que de permettre à un tant de capital de rester inactif cinq ou six mois de l'année. Par le passé cela a été non seulement improductif, mais une source de beaucoup de dépenses. Durant l'hiver, un travail considérable des fermes est absorbé dans le travail inutile de ses bâtiments, à moins que les animaux soient gardés pour fournir un produit ou augmenter en valeur.

Les vaches doivent être nourries durant l'hiver.

Si un revenu direct peut être obtenu, le travail sera fait avec plus d'entrain, il y en aura plus d'entrepris et on y appliquera plus de méthodes profitables. Il se formera d'autres branches de la gérance d'une ferme, tel que l'élevage de jeune bétail, l'engrais des cochons et l'entretien de poules couveuses. Il y a encore d'autres occupations plus décourageantes et moins gales que celles d'entretenir les vaches l'hiver, sans aucun revenu de ce travail.

Il y a des centaines d'hommes qui sont employés comme fromagers durant les mois d'été et qui sont comparativement à rien faire, bien malgré eux, durant les mois d'hiver. Si la capacité et l'adresse qu'ils possèdent peuvent être appliquées à la fabrication du beurre, cela serait autant de gagné.

Quand les laitiers obtiennent un revenu satisfaisant de leurs fromageries durant l'été et presque rien durant l'hiver, ils ne peuvent faire que peu de progrès pour améliorer leur condition. Le patron qui envoie le plus de lait à la fromagerie durant l'été pourrait aussi en envoyer, relativement, la plus grande quantité pendant l'hiver. Comme résultat du revenu de la fabrication du beurre en hiver, les vaches obtiennent un meilleur soin et une meilleure nourriture, en conséquence, elles donnent plus de lait l'été suivant.

Après que la première laiterie d'hiver fut installée à la Station du gouvernement, le président de la Mount Elgin Dairy Company qui avait trente vaches et qui les avait traitées durant tout l'hiver, remarqua que durant le mois de mai de l'année suivante il obtint vingt-cinq pour cent de plus de lait, de son troupeau de vaches que les années précédentes à pareille époque. Sans aucun doute que cela provenait principalement du fait, que les vaches avaient été gardées dans une étable chaude durant les mois d'hiver et nourries de ravier succulent afin de produire une forte abondance de lait. A moins que la moyenne des vaches soit traitées durant dix mois de l'année, elles deviennent improductives comme vaches laitières, et cela ne fera pas de laisser les vaches devenir paresseuses, en leur donnant des vacances de cinq ou six mois.

Les produits accessoires de la laiterie dans la forme de lait écrémé et lait de beurre sont plus profitables pour l'élevage du bétail, l'engrais des cochons et l'élevage des poulets, durant les mois d'hiver et les premiers mois du printemps, qu'ils ne le sont pendant l'été.

Les laiteries n'ont pas été et ne peuvent être en pleine prospérité que quand ils auront un revenu régulier durant toute l'année.

## COMMENT EVITER LA CONTAMINATION DU LAIT.— Par

E. C. Bennett.

Il est dit que le lait chaud donne des odeurs; et que le lait froid les absorbe. Si ceci est un rapport correct, scientifiquement, cela peut être un sujet de discussion, mais cela démontre approximativement des faits bien véridiques. Eloigner le lait de l'étable de suite. Si il y est laissé jusqu'à ce qu'il devienne froid, et alors retiré et réchauffé à 110 degrés, les odeurs qu'il émanera porteront témoignage contre lui. Un fermier tua un "puvois" sous le plancher de l'étable de sa vache, l'odeur en était presque intolérable, mais les vaches n'ayant jamais été traitées en dehors, elles ne le supportaient pas. Pour cette raison, il se mit dans l'étable, retint sa respiration autant que possible et réussit à les traire. Le lait fut remis dans un endroit désinfecté, on fit du beurre de la crème et on n'y trouva aucune trace de mauvaise odeur.

Dans un autre cas où un putois fut tué sous le plancher d'une remise plusieurs tinettes de beurre déjà faites absorbèrent l'odeur et quand elles arrivèrent à destination le vendeur expert fit rapport que le beurre avait une mauvaise odeur causée par le fait que les vaches mangèrent de l'ail.

Les mauvaises odeurs sont souvent causées par le fourrage moisi.

Ceci est spécialement le cas quand la nourriture est donnée avant de traire. Si le foin ou le fourrage est moisi, il ne devrait pas être donné avant, mais après, et comme de fait, c'est encore mieux de ne pas le donner du tout. Les ensilages, navets et toute autre nourriture avec des odeurs prononcées devraient être données après, plutôt qu'avant. Donnez de telles nourritures après avoir trayé et en dix heures de temps, ce système l'aura délivré de toute odeur et il n'y aura aucune objection à votre lait.

Parmi les autres causes, il y a les canistres rouillées, ceux à lait en bois, sales habitudes en trayant et l'absence d'eau chaude dans le lavage des canistres et des seaux; l'eau froide ne fera pas cet ouvrage. Les canistres doivent être complètement échaudés et passés à la vapeur après avoir été lavés et doivent être exempts de rouille.

La rouille dans une canistre ou un seau engendre une odeur fétide, employez seulement du fer blanc clair et propre pour les seaux et les canistres.

Ceci plus haut s'applique au lait qui doit être transporté à la fromagerie ou à la crémérie séparatrice. Si la crème est levée pour être transportée à une fabrique de crème rassemblée, elle tient bon, excepté le lait ne devrait pas être remué en refroidissant ceci entraverait la fermentation de la crème. Si on emploie un séparateur de ferme la chose sera bien simplifiée.

Il devrait y avoir quand même une maison-laiterie, comme commodité, mais le lait devrait être séparé ensuite, et la canistre de crème seulement doit être mise dans le réservoir et refroidie pour attendre l'hisser de crème.

Pour récapituler. Prenez les canistres et les seaux propres et brillants, retirez le lait sans retard de l'étable, aérez-le ou refroidissez-le dans de l'eau, ôtant le couvercle jusqu'à ce qu'il soit froid.

Ne nourrissez pas avec quoique ce soit qui produise des odeurs désagréables sans donner dix heures à la vache pour les extraire de son système.

Ne mélangez pas le lait chaud avec le vieux. Tenez le lait refroidi, isolé d'odeurs malfaisantes. Voyez à ce qu'il arrive au fabricant, avant d'être détérioré en rapport au sujet pour lequel il doit être employé.

BRITISH DAIRY FARMER.

## POISON CONTRE L'EMPLOI DE CONSERVATEURS DANS LE LAIT.

Je crois qu'il est du devoir de tout fabricant de beurre ou de fromage de lever la main contre l'usage de préservatifs de toutes sortes qui sont employés pour augmenter les qualités conservatrices du beurre ou du fromage.

Laissez-moi vous démontrer trois dangers que les fabricants de beurre rencontreraient, si leurs patrons employaient des préservatifs.

1o Un fabricant de beurre n'aurait aucun contrôle sur la crème, et aucune idée de ce qui aurait été employé, conséquemment, il ne connaîtrait pas combien de "levain" employer et combien cela prendrait de temps pour mûrir la crème.

2o Si les patrons gardaient la crème douce, ils refuseraient de porter la crème à la crémérie tous les jours et le lait perdrait son bon goût, empêchant ainsi un homme de faire du bon beurre.

3o Les patrons ne devraient prendre aucune précaution sanitaires afin de garder le lait, et une partie on serait portée dans la crème et le beurre, conséquemment il n'y aurait en général qu'un article inférieur de beurre.

## COMMENT LA QUALITE DU BEURRE EST MAINTENUE AU DANEMARK.

Le Professeur Wing, de l'Université Cornell, dans ses observations sur la laiterie dans les contrées étrangères, dit, en rapport au Danemark: Le beurre Danois jugé du point commercial, obtient la meilleure qualité du monde. Ceci a été obtenu largement à l'aide officiel et semi-officiel du gouvernement. Le développement a été rapide et est maintenant, probablement près du maximum. Les laiteries sont pour la plupart co-opératives — ce que nous appelons ici beurrieres. Ces crémeries prennent tout le lait, la crème en est retirée dans des séparateurs, alors pasteurisées et après mûries à l'aide de ferments de culture pure. La plus grande partie des beurrieres se place volontairement sous l'inspection du Gouvernement de cette manière-ci: Elles conviennent d'envoyer à n'importe quel temps, deux fois par an, aux stations du gouvernement, une tinette de beurre qui, après avoir été reçue à la station, est examinée tant qu'à sa teneur en eau et jugée par un comité de neuf juges choisis par la station.

Ce comité est composé de deux représentants du point de vue du marchand à un du manufacturier. Les jugements moyen des neuf est transmis avec des suggestions au fabricant. Pendant les sept ou huit ans passés, des expositions bi-mensuelles ont été tenues à Copenhague, qui ont résultées à améliorer la vente du beurre. Quand après une deuxième fois, le beurre d'une crémérie n'est pas de la qualité voulue, la crémérie est obligée d'employer un expert du Gouvernement.

Les expositions sont tenues sous les auspices de la Société d'Agriculture Royale. Des fabriques de réputation établie, les échantillons ne sont pas requis, mais des autres moins bonnes ils le sont.

## CAUSES DE MAUVAISE ODEURS DANS LE BEURRE

Les remarques suivantes sur la mauvaise saveur du beurre que nous lisons dans le "New-York Produce Review and American Creamery", s'applique parfaitement au beurre d'automne que l'on trouve actuellement sur nos marchés.

Personne n'a besoin d'aller dans l'Ouest pour connaître que de nos jours très peu des vaches laitières obtiennent une bonne qualité de nourriture. Tout ce qui est nécessaire pour obtenir ce renseignement, est de se tenir dans un grand magasin et examiner le beurre quand il

arrive. Un lot sera peut-être d'une bonne qualité exceptionnelle, un autre sera classé comme premier, tandis qu'un autre trouvera une grande difficulté à être passé par l'inspecteur comme second. Ceci peut être aussi dit du beurre fait dans d'autres saisons de l'année, mais c'est très rare qu'il y ait, à moins que ce ne soit le printemps, une telle différence dans la qualité qu'à cette saison-ci. Une autre chose qui a aussi causé des pourparlers parmi les fabricants de beurre, c'est l'odeur de crème sûre de plusieurs des beurres qui nous arrivent depuis quelque temps. Il y a plusieurs qui disent que cette odeur provient du fait que certains crémiers ne battent que trois ou quatre fois par semaine au lieu de tous les jours. Ceci arrive dans les districts où la récolte du lait est légère.

Où l'on a pas bien soin de la crème, cette mauvaise odeur est très prononcée dans le beurre et en affecte beaucoup sa vente. Les marchands ont averti les fabricants de beurre dans les crémiers qui ne battent pas tous les jours de prendre grand soin dans le maniement de leur crème. On devrait faire attention aux conseils.

**AMELIORATION DU BEURRE.**

Nous empruntons à notre confrère, "The Dairy World" la note suivante, à titre d'encouragement pour ceux qui travaillent incessamment à l'amélioration de nos produits laitiers :

L'écrivain de ceci est un ancien voyageur. Pendant près de cinquante ans il a erré dans son propre pays. Il a vécu et mangé dans des hôtels de toutes classes, des restaurants de tout degrés, sur les chemins de fer et les bateaux, avec des familles privées, et de n'importe quelle manière imaginable, nous dit le correspondant d'un échange. Il rappelle le temps, couvrant bien des années, quand il n'attaquait jamais l'assiette à beurre sur la table sans crainte, et toujours avec incertitude, quant au goût que le beurre donnerait à sa bouche, car il était sûr de quelque nouveau goût, quelque chose de très nouveau quand on en a pas eu l'expérience. Le beurre n'était jamais du même goût à deux différentes tables, et il mangeait de l'intolérable au bon, ce que nous appelons maintenant moyen. Parfois, on rencontrait le produit d'une bonne buurrerie et alors la mouche à beurre menaçait de soulever une famine de pain! Mais maintenant tout cela est changé. Le bon beurre est la règle de toutes les tables, et la présence de mauvais beurre est toujours le signe aux voyageurs de déménager, car à la prochaine place ils ne seront pas traités ainsi. Je viens justement de compléter un voyage à travers quinze Etats et trois provinces canadiennes, mangeant comme suggéré ci-haut sans rencontrer de mauvais beurre à une seule table. Que le compte soit ce qu'il veule ou quoi que soit l'habileté du cuisinier le beurre, pour lequel le pâtisier ou le cuisinier ne sont responsables, serait bon, probablement pour la raison que l'universalité des crémiers et des bonnes laiteries privées rendait difficile la possession de mauvais beurre. Les professeurs de crémiers et de laiteries ont construit le mieux qu'ils savaient, et quoique je sois ni l'un ni l'autre je me lève pour les bénir. Ils ont rendu le monde meilleur et la vie supportable.

**FABRICATION DU "BRICK CHEESE"**

Il se fabrique en ce moment au Wisconsin, un fromage qui a beaucoup de vogue sur les marchés locaux et qui rapportent au cultivateur beaucoup plus par 100 livres de lait que le cheddar, parce qu'il retient beaucoup plus d'humidité.

La fabrication de ce fromage est très simple et ne demande pas un matériel bien compliqué. La voici :

- 1. La première condition de réussite est d'employer du lait aussi doux que possible.
- 1o Faire cailler à 90 degrés F. en 30 minutes.
- 2o Couper le caillé comme pour le cheddar.
- 3o Cuire à 104 degrés, en automne, et à 116 degrés, en été, en 30 minutes.
- 4o Soutirer le petit lait aussitôt que le caillé est suffisamment raffermi, ce qui prend environ 15 minutes.
- 5o Laisser égoutter le caillé et le saler à raison d'une livre de sel par cent livres de caillé.
- 6o Mettre en presse.

Pour cette opération, on se sert d'une large table étanche et inclinée vers l'une de ses extrémités. Sur cette table, on étend un tapis de corde. Sur ce tapis, on place les uns à côté des autres de petits moules en bois, ayant en plan, intérieurement, les dimensions d'une brique ordinaire, mais une hauteur d'environ six pouces et dont les parois sont percées d'un certain nombre de petits trous de grosseur moyenne, pour permettre au petit lait de sortir.

Ces moules, une fois placés les uns à côté des autres, sur la table, sont remplis de caillé. Sur le caillé, on place à plat une planchette en bois, pouvant pénétrer sans frottement dans le moule et, sur cette planchette, on place de champ une brique ordinaire, suivant l'une des diagonales du moule.

Le poids de cette brique est suffisant pour presser le fromage et, dès que le caillé est assez ferme, on peut retourner le pain de caillé dans les moules.

Le caillé reste ainsi 24 heures en moule et on le retourne trois ou quatre fois, pendant cet intervalle de temps, durant les premières heures surtout.

La température de la chambre où se fait cette opération, doit être dans le voisinage de 60 degrés. Au bout de 24 heures, les pains sont retirés du moule et transportés dans une autre salle un peu plus froide, où on les place les uns à côté des autres sur une large table, après les avoir frottés de sel sur toutes leurs faces; on en superpose deux rangées. Ils restent sur cette table pendant deux jours; pendant ce temps, on les retourne deux fois par jour en les frottant de sel sur toutes leurs faces. Cependant, il est inutile de frotter la surface inférieure du pain supérieur, qui est en contact avec la surface supérieure du pain inférieur déjà frottée.

On porte ensuite les fromages dans la salle de maturation, dans laquelle il faut garder une température de 50 à 60 degrés. Au bout de 15 jours de maturation environ, ils sont bons à être vendus; on les enveloppe soigneusement de papier parchemin et on les expédie.

Le "Brick Cheese" est un bon fromage qui a une grande vogue au Wisconsin; il est plus mou que le cheddar et d'un goût agréable.

C'est surtout l'automne que se fabrique ce fromage, car, l'été, il est difficile d'avoir du lait assez doux et de maintenir dans les salles une température assez froide.

G. HENRY.

(L'Industrie Laitière.)

**LA CAUSE DU MAUVAIS GOUT DANS LE FROMAGE**

Ceci est une question importante à chaque patron de fromagerie, car cela signifie une perte sérieuse de revenu pour chacun.

M. Kirk, d'Ecosse, a délivré récemment une lecture intéressante sur ce sujet :

Le principal argument de la lecture était que les mauvais goûts dans le fromage étaient les résultats inévitables de la saleté qui s'était introduite dans le lait soit directement par le manque de propreté suffisante en maniant le lait, ou indirectement parce

que les vaches buvaient de l'eau sale ou de la nourriture contaminée. Les bâtiments sales, les mamelles sales, les vaisseaux sales, les linges sales et les conduits d'eau sales discutait M. Kirk, étaient les causes qui produisaient une récolte féconde de mauvaises odeurs dans le fromage. Les odeurs dans celui-ci, quelles soient bonnes ou mauvaises, étaient des odeurs vivantes étant dues à des organismes bactériens. Les saletés de toutes sortes étaient le seul terrain productif du bactéria malin produisant des mauvaises odeurs dans le lait et le fromage, et comme le bactéria, quand il a obtenu une entrée dans un milieu si favorable à son développement tel que le lait se multiplie avec une rapidité inconcevable, il provient que le moindre grain de saleté dans le lait vaudra dire inévitablement l'introduction d'une colonie de germes nuisibles croissant rapidement.

**QUAND FAIRE VÉLER LES GENISSES POUR LA PREMIERE FOIS.**

Un échange dit que le meilleur temps pour une génisse d'avoir son premier veau est en juin, sur l'herbe fraîche, quand la nourriture juteuse l'aidera à grossir sa mamelle et, par cela, en faire une bonne vache laitière.

Par notre expérience, le meilleur temps de véler pour une génisse est en septembre, ou en octobre, parce qu'elle deviendra certainement, une vache vélant l'automne.

Et encore son veau pourra être élevé avec plus d'avantage en hiver, car il passera huit à neuf mois du commencement de sa vie, sans être tourmenté par les mouches. Ceci s'applique aussi bien au profit de la vache que du veau.

**EXPORTATION DU BEURRE CANADIEN ET AMERICAIN.**

Les exportations totales du beurre de Montréal pour la saison présente jusqu'au 30 juillet 1898, ont été de 60,027 paquets contre 44,619 paquets pour la période correspondante l'année dernière, montrant une augmentation de 15,408 paquets dit le "Trade Bulletin" de Montréal.

Les envois de New-York pour la saison finissant le 29 juillet 1898, ont été de 26,592 paquets contre 91,825 paquets pour la période correspondante l'année dernière, montrant une diminution de 65,233 paquets. L'ensemble des expéditions des deux ports montre la baisse considérable pour la saison, de 49,825 paquets.

Les stocks de beurre dans cette ville étaient estimés varieusement au commencement de cette semaine-ci, de 50,000 à 60,000 paquets, mais une bonne commande d'exportation absorberait vite cette quantité. De l'automne dernier au 15 janvier, les prix variaient de 18 1-2 à 20 cents et depuis ce temps au 15 d'avril de 19 1-2 à 21 cents. Les exportations combinées de Montréal et New-York, pour la saison, jusqu'à la fin de la semaine, sont récapitulées comme suit :

	1898	1897.
De Montréal, paquets .....	60,027	44,619
De New-York, paquets .....	26,592	91,825
	<u>86,619</u>	<u>136,444</u>
Diminution .....	49,825	

**ASSISTEZ A LA CLASSE TOUS LES JOURS.**

Le gouvernement a rendu facile à tous les fabricants de beurre et de fromage de devenir des fabricants modernes en procurant des écoles qui sont ouvertes à tous sur paiement d'un honoraire qui ne compte pas.

Allez sans tarder remplir ces écoles et vous préparerez à recevoir dix piastres de salaire de plus par mois le printemps prochain.

**UNIFORMITÉ DES DIMENSIONS ET DU POIDS DANS LE FROMAGE D'EXPORTATION.**

Tous les fromagiers devraient se rappeler que l'Angleterre désire que le fromage soit d'un poids uniforme. Faites-le de 75 livres, même si vous devez peser le lait caillé.

Une cause qui a empêché le prix des fromages de Québec d'augmenter est le mélange des petits et des grands fromages envoyés ensemble au marché. Changez de système! Estampiez les boîtes proprement, coupez-les un demi pouce au-dessous du dessus du fromage. De cette façon quand ils seront empilés chaque fromage en pressera un autre et ne s'appuyera pas sur le rebord de la boîte. En suivant ces indications vous obtiendrez une différence d'un quart de cent par livre pour votre bénéfice.

**COMMENT ON FAIT DANS ONTARIO LE FROMAGE DE QUALITÉ SUPÉRIEURE.**

La confection du fromage, dans les meilleures manufactures canadiennes, n'est plus conduite au hasard, mais est soumise à des données scientifiques, qui donnent au manufacturier intelligent et expérimenté le pouvoir de contrôler son travail entièrement. Pour en arriver à un bon résultat, il faut se servir d'un lait doux, et un bon manufacturier n'acceptera pas de lait, qui sans être tout-à-fait sûr, commence à perdre son goût.

La manufacture Tavistock (Oxford Co., Ont.), appartenant à MM. Ballantyne et Bell, a la réputation de produire le meilleur fromage qui soit sur le marché canadien. M. A. T. Bell, en est le gérant. Le fromager en chef, est M. Moses Knechtel, qui connaît les

moindres détails du travail qui lui est confié : il est assisté de trois ouvriers de première classe. La manufacture a 140 patrons, qui tous ensemble, le 19 août, jour de notre visite, ont apporté 17,900 livres de lait. C'est là la moyenne des quantités de lait qu'on y transporte tous les jours. Ce lait est généralement en bonne condition. Il est très rare qu'on soit obligé d'en refuser. Cela est arrivé quelquefois, cependant, durant la dernière saison, et la raison de ce refus était que certaines quantités de lait avaient une "odeur de vache." Ce cas ne se présente que pour les fermiers peu soigneux. Il est plus fréquent au temps des récoltes, où les fermiers, pressés par les travaux sont obligés de traire leurs vaches à la hâte, et ne prennent pas toutes les précautions nécessaires. La meilleure classe de patrons se composent de ceux qui en tout temps ne négligent jamais de prendre une précaution essentielle qui consiste à aérer le lait en le transvasant avant qu'il soit refroidi. C'est une mauvaise pratique que de laisser refroidir le lait sans l'aérer; car alors, il prend un mauvais goût qui ne fait que s'accroître lorsque le lait vieillit, et qu'on ne parvient pas à enlever. Lorsqu'on retourne une canistre de lait on envoie en même temps au fermier qui l'a fourni, une circulaire imprimée, démontrant l'importance qu'il y a de recevoir le lait en bonne condition, si l'on veut faire du bon fromage, et donnant le moyen d'en arriver à ce résultat. Les points principaux sont : 1o, de bien laver et échauder les seaux, les terrines, les couloirs, les canistres, etc., de les nettoyer au moins une fois par semaine avec du sel, et de ne pas les essuyer après les avoir échaudés; 2o, une propreté absolue pour traire les vaches; 3o, bien aérer le lait et le tenir bien froid, éviter de le placer dans des caves ou autres endroits susceptibles d'être humides. La plupart du temps, ceux qui voient revenir leur lait de la fromagerie, ont pris toutes ces précautions, ou

du moins croient les avoir prises. Mais ils ont des vues passablement larges au sujet de la propreté et s'imaginent qu'il n'est pas important de se laver les mains avant d'aller traire les vaches.

### COMMENT EST ATTEINT LE PRIX ÉLEVÉ DU CHEDDAR CHEESE D'ONTARIO.

#### Chauffage—Fermentation du lait et coupage du lait caillé, etc.

Vers neuf heures du matin, le lait est ordinairement dans toutes les cuves. A cette saison, on emploie quatre cuves, elles mesurent toutes 15 pieds de long sur 44 pouces de larges. Elles sont chacune, entourées d'une enveloppe pour recevoir l'eau et dans laquelle on tourne la vapeur. Le lait est premièrement chauffé jusqu'à 86 degrés F., deux paires de palettes agitatrices, fonctionnant pendant le chauffage. Le lait est éprouvé quant à sa maturité par l'éprouveur de caillotte et l'est d'ordinaire nécessaire d'ajouter un ferment afin de faire mûrir les cuves uniformément. Quand l'éprouveur de caillotte démontre la coagulation en 17 1-2 secondes les cuves sont arrangées. Le ferment se fait en plaçant quatre seaux de lait de la cuve la plus savoureuse, s'il y a quelque différence, dans une canistre à lait, à ceci on ajoute deux seaux d'eau et une pinte et demie de ferment sur, de la préparation du jour précédent.

La quantité ajoutée habituellement à chaque cuve est de un seau et demi, mais ceci est guidé par l'éprouveur de caillotte.

Le lait est fini en ajoutant quatre onces de caillotte, par 1000 livres de lait, dans un fort volume d'eau et on permet aux agitateurs de fonctionner pendant trois ou quatre minutes.

En cas que le lait soit trop mûr il est monté à une température moins élevée et jusqu'à ce que deux onces de caillotte, par 100 gallons de lait, soient ajoutés, la cuve étant ensuite chauffée plus vite afin de prévenir l'acidité. Le lait caillé est conservé quand il se brise sous le doigt, pousse sous la surface et levé avec son cœu est à peu près trente minutes après l'avoir réglé.

Le couteau horizontal est employé premièrement sur la longueur de la cuve et le couteau perpendiculaire en travers et en long, ce qui coupe le lait caillé en morceaux d'un demi-pouce cube. Il faut prendre soin afin que le lait caillé ne soit ni brisé ni écrasé. Quatre paires de palettes sont maintenant mises en mouvement dans chaque cuve. Le lait caillé en est détaché des parois et la vapeur est ouverte au-dessous afin de la cuire. La température est montée de 86 à 98 degrés dans l'espace de quarante à quarante-cinq minutes. Les agitateurs sont tenus en mouvement jusqu'à ce qu'ils montent, sur le fer chaud, de l'acidité et le petit lait en est soustrait quand il marque un huitième à un quart de pouce, ceci est ordinairement trois heures après être commencé. Quand le lait caillé travaille trop vite, ce qui provient de lait trop mûr, on le coupe plus fin. Le petit lait est soustrait ordinairement peu après le coupage, et le lait caillé est tenu en mouvement par un râteau.

Dans le cas où, à cette période, il y des mauvaises odeurs. M. Knechtel a trouvé un avantage en lavant le lait caillé dans la cuve, en ayant soin dans chaque cas qu'il n'y ait aucune humidité dans le trou d'évier. Après que le petit lait est coulé, le lait caillé est placé dans l'évier jusqu'à ce qu'il se mêle, et alors, coupé en blocs et tourné fréquemment jusqu'à ce qu'il soit prêt à être moulu, ceci dans l'espace d'une heure et demie à deux heures.

MOUTURE, SALAGE ET PRESSAGE. Le lait caillé est employé et mis en mouvement par le pouvoir de l'engin. Après être moulu, le lait caillé, quand il est soigneusement pilé et couvert hermétiquement, est agité fréquem-

ment pendant 40 ou 60 minutes, afin de se perfectionner.

Ceci tend à aider et la douceur du fromage. Il est maintenant brisé et bien aéré à l'air frais par de fréquentes impulsions jusqu'à ce que le lait caillé démontre le gras du beurre et la température est baissée à à peu près 82 degrés après avoir été salé au taux de deux à trois livres et quart de sel par 1000 livres de lait.

Le lait caillé qui contient du gaz ou des mauvais s'odeurs, a besoin de plus de brassage et d'être aéré plus longtemps. Un lait caillé humide est salé à raison de 3 livres de sel par 1000 livres de lait, afin d'allouer pour le sel qui se perd dans le dégouttage.

M. Knechtel considère que le pilage du lait caillé, suivi par beaucoup de brassage dans l'air frais, est très important, parce qu'il pourrait arriver que par cette négligence, il en résulterait un fromage mou, troué et en lambeaux. Il est aussi nécessaire que les parties du lait caillé soient bien séparées avant le salage, afin qu'il soit salé uniformément.

Le lait caillé est brassé deux fois durant le salage et trois ou quatre fois pendant les 15 ou 20 minutes qui suivent.

Il est alors pesé et mis dans les cercles, 112 livres dans chaque, qui pèsent, quand fini, 82 lbs. Ils sont pressés dans la presse pendant 45 minutes et alors bandés soigneusement. Les bandes en toile pour fromage sans coutures, sont employées et elles sont relevées soigneusement afin d'éviter les plis. Des toiles à double haut et double fond sont posées et celles du dehors sont retirées avant que le fromage aille dans le séchoir. Le fromage est alors rapporté à la presse et tourné à 6 h. a. m., le jour suivant. A onze heures il est retiré de la presse et marqué du nom de la cuve de laquelle il provient, la date de sa fabrication, Canada, et placé sur les rayons de la chambre à sécher.

#### LA CHAMBRE À SÉCHER

est un large bâtiment bien aéré et d'une clarté moyenne. Aussitôt que quel qu'un entre il remarque une odeur agréable, un goût ou une odeur de noix, ce qui est commun au bon fromage. Ceci est reconnu à la fabrique et c'est pourquoi elle est tenue avec cette propreté scrupuleuse. Le séchoir est tempéré, de 60 à 70 degrés Fahr. Dans les journées chaudes, la boîte à glace est employée, celle-ci mesure six pieds et demi de haut, sur trois pieds de large et trois pieds de longueur, elle se tient élevée sur un pancher et toujours pleine de glace.

Elle a une ouverture au bas, par laquelle l'air frais circule.

La chambre est chauffée l'hiver par une tournaise à charbon enroulé d'une enveloppe en asbestos, afin que la chaleur ne s'échappe que du haut, près du plafond.

Durant les temps chauds, toutes les fenêtres du séchoir sont grandes ouvertes après le lever du soleil et fermées de bonne heure le matin.

Le fromage reste à la fabrique pendant trois ou six semaines, après quoi il est expédié à MM. Ballantyne de Stratford qui l'inspecte et donne les instructions, quand à la place et le temps de l'expédition.

#### EMPAQUETAGE.

Le fromage est pesé quand il est poids du fromage est marqué sur le dément dans de fortes boîtes. Des planches doubles sont posées sur le haut et le bas, les couvercles s'ajustent bien et sont posés sans clous, le poids du fromage est marqué sur le dehors de la boîte ainsi que la marque de fabrique de MM. Ballantyne et Bell.

#### LA BASE DE LA VALEUR

Les patrons sont payés d'après les qualités du lait tel qu'indiqué par l'évaluateur Babcock, à laquelle est ajouté deux pour cent, ceci étant con-

sidérer à indiquer sa valeur productive en fromage. L'évaluation est faite une fois par mois.

Un échantillon d'une once de lait, de chaque patron, est prise chaque matin tel que reçu et placé dans un vase contenant un peu plus de bi-chromate de potasse et de sublime corrosif, que contiendrait une pièce de dix cents. Ceci le garde en forme liquide, jusqu'à la fin du mois, quand l'épreuve est faite.

Les patrons reçoivent des états de compte mensuels montrant les livres de lait, pourcentage de gras avec 2 pour cent ajouté, la moyenne de livres de lait à la livre de fromage, moyenne du fromage, taux du gras par livre, proportion totale du fromage, argent et balance qui leur est due, ce qui est payé par chèque.

M. Bell reçoit \$1.85 par 100 lbs de fromage fabriqué, et le petit lait qui est allimenté à la fabrique. Pour ceci le lait est trié, le fromage fabriqué et vendu.

L'année dernière il fabriqua 140 tonnes de fromage, mais il est peu probable qu'il excède cette saison 120 tonnes.

L'automne dernier, un outillage de beurrerie fut introduit, et on y fabriqua du beurre du 1er novembre au 1er mai. Le beurre fut fabriqué pour 2 1-2 cents la lb. Ceci était très satisfaisant et bien des patrons regrettaient le commencement de la fabrication du fromage, car ils estimaient à une certaine valeur le lait écrémé qui leur était retourné.

#### LES PORCS QUI BOIVENT LE PETIT LAIT

Tel que dit plus haut, tout le petit lait s'allimente à la fabrique, de sorte que la cause de tant de trouble dans beaucoup de fabriques—renvoyer du petit lait sale dans les canistres, infectant ainsi le lait du jour suivant—est complètement évitée. Au temps de notre visite ils nourrissaient environ 400 cochons dont la plupart était du genre Bacon, et il y avait à peu près à expédier un char double. Ils sont de toutes couleurs, et ressemblent à la race de Berkshire, Tamworth, Yorkshire, Poland, China et Chester White. C'était un troupeau prospère et mûri économiquement. Ils reçoivent journellement trois breuvages de petit lait doux, et deux repas de mouture de pois et de mouliné une moyenne par cochon de une demi à trois quarts de livre par repas ou l'angé dans la même proportion qu'une tonne de pois est trois quarts de tonne de mouliné. Ceci est trempé dans du petit lait trois heures avant le repas et on trouve que c'est la nourriture de grains la plus satisfaisante. Ils sont gardés dans des bates bien aérées avant dix pieds sur 10, et contenant de huit à neuf pores.

La porcherie qui est située à 600 ou 700 pieds nord-est de la fabrique est tenue proprement et confortablement.

Il n'importe quel temps, quand un cochon perd son appétit ou a une disposition à le sortir pour une journée ou deux, ce qui le ramène à la santé.

Ils sont groupés suivant la couleur, la grandeur et la forme et toutes les fois qu'un lot tend à se multiplier et à engraisser il est mis dans la cour ou on lui réduit sa ration de grain.

De cette façon, la forme du lard est conservée et la tranche de maigre proverbiale est obtenue, ces cochons sont expédiés à l'âge de huit mois et pèsent alors en moyenne 200 lbs.

L'Institution comme ensemble, est excessivement bien équipée et conduite d'une manière digne de rivalité. Il y a peu de rien, qui n'est pas nécessaire dans n'importe quel département; mais ce qui est requis, est présent, et en bonne condition.

Nous sommes informés que le prix reçu pour le produit de cette fabrique est habituellement de 1-8 à 1-4 de cent au-dessus du prix du marché, et cela par la bonne qualité uniforme du fro-

mage. Nous avons vu percer un certain nombre de fromages de la même et de différentes dates, et l'uniformité de ceux de même âge était remarquablement prononcée.

Le fromage mûr possédait une douceur ou une saveur de goût qu'on obtient rarement, même sur les meilleures tables d'hôtels du Canada ou des États-Unis.

C'est un fait bien lamentable que toutes les fabriques ne soient pas du même degré de perfection, vu que les patrons et les manufacturiers pourraient le faire si ils s'arrangeaient pour pousser cette idée. Il y a toujours un marché ouvert et animé pour les produits alimentaires de bonne qualité, mais ceux de qualité inférieure sont toujours bloqués par la grande compétition qu'ils rencontrent.

Il n'y a pas de doute que le genre de chaque fabrique est gouverné en grande partie par son système de direction, ce qui donne à celle de Tomstock une grande supériorité sur les autres, vu que M. A. T. Bell est reconnu comme étant un des avancés dans la fromagerie.

Pendant plusieurs années, il fut instructeur à la fromagerie de Guelph, où il se fit une foule d'amis parmi les étudiants de cette institution.

Les beurriers ne devraient pas oublier tout le trouble qu'ils eurent l'année dernière avec les tinettes moisies et être certains que chaque une d'elle soit ébouillantée avec soin. Si ceci est fait, il n'y a pas de danger que le mois fasse son apparition sur les tinettes.

Le fromager qui envoie ses voitures chercher le lait se rendrait très populaire avec ses patrons en faisant faire à ses voitures une livraison journalière.

Le fabricant de beurre n'est pas, ne devrait pas être payé suivant le montant d'ouvrage qu'il peut faire, mais d'après la qualité qu'il peut produire. C'est la façon dont il fait son beurre qui le rend indispensable dans une beurrerie. Nous trouvons que c'est une grande erreur que d'employer par contract un beurrier qui est obligé de manier tant de livres de lait par jour. Celui qui est digne de sa position maniera tout le lait qu'il pourra et fera justice à son ouvrage.

ETABLIS EN 1889

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A CHEESE LESSON.

A leading grocer in an eastern city gives the following experience and draws a lesson from it for the benefit of New York cheesemakers. It would seem that this lesson is equally pertinent to every cheesemaker in the country. The grocer advertised: "Old cheese, one year old to-day; it is rich and mellow, and of delicious flavor, but not strong." He had the goods, plenty of them, and it was just as advertised. All day and late in the evening the people gathered around that cheese counter waiting to be served, like the crowd at the Friday bargain table in a department store. Cheese melted away about as fast as the attendant could cut and put it up. Very few asked the price. The quality was there and they were willing to pay for it. It was high enough to cover what was paid the producer a year ago, storage, interest on the investment and a fair retailer's profit. There was probably more cheese sold at that counter on Saturday than there will be of the average run of grocery cheese in a month. There is an object lesson in this incident that the cheese producers of Central New York would do well to study. They are making cheese for export, competing with countries that can produce good cheese at lower cost than here and selling to a combination of operators in the poorest cheese market on earth. There is a trade right here at home that will take all the good cheese offered, at twice what the maker gets for the article produced. It is a fact that here in the cheese centre of the United States, it is difficult for the critical consumer to find a satisfactory piece of cheese. The grocer referred to filled a long felt want, and he was rewarded with a big trade.—Produce Review, N.Y.

FARMERS' INSTITUTE, SUNBURY.

At the Farmers' Institute meeting, Sunbury, Ont., Dec., '98, Mr. William Guthrie, of Perth Road, Ont., truthfully said: "Among the fundamental principles in any business are knowledge, honesty and confidence. Knowledge in the selection of their herds; too many cattle are objectionable, poor cattle are dear at any price. Knowledge in the care of cattle; well-lighted, properly ventilated, warm houses are necessary for dairy cattle. The care of the milk at the farm is most important. The bane of the cheesemaker is the return from the market of a dockage of half a cent a pound, with the explanation, 'a bad flavor,' etc., which may be in the milk traced to the farm. Cleanliness is absolutely necessary. The farmer must be honest with his herds; proper foods must be supplied. Cheesemakers should absolutely refuse to accept milk that is tainted from one man and thereby depreciate the value of the products of a number of patrons. He strongly recommended the Babcock test in paying for the milk, and also the dating of the make of each cheese. He severely condemned the dealings in futures in the cheese market. Dairy men must have confidence in their business and in their cheesemakers. Those who have this confidence will be anxious to furnish first-class milk. The salesman having confidence in the buyer for the wholesale market."

Miss L. Roor, of the staff of the Ontario Agricultural College, presented the subject, "One Eye in the Field, the Other in the Town." How much character may be discovered of a person may be discerned from the eye. Do not keep your eyes upon a little plot of land, but rather upon the others and benefit by your observations. Ignorance in any business means failure. Visit your friends with eyes and ears open, and you will return much improved, to carry on your work.

The speaker contended that the men of the country are much broader in their views than men from the city. It is necessary that men should extend their sympathies to their neighbor, and not live for themselves and by themselves. The farmer should keep one eye on the city and thereby be in touch with the necessities of the world and the best market suited to

himself. The adoption of the cold storage system means many millions of dollars for the farmer. The bringing to the city of the raw material are needed to build up the manufactories and finally go back again to the origin. Thus has the farmer, not the greatest interest in the towns and cities. Take recreation as you go through life, and do not leave it off till old age. What do the people get out of life who are busy from five o'clock in the morning until ten o'clock at night? Keep posted along the lines of politics, not party politics, but those in the best interests of the country. There never was a time, when men of integrity were more needed, men of honor, men who will not lie.

POINTERS ON HANDLING SEPARATORS.

I notice that agents feel freer to sell a separator to a man who proposes to turn it by hand than to one who intends to run it by tread power. This is not because the tread power cannot be used with entire success, but because it generates more power than is needed to run the separator, and this extra power may be allowed to grind out the machine.

It is proper, therefore, that the belt should always be loose. Then if motion runs up too fast the belt will slip. Or if the separator is in bad order the belt will slip. Here is a pointer. If it is a frosty morning and the separator is in a cold room it will turn hard. If it is turned by hand the operator knows it. It will be so hard work for him that he will not turn it until he has warmed it, and made it run easy. But if he uses power he knows nothing of this, the machine is forced to run, and too much strain comes on the machine, the screw gear is worn and the machine grows old before its time.

The writer wishes to make a suggestion here which will be valuable to many readers. If the separator is in a room where it is subjected to the cold do not start it in winter time without first trying it by hand. Throw off the belt and run it by the pulley. It is not necessary to put in the bowl. Try it without the bowl to see if the gearing runs freely. If it does not, warm it before using it.

There are different ways to warm it. Some use a stove. Some use a kerosene burner, and some have the separator where neither of these methods is practicable. The simplest way so far as my experience goes is to take one of the footstones which are in every well regulated farm house. The soap stone or the granite stone, or whatever kind is used to keep the feet warm in riding in winter, is the proper thing. All that is necessary is to put one of them in the oven of the kitchen stove, or on the top, or anywhere where it will be warmed when the fire is started. Set this hot stone next to the screw gear, wrap a blanket around the machine and it will be warmed as nicely and as gently as you could wish were it a baby boy instead of a baby separator, and when you are ready to start it the desired hum will duly greet your appreciative ears. Little things like these are important. A Colicative machine like a separator machine can be put out of condition for doing acceptable work in a short time by thoughtless neglect and it can be made to run for years as good as new, and with no worry, for one soon becomes accustomed to it, and does the work automatically and detects at once any change in motion or in manner of running. Use light oil in winter and heavy oil the rest of the year. It is absolutely necessary to use oil that will run, and heavy oil will not run in a cold place.—New York Produce Review and American Creamery.

The following, showing average composition of cows' milk, has, of course, gone the rounds, but we think it should start out again:

Water	88.19
Fat	4.69
Casein	3.53
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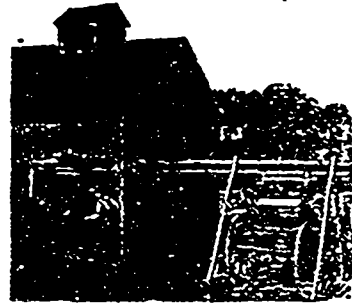
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The LAWRENCE-WILLIAMS CO.,

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### WITH LIMBERGER CHEESE. THE EXPERIENCE AND FUN A BOY HAD.

Father and Mother Carried Slices as They Went to Church—A Panic Arose, and the Sanitary State of the Church Came Under Review—My, When Pa Found Out!

"Ma sent me down to pay a bill at the grocer's last Saturday. The 'boss' behind the counter made me a present of something wrapped in a piece of silver paper, which he told me was a piece of Limberger cheese. When I got out-side the shop I opened the paper and when I smelt what was inside of it I felt tired. I took it home and put it in the coal shed. In the morning I went to it again. It was still there. Nobody had taken it. I wondered what I could do with it. Father and mother were getting ready to go to church. I put a piece in the back pocket of father's pants, and another piece in the lining of ma's muff. I walked behind when we started for church. It was beginning to get warm. When we got in church and after singing the first hymn, mother told father not to sing again, but to keep his mouth shut, and breathe through his nose. After prayer, perspiration stood on father's face, and the people in the next pew to ours got up and went out. After the next hymn father whispered to mother that he thought she had better go out. After the second lesson, some of the churchwardens came round to see if there were any stray rats in the church. Some more people near our pew got up and went out, putting their handkerchiefs to their noses as they went. The parson said they had better close the service and hold a meeting outside to discuss the sanitary condition of the church. Father told mother they had better go home one at a time. When they got home they both went into the front room but did not speak for some time. Mother spoke first, and told father to put the cat out of the room. As she thought it was going to be sick. It was sick before father could get it out. Mother then turned round and noticed that the canary was dead. Mother told father not to sit so near the fire, as it made matters worse. Just then the hired man came in and asked if he could throw open the windows, as the room smelt very close. Father went up stairs and changed his clothes and had a hot bath. Mother took father's clothes and offered them to a tramp, who said, "Thanks, kind lady, they are a bit too high for me." Mother threw them into the creek. Father was summoned afterwards for poisoning the fish. Next morning father had a note sent to him. Father came to wish me "Good night" at one o'clock, with the note in one hand and a razor strap in the other. I got under the bed. The people next door thought we were beating carpets in our house. I cannot sit down comfortably yet. I have given my little sister what I left of that Limberger cheese. I thought it a pity to waste it."

### THE POSITION OF CHEESE.

(From the "Dairy," London, England, Dec. 15, 1898.)

The latest and most reliable reports indicate that the make of cheese in Canada and the United States this season is between 650,000 and 700,000 boxes less than last season. The make last year was larger than usual, but it is perfectly clear that this season's make will be the smallest for many years. It is obvious that the English make is much smaller than usual, but unfortunately it is impossible to get even approximate statistics. (English cheese being distributed through so many channels.)

The main causes of the small make on the other side of the Atlantic are fewer cows, a general anticipation of low prices for cheese at the beginning of the season, which led many factory men (who had never done so before) to make butter instead of cheese, and, later on in the season, drought in some sections. The ultimate effect of this

deficiency, which is over 20 per cent, cannot at the moment be determined, but no one who has accurate first-hand information from the important producing centres, questions that it is a fact of considerable importance.

Since the November elections in the States have disposed of currency troubles for some years, there has been a great expansion of trade, and it now seems almost certain that fewer States cheese than usual will be shipped to England during the ensuing winter and spring. Our New York correspondent writes us as follows: "I am afraid I shall not be able to ship more cheese to you this season. The home trade is rapidly absorbing the September and October make, and shipments from here during the winter will be almost entirely from Western Canada, shipped on through bills of lading." He also states that the consumption of milk in the large cities is steadily increasing, and that the railway companies are giving cutting rates, enabling the milk dealers to draw their supplies from distances of from 300 to 400 miles at low rates of freight.

The figures given above are based on a liberal estimate for shipments of States cheese, viz., 100,000 boxes.

The causes which contributed to a larger make of butter and a smaller make of cheese in Canada have also obtained in New Zealand, with the same result.

CREW, WIDGERY AND CO.

36 Snow Hill, E.C.

Dunvegan, Ont., Dec. 15, 1898.

J. O. Lingenfelter, Esq., Editor C. C. & B. M., Kingston, Ont.:

My Dear Sir,—Your valuable paper, which I have been receiving since its start, and which always contains such admirable knowledge, for the man in any way interested in the great dairy interest, which to-day leads all others in our Canadian home.

And, I believe your paper shall be no small means of bringing this industry to a higher notch in the keen competition of the world.

As I read in each issue of your paper some valuable points given by some local cheesemakers, I shall endeavor to say a few words.

Being a cheesemaker, anxious to attain success for the past six years, I have succeeded this past autumn in carrying off first prize, and gold medal at the Central Canada Exposition, Ottawa.

Below I shall give you a correct statement of how said cheese was made, trusting it may be of benefit to some of the boys.

The cheese was made in "Maple Creek" Cheese Factory, Dunvegan, Glengarry County, the last week of August. The land is of a hilly and rocky nature, producing, I believe, an unexcelled quality of milk for cheese and butter making purposes.

The milk (as you will further on notice) was a little over-ripe, as the preceding night was very warm. Milk was set at 8.25 a.m. at a temperature of 88 degrees Fahr. I used three oz. champion rennet to 1,000 lbs. Milk. Coagulation took place at 8.50 o'clock. I cut at 9.50.

Stirred very gently for ten minutes. Applied heat 9.10.

Cooked at 9.30; temperature, 99. Removed a portion of the whey at 9.45, with a continual stirring until the final removal of all the whey at 11.05—(the temperature raised to 102 degrees before removing).

Hand stirred very dry and careful; temperature after whey was removed 96.

One-fourth inch acid. Piled three deep, turned every ten minutes.

Milled at 2.15 p.m.; temperature, 94. Continued stirring and riling the curd until salted at 3.15; temperature, 86.

Used three lbs. Windsor Salt to 1,000 lbs. milk.

Hooped at 3.35 p.m.

Banded at 5.00.

Cheese was tested when about four weeks old.

Wishing you success, I am yours,

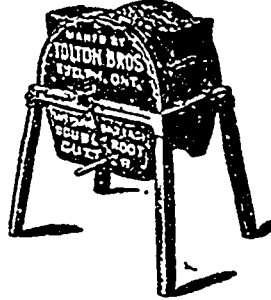
very truly,

DANIEL BARKER.

Mention this paper when answering admts.

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## No. 1 DOUBLE ROOT CUTTER.



### POINTS OF MERIT.

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

## STEEL SHAFTING AND ROLLER BEARINGS.

And all that is Latest and Best in Material, Construction and Workmanship—hence the Latest and Best and Only Double Root Cutter Manufactured. Soliciting your orders, we are

Yours Truly,

**Tolton Bros.,** Guelph, Ontario.

R. H. BUCHANAN CO.,

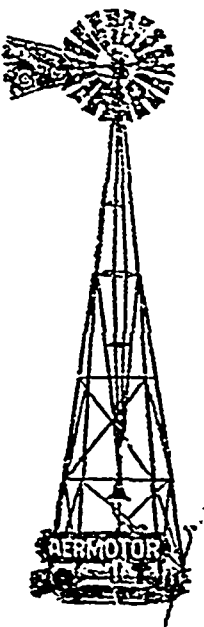
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AERMOTOR STEEL WIND MILLS. Largest sale of any Mill in America. Roller Bearings— all Sizes 12 ft. and 16 ft. GRIND MILLS, GRINDERS, Etc.

### SMALL BABY STEAM

Pumps, for Dairy's, Cheese Manufactories, Etc. Suction 1 in., Discharge 2.

Rider-Ericsson Hot Air Pumping Engines, Injectors, Belting, and Tools of all kinds. Send for Prices and Testimonials.



## FOR SALE



The Midland Central Apiary and Fixtures To Be Sold.

THIS season's honey crop is 25,700 pounds, or nearly thirteen tons. Satisfactory reasons given for selling. For further particulars apply to

R. A. Morrison,

Inverary, Frontenac County, Ontario.

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THE BEST SEPARATOR OIL KNOWN Makes Machinery Run smoothly and cheaply. Saves wear and tear and fuel. Made by the Vacuum Oil Co., under the Vacuum process.

### FARMERS

insist upon your dealer furnishing Vacuum American Pulp. Take no other.

Canadian Office and Works.

VACUUM OIL CO.

Front and Scott Sts., TORONTO.

468 St. Paul St., MONTREAL.



**LONGHORN CATTLE.**

Revival of Interest In an Old English Breed.

How the mention of the name "Longhorn" seems to awaken memories of the past, says the London Live Stock Journal, with the many pleasant associations that linger round our schoolboy and early farming days! Then we used to be delighted with the enormous, picturesque horns and the long, deep bodies of this famous breed and to hear the breeders and feeders of those days discussing the profits that had been drawn from the grazing. We learned of the weight of cheese that had been produced from the cows during the summer or the weekly yield of butter, or perchance it might be the merits of some renowned breeding animal that after 15 or 16 years in the herd had at last succumbed, when the thickness of flesh upon the loin formed the subject of great boasting, and most of these remarks applied at that time to the Longhorn. The improved Shorthorn, or Durham as it was more commonly called then, had only just begun to displace the old familiar



LONGHORN PRIZE BULL KENILWORTH.

Bakewell cattle. Among the many breeds in the British islands that for perfection of form and general contour as well as for the more practical purposes of producing meat and milk are the admiration of every foreigner that sets foot upon our shores, whose line of life is in any way connected with cattle breeding, it is very pleasing to find that the old Longhorn still finds a place, and that this, one of the oldest breeds in the country and at one time threatened with extinction, is still to be found in various parts of the country and in sufficient numbers to make a very creditable display.

At the recent Royal show, where owing to the exertions of several breeders of this variety classes were instituted with a view to the resurrection of this at one time leading breed of the central midlands, but which had become so much reduced in numbers that it was thought by many to have been already entirely lost, the entry of some 22 animals in the three classes allotted to them at Four Oaks Park, however, proved very conclusively that considerable interest is still taken in their breeding, and the writer's experience is that there are many parts of England and many conditions obtaining for which the Longhorn will be found a more profitable animal than many of the other breeds.

The general characteristics of the Longhorn are undoubtedly an ability to combine beef with milk and also a hardihood of constitution that fits them for the greatest exposure. Indeed the breeders never happier than when out in the fields both winter and summer, their thick mellow hide and heavy coat of hair enabling them to endure cold or wet without feeling the slightest ill

effects. This quality alone admirably fits them for the greatly increased amount of permanent pasture that has been created in England during the past decade, as well as for the increased labor difficulties connected with farming and which outlying cattle during the winter season reduce to a minimum. Then again, the rapidity with which the Longhorn becomes fit for the butcher is a very strong element in its favor, as is also its suitability for crossing purposes, crossbred steers attaining a great weight and good value at a very early age. As an instance of the latter it is within the knowledge of the writer that half horned steers, as the Longhorn crosses are usually termed, have very recently been sold to the butcher at as much as 80 guineas each at 2½ years old, while as instancing their great aptitude to fatten, it may be mentioned that during last month an offer of £27 was refused for a steer of the pure breed that was purchased lean immediately before last Christmas at half that sum. Then coming to the dairy, another very important point, the Longhorn for quality of milk and yield of butter occupies a position second only to those of the Channel island breed. Looking at these desirable characteristics many will naturally be led to ask why, if all this is true, did the breed so rapidly sink into comparative oblivion? To this question there are several answers. Doubtless the breed, as it formerly existed, was a little longer in coming to maturity than some of the newer breeds. Then there was the desire to try the Shorthorn, which tempted many to get rid of their old favorites. Then again, a great many herds had suffered from overbreeding, which had given an excess of fat in the flesh and a reduction of the milk giving properties, and, further, there is little doubt that the Longhorn, so to speak, hastened its own end by its rapid fattening properties.

**Disease of Young Cattle.**

A new disease, so far only affecting cattle less than a year old, has appeared in the herds of Messrs. Reed, Hamilton and Talbot in Harmon in northern New York. The disease makes itself known in the breeding in the throat of hundreds of white worms, which if not removed speedily eat their way into the flesh, making death certain.

**FEWER BIG RANCHES.**

Changes in the Cattle Industry of the Far West.

About a decade ago a good many big cattle companies in the west went out of the business. They were forced out by a combination of unfavorable circumstances—hard winters, overstocked ranges with no provision for winter feeding and a great decline in the price of beef cattle. Some of the companies weathered the storm, learned a lesson from their dead cattle and inaugurated a new policy of caution in stocking up and preparation for winter feeding. Haymaking became a part of the business of the ranges, much to the benefit of the cattle industry. Again we hear of several big cattle companies that are winding up their affairs, but this time under quite different conditions from those first mentioned. Then the prices for yearling to 3-year-old steers ranged from \$8 to \$18 per head, and cows with calves at \$10 to \$15. Now yearlings to 3-year-olds bring from \$25 to \$45 per head and cows with calves from \$35 to \$45. The big ranches are not being forced out by disasters, but they are passing away because of a new order of things in which they are at a disadvantage. The range is being occupied by small ranchmen, sheep have been crowding upon the cattle territory, and the element of farming is coming into

the business to a greater extent in the growing of alfalfa and the making of hay for winter. All these are behind the changes now apparent in the cattle industry of the west. And the meaning of it all is that more cattle will be raised and better ones than under the old order. It is a step forward in the development of the cattle industry and the country of which it is the leading industry.—National Stockman.

**Points About Horse Feeding.**

There are a few important facts in horse feeding that every horse owner ought to know and that are frequently neglected, much to the injury of the animal. A horse should never be fed grain after heavy work until he has rested half an hour. Hay will do no harm at any time. Never water a horse just after eating. To drink freely at this time will wash a large portion of the food from the stomach to the intestines, dilute the gastric acid and irritate the bowels. Always water before feeding grain. Never permit a fatigued horse to drink freely of cold water. A warm mash will do no harm at any time, or wet hay and fodder may be fed, and afterward a full drink may be given. Never let a horse suffer from thirst when it can be avoided, nor food either, but the first is more injurious. A horse employed in regular work should have a full feed at night, with hay to nibble at will, a light feed in the morning and a bran mash with hay at noon-time. A horse should never be required to do heavy work with his stomach full of grain or entirely empty. Study your horse and feed according to his individuality. A greedy horse should be restrained. Others may be given all they will eat. Each horse should be fed separately. Men, women and children should make their meals social occasions, but they are not horses.—Texas Farm and Ranch.

**The Mouth of the Horse.**

It is to be regretted that the cavalry (mounted) could not have been used at the front in the war now closed, says a correspondent of The Breeder's Gazette. It would have demonstrated to the rising generation that horsemanship is an art not lost, but urgently needed in every young man's education. The First Ohio cavalry, in camp at Chickamauga and later Lakeland, Fla., gave to many of the young citizens of three of the largest cities in their state an experience they never thought necessary previous to enlistment. To be placed where one can and does study the disposition of a horse always broadens a growing mind. Undoubtedly the best place to do this is in the saddle. The mouth of a horse can be called the sea of learning, and the most instructive drill indulged in by the cavalry is the act of swimming horses, for here a rider is brought at once to a full realization of the horse's mouth as it should appear to him under all circumstances. With a viselike grip of the knees, that is hard to retain against the force of the water, any more against the mouth more than the slightest pressure in directing his course imperils the safety of the rider.

**MURRAY'S INTEREST TABLES.**

(Revised Edition).

The only table showing 2½ per cent. rates.

Most complete table in the market, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 7½ and 8 per cent. From 1 day to 365, or \$1.00 to \$10,000. Price \$10.00. Apply to

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**Wisconsin CURD TEST.**

It shows the quality of every patron's milk and points unerringly to the milk that causes Bad Flavor and Gassy Cheese. For full particulars address,

A. J. DECKER, Fond du Lac, Wis., U. S. A., or The "Canadian Cheese and Butter Maker," Kingston, Ontario, Canada.

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Prevents Abortion in Cows and Cures Scours in Calves.

**HOG CHOLERA,**

**SWINE PLAGUE,**

Prevented by Specific No. 1. Will cure 90 per cent. of Sick Hogs.

**ROUP IN FOWLS,**

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Prevented and cured by Specific No. 2.

All remedies applied by sprinkling in stables or pens. No dosing or injecting. Prepared by Dr. L. Hagadorn, V. S. Send for book and testimonials.

**ANIMAL GERMICIDE CO.**

319 Washington St.

New York City, N.Y.

## GOOD WORK AT THE EASTERN DAIRY SCHOOL, KINGSTON.

1897.

Some Very Strong Hints and Good Advice Thrown Out to His Eastern Friends who are Engaged in Dairy Work, by an Old Glengarry Cheese Maker, and Lately a Student of the Kingston School.

I would strongly advise all cheese and butter makers, who intend following up the dairy business and who want to keep up with the times, and in line with their fellow-makers of Western Ontario, who are constantly seeking after every possible knowledge pertaining to the make of a finer article of both butter and cheese than they are now making, to at once or as soon as possible take a course at the Kingston Dairy School.

They not only give you a theoretical knowledge of the different and various branches in connection with dairy work, but they are put into practice and thoroughly and systematically carried out on the most improved methods of the manufacture of butter and cheese. The handling of all factory utensils, care of vats, presses, curd mills, etc., satisfactorily given, also a practical drilling is given on the handling of creamery machinery, all makes of separators, butter workers, centrifugal and rotary pumps, engines, boilers inspirators, ejectors, etc., also a practical drilling is given each day on milk testing, the use of the quivene lactometer, the per cent. lactometer and the oil test churn used in skimming stations or rather on the cream raising system to divide fat amongst patrons.

How the Babcock test can be easily and successfully handled by means of a composite test and the only true way of paying patrons according to the amount of fat contained in their milk is taught. In order to carry on this composite test properly and satisfactorily to all, it requires skillful training and a practical knowledge of the true method of making this composite test.

I have every reason to believe that the chief cause for the Babcock test being discarded in a large number of our eastern factories after a short trial, is due to the insufficient knowledge on the part of the ordinary cheese-maker to carry on a composite test intelligently and with the exactness and skill that it requires to be done with.

During my stay at the school we received two lectures a day, the lectures comprise the following: Milk, its nature and composition. Care and preparation of milk for butter and cheese making. Methods of make and ideas of foreign cheese. Color rennet and salt in cheesemaking. Pasteurization and sterilization of milk. The elaboration of milk. Principles of cheese and buttermaking. Milk testing. Composition of dairy products. Care of cheese and butter factory machinery and utensils. Judging of all kinds of dairy products, also one lecture each week on Dairy Bacteriology by Dr. Connell.

The school is under the able management of Prof. J. A. Ruddle, who is now resident superintendent and who for a number of years acted as superintendent for D. M. Macpherson, M.P.P.'s combination of cheese factories, and was afterwards appointed as instructor for the Dairymen's Association of Eastern Ontario, from this he was appointed on the Dominion Dairy staff as one of Prof. Robertson's assistants, during that time he remained on the staff Prof. Ruddle has been connected with some of the most important dairy work that has been carried on in Canada, such as having in charge the make and shipment of the great mammoth cheese at Perth, he was also chosen by the Dairy Commissioners and sent in charge of the Canadian Dairy Exhibit to the World's Columbian Exposition. During the last three summers, Prof. Ruddle's dairy experience in Manito-

ba and the Northwest Territories has been of the widest kind, also his work in British Columbia has proved a marked success.

During the course of his lectures at the school, he gave us some very instructive information on his dairy work in British Columbia, as well as a splendid idea of what that vast country is like, at the end of the course in his closing address Prof. Ruddle, wanted us to look upon the Kingston Dairy School as our school, and a place where we eastern cheese and butter makers could look to at any time.

## Articles Of Agreement In Starting a Creamery.

Several subscribers have requested us to publish a form of articles of agreement, proper to be made between the proprietor of a creamery, and the patrons of the same. We append, herewith, a very good form, such as was entered into in the building of a new creamery, at Nunda, Ill.:

### ARTICLES OF AGREEMENT.

Made and entered into this 15th day of August, A.D. 1898, by and between Cornell Bros., of the City of Elgin, County of Kane and State of Illinois, party of the first part, and the undersigned, of the County of McHenry, State of Illinois, to-wit:

The said party of the first part, in consideration of the agreement of the second parties herein, hereby agree to build and fully equip a creamery at their own expense on a suitable site to be purchased by them where sufficient water and suitable drainage can be had, in the village of Nunda, McHenry County, or immediate vicinity, for the manufacture of butter and cheese and other milk products, and to conduct the said creamery on the test plan, dividend basis; said creamery to be so erected and equipped, shall be of sufficient capacity to properly handle the milk of two thousand (2,000) cows.

The said parties of the first part further agree to make up the butter at the expense of the patrons of three (3) cents a pound and give them in addition to the butter value in the milk, whatever the skim milk is worth to those who may wish to leave it in the factory.

And the said parties of the second part, each for himself, in consideration of the above, hereby agree on their part, respectively, to deliver to the said creamery in good and proper condition the full amount of milk obtained from the number of cows set opposite their respective names, for a period of one year from November 1st, 1898; or to commence such delivery of milk earlier if the said factory shall be completed and ready for operation sooner than date mentioned, and the existing contracts of the undersigned shall expire so they can do so.

It is further understood and agreed by and between all of the parties hereto that this agreement shall not be obligatory upon the said first party unless the full amount of two thousand (2,000) cows shall be subscribed by the undersigned on or before the first day of September, A.D. 1898.

The said party of the first part agree to commence the erection of the creamery as soon as practicable after the two thousand (2,000) cows are subscribed.

In witness whereof the aforesaid parties have subscribed their names hereto, on the day and year first above written.

There is only one provision in the above agreement that we would criticize in the interest of the patrons. That is the provision relative to the skim milk.

To this we would say, we have never yet seen a creamery proprietor who could give the patrons as much for their skim milk as they could make in feeding it to young calves, pigs, and sheeps, in an intelligent way. When skim milk is worth, at the present prices of pork, 20 to 25 cents per 100 pounds, it is useless to expect factory proprietors to pay such prices for it.—Hoard's Dairyman.

## Tin Foil Cheese Wrappers.

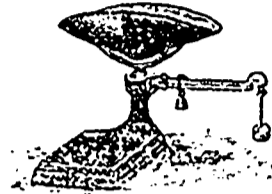
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WINDSOR, ONT.

THE ATTENTION OF

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BUTTER, LARD, HONEY, JAM, ETC.,

is directed to the utility for this purpose of our



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It is perfectly sweet and odorless and does not become corroded under any circumstances.

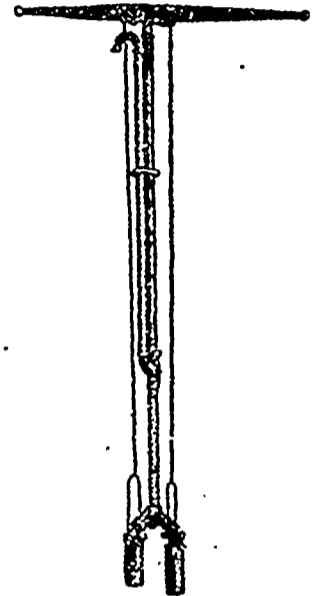
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For supplying Store, Tanks, Washing Floors, Fire Protection, Etc., has no equal. Also for all general purposes for which pumps are used. No sucker, stuffing box or packing.



Pumps sent on trial. Satisfaction guaranteed, or no sale. For catalogue address

J. W. Anderson,

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## COPP'S FARMERS' BOILER.

Registered 1898.

Nos. 30, 45 and 60.



With pleasure we draw the attention of our farmers to our Excellent Modern Feed Boiler,

which is constructed on new lines. It has a strong and well devised Cast Iron Front and Back with Bagged out Flue and Collar Top, so as to receive a straight pipe which is preferable to the elbow attachment.

The sides are made of Steel Plate with a band at the bottom.

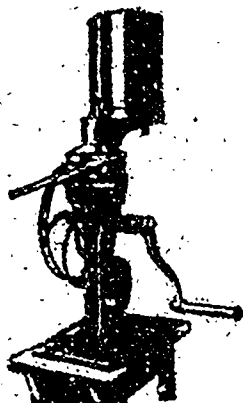
The Feed Door is large and the Body of the Furnace is very roomy, calculated to admit the roughest kind of wood.

The Boiler is designed to sit on the ground, or brick foundation.

Without doubt this is the Best, Cheapest, Most Economical, and Practical Agriculture Furnace in the market. Already it has commanded a large sale.

The COPP BROS. COY,  
HAMILTON, ONT.

The American



Cream Separator

Acknowledged by all to be the best. Easy to run. Easy to clean. Only one piece to the bowl. No loose parts whatever. Low in price. High Quality and finish and most complete. Send for descriptive catalogue.

We also manufacture all utensils and machinery for the manufacture of butter and cheese.

**RICHARDSON & WEBSTER,**  
St. Mary's, Ont.

**THE FINCH WOOD PRESERVATIVE AND PRESERVATIVE PAINT.**

These preparations have been used and tested 25 years scantling sidewalks, Joice Sills of buildings, after being in the ground 18 years are found to be as sound as when put down. Old shingle roofs, painted with the Preservative Paint, after 17 years is still in a good state of preservation, is suitable for sides of buildings, fences, etc. It is the cheapest and most durable paint known.

E. H. CRANDELL, Esq., Mayor of Brampton, writes:

DEAR SIR,—In reply to your request, would say you painted an old roof of my house in 1882 and it is still in a good state of repair.

Yours Truly,  
E. H. CRANDELL.

BRAMPTON, April 2, 1907.

GENTLEMEN,—About sixteen years ago you painted the roof of the house. The shingles were then pretty well worn. I have done nothing to this roof since and the shingles appear to be in a good state of preservation.

M. TREADGOLD,  
Ex-Mayor of Brampton.

**The Finch Wood Preservative And Paint Company.**

870 Queen St. West, Toronto, Ont.

**IT PAYS** to give your Boys and Girls a course of instruction at the Guelph Business College and Short-hand Institute.

Each student receives the most careful attention. If you are interested write for circulars. Address:

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GUELPH BUSINESS COLLEGE  
GUELPH, ONT.

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SOMETHING GOOD!**

Something that will please every owner of a

**Butter Factory or Skimming Station.**

Is the new pumping device lately placed on the market by the **LANCASTER MACHINE WORKS**

One, Two, Three or more pumps may be operated at once by this engine, and at a slight additional cost is adapted to run Churn, Curd Mill, Separator, etc.

The most complete invention of its kind. Fully covered by patents. Infringers are warned.

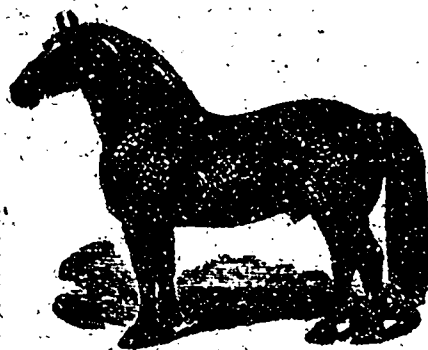
Full particulars from manufacturers.

**LANCASTER MACHINE WORKS.**

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D. M. MACPHERSON, Sole Agent.  
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**PERSIATIC SHEEP AND ANIMAL WASH**



Do you know that the Bickhardt Renfrew Co., Limited, Stouffville, Ontario, have received Diplomas and Medals, at Toronto, Ottawa, London and Sherbrook fairs, last fall, for their Persiatic Sheep and Animal Dip or Wash? This is a fact. Do you know that if your cows during the winter months received a dipping once a month, lice or no lice, they feel better for it? Do you know that a few cents spent on each cow in that direction will pay you many times over for the larger amount of milk they will give? Do you know that a cow when confined in close quarters all winter appreciates attention of this kind? Do you know that vermin will appear on cattle and that their skin becomes very itchy and often sore, and that the poor dumb brute is in misery? and do you know that it is your duty to periodically relieve them of this unpleasant condition. If you don't know it try it, and you will be surprised how thankful your cow will be. You will see the thanks in more milk and better milk, consequently more and better butter. Those that have tried it will tell you so. Your Sheep, Pigs, Calves and Horses all appreciate the same attention. They all become more or less affected during the winter months. Persiatic Sheep and Animal Dip has made its mark. It is being used by the leading cattle and sheep men of Canada. It is put up in wide quarts, gallons or barrels. It retails at 75c per quart. We solicit correspondence. We believe we are on the right track. Our sales and testimonials justify our saying so. Persiatic Sheep and Animal Dip cures Sheep Scab, and Scaled Hoof on Cattle. Write us. It only costs two cents.

**The PICKHARDT RENFREW CO.**

(LIMITED).

STOUFFVILLE ONT.

Please mention that you saw this ad. in this paper.

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**PRODUCE MERCHANT AND CHEESE EXPORTER.**

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**CHEESE SUPPLIES,**

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**THE "VESSOT" GRAIN GRINDER (PATENTED).**

This Grain-Grinder is of different sizes, and for the use of Grist Mills, Saw Mills, Farmers, Etc.

**Agents Wanted.**

Without Doubt the Best Grinder in the World.

ADDRESS:

**S. VESSOT & CO.,**

Founders and General Machinists, Joliette.

Manufacturers of the Joliette Grain Grinder, Quebec.

**THE NAME IS SUFFICIENT**

**KINGSTON BUSINESS**

**COLLEGE**

**And Remington**

**SCHOOL OF SHORTHAND.**

Write for information to

**J. B. MCKAY,**

KINGSTON, ONT.

**THE CHEESE AND BUTTER ASSOCIATION OF WESTERN ONTARIO**

The programme for the 22nd annual convention of the above association, has reached us. This annual gathering of Western Dairymen will take place in the Grand Opera House at Guelph, Ont., on January 17th, 18th and 19th next. A splendid array of talent has been secured, and dairymen who can avail themselves of the privileges of this convention will be well repaid in the line of practical and up-to-date information they will receive on all branches of dairying. Among the prominent speakers who are to address the convention are the Hon. Sydney Fisher, Hon. John Dryden, Hon. Thomas Balfour, A. F. MacLaren, M.P., A. Patullo, M.P.P., Prof. Robertson, Prof. Jordan, Director New York Agricultural Experimental Station; Prof. Beardshaw, President Ohio State College of Agriculture; Prof. McKay, Iowa State Dairy Instructor; Mr. Saunders, Dr. Mills, Prof. Dean, Prof. Shutt, Dr. Council, C. C. James, Deputy Minister of Agriculture, F. C. Harrison, and D. Derbyshire, President Eastern Butter and Cheese Association. Arrangements have been made for a return trip for single fare to Guelph. Delegates must secure standard certificates from the ticket agent, from whom a first-class single ticket to Guelph is purchased.

**Disposing of Old Stock.**

At this time of year all the stock should be inventoried and what will not probably gain enough or produce enough during the winter to pay for its keep should be sold or killed. No farmer can afford to keep stock that does not at all times not merely pay its way, but give him a profit besides. At this time of year such stock as is used for food will probably be in as good condition to kill, as it can be made, and the sooner this disposal of it is made the better it will be. Young growing stock will always pay a profit. So, too, will the best blooded stock, even if it is past the time for growing.—Boston Cultivator.

**BRANTFORD GALVANIZED**



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for Power and Pumping,

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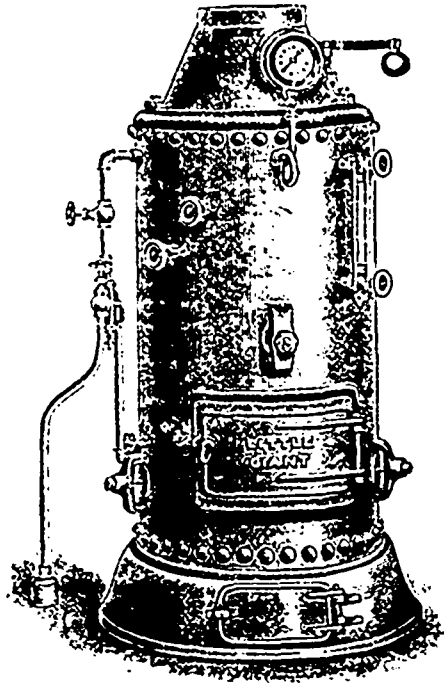
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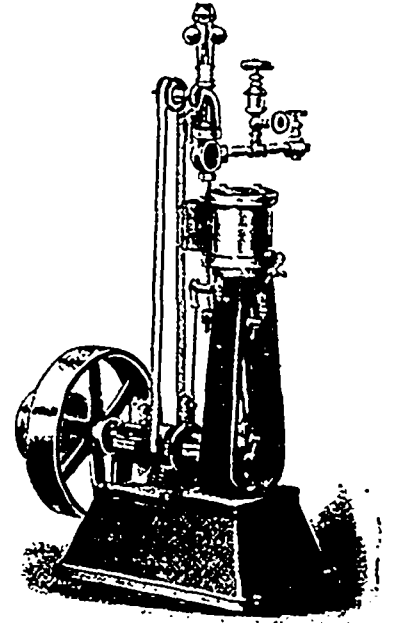


# A \$25.00 BONANZA!!

## Every Farmer can now afford STEAM POWER.



For further particulars regarding  
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**ELLIOT'S** To Dairy men or others who will send 30c. to pay postage.

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Two mills in one with two sets of burrs, the largest ever made, 25 to 30 ins. in diameter, (four burrs) all grinding at once, having double the grinding capacity of other mills, also double the durability. We manufacture the largest and best line of sweep mills sold including the

Famous Iowa No. 2 for \$13.

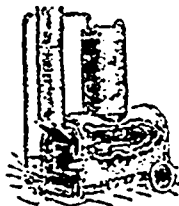
Get our catalogue before paying two prices for an inferior mill. Agents wanted. Manufactured and sold by

**IOWA GRINDER & STEAM WORKS,**

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Improved for 1898. With return flue.



Fire surrounded with water and goes twice the length of boiler. Does three times the cooking with the same fuel used in other steamers. Steel boiler, will last a lifetime. We also manufacture the best line of sweep mills ever

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**WANTED — EXPERIENCED DAIRYMAN** with family and a son or a relative to help run a dairy and retail milk wagon. Must be good salesman and first-class milkers and butter-makers. Address: R. D. ARMSTRONG, Rocky Mount, N. C.

## Northwestern Creamery Managers' and Butter-makers' Bureau.

**JOHN G. BATELY, Secretary.**

Mitchell, South Dakota, September 14, 1898.

To the CREAMERY MANAGERS of the United States and Canada.

GENTLEMEN: I beg to call your attention to our Register which contains the addresses of some of the best buttermakers in the United States. We have men with long experience and testimonials, proving them to be first class buttermakers and good engineers, well educated and positively progressive men. If you are in need of a buttermaker write us all particulars and qualification required, and we will do our utmost to fill your order Free of Charge. We have a few good cheesemakers. Yours respectfully,

**JOHN G. BATELY, Sec'y.**

References: First National Bank, Mitchell, S. D.; Mitchell National Bank, Mitchell, S. D.; Hon. Thomas Fullerton, Mayor of Mitchell, S. D., and the following creameries: Mount Vernon, S. D.; De Smet, S. D.; Hills, Minn.; Lester, Iowa; Parkston, S. D., and other Creameries.