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Vol. 1. No. 5.

KINGSTON, ONT., CAN., NOVEMBER, 1898.

50¢ Per Year.

SOME INTERESTING

“SOLAR-PLEXUS” KNOCKOUTS OF THE LATEST Fake in Cream Separators.

SIDNEY CENTRE, N. Y., May 30th, 1898.

“After running the Sharples ‘Tubular’ alongside of the ‘Alpha’ No. 1 for over a month, we find by experience that it is impossible to get the ‘Tubular’ to skim below .15 of 1 per cent. while the ‘Alpha’ will skim down to .02 of 1 per cent. and has never shown over .04 of 1 per cent. left in skim milk. We find that for about six weeks the ‘Alpha’ has made us a saving of from 75 cents to \$1.00 per day in closer skimming of the same amount of milk.”

“The ‘Tubular’ has also given us considerable trouble in getting out of order. Sharples was obliged to send two bowls and we were a week at a time obliged to let it stand still in waiting for repairs to be made.”

“We have ordered the ‘Tubular’ taken out and have already given our order for another ‘Alpha’ Turbine No. 1.”

ELGIN CREAMERY CO.,

W. H. Mudford, President.

WEST NEWARK, N. Y., July 23th, 1898.

“I have been running a Sharples ‘Tubular’ separator from July 6th to July 23th, shipping it back to factory to-day. I have found it unsatisfactory, taking too much oil, too much fuel, and requiring too much watching. The machine would not run over 2,000 lbs. per hour and skimmed only to .15. I had to keep constant watch over it, as the speed varied so I was afraid of injuring the machine. I had to keep extra help on that account. It also kept me close to my boiler in order to keep steam enough to run it at full speed. Once the bowl set and I had to go ten miles to get it apart.”

“I have shipped back the machine, after calling on the manufacturer to replace it with a De Laval or a U. S., as I had understood him to agree to do, but which agreement he has failed to make good.”

C. E. ANGELL.

MONTROSE, PA., Aug. 2nd, 1898.

“We have tried a Sharples ‘Tubular’ and our experience with same was that we would not have one as a gift, as we believe it would be very expensive to use in the end. We do not see how this machine could ever stand a year’s run without an enormous outlay for repairs. We know by experience that it requires continual watching while in operation, while the ‘Alpha’ requires but very little. And as to skimming, we know the ‘Alpha’ is much the cleaner skimmer, and also believe we could run five ‘Alphas’ on the same amount of steam that the ‘Tubular’ requires.”

THE MONTROSE CREAMERY CO.,

G. A. Baldwin, Secretary.

SCRANTON, PA., July 13th, 1898.

“Yours of 11th, asking why we changed from a Sharples ‘Tubular’ Separator to a De Laval, is received, and in reply we would state that about three months ago we had a Sharples ‘Tubular’ Separator placed in our creamery at Chinchilla and after giving it a thorough trial we were convinced that the machine would not do its work and that it was not what we wanted. We think that if you want a machine to skim clean, that you can depend upon, that the only machine for you to purchase would be an ‘Alpha’ machine. Since placing the ‘Alpha’ at our Chinchilla creamery we have had perfect satisfaction and would advise you by all means to purchase an ‘Alpha’ machine. We have had much experience in the separator business as we are now running five machines, three machines of different manufactures, and are convinced that our ‘Alpha’ machines are superior to anything else we have. We found the ‘Tubular’ machine could not be depended upon from the fact that it was so lightly constructed that it was out of repair a large portion of the time, and that it was very expensive to keep in repair. We feel sure that if you are going to purchase a machine that you will make no mistake if you buy an ‘Alpha.’”

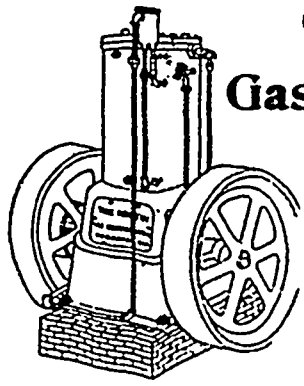
SCRANTON DAIRY CO.,

C. E. Rogers, Manager.

If you use a separator and want the machine which the “Alpha” disc and other recent improvements have made the only all-round practicable machine, either for butter or commercial cream making, the “Alpha-De Laval” is the only one which will fill the bill. It will more than save its cost each year—on an average of 5,000 lbs of milk per day—over and above the best that is possible with any other separator made.

Canadian - Dairy - Supply - Co.,

327 Commissioners Street, Montreal, Que.



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, ¹⁸²¹ King St., TORONTO,
Subway,

Extract From Annual Report for 1897.

Of the Consulting Chemists of the Royal Agricultural Society of England, published in their Journal, 31st December, 1897, page 732:

"It has been necessary to call attention to the fact that under the name of 'slag,' and sometimes even under that of 'basic slag,' have been sold refuse materials of a very different character, and having little or no manurial value. These have not been the product of the now well-known 'Basic' or THOMAS process of iron or steel-making, and have contained little or no phosphoric acid such as basic phosphate has. In several instances the purchasers believed that they were buying the true basic slag. It behooves one, therefore, to be careful to stipulate for THOMAS-PHOSPHATE, and to have a guarantee of phosphoric acid contained, and of fineness of division."

We handle the only true - - -

Thomas-Phosphate Powder

Sold in Canada; and to be sure of the genuine material, see that the bags have our name and address.

WALLACE & FRASER,

Masonic Block
ST. JOHN, N.B.

Canada Life Building,
TORONTO.

BELL BUILT TO LAST A LIFETIME. PIANOS and ORGANS

Superior in Tone, Design and Finish

Nearly 100,000 in use. - - -

Ask for Catalogue No. 61. - - -

The Bell Organ & Piano Co., ^{Factories at} GUELPH, ONT.
LIMITED.

ONE-HALF REAM FREE.

ELLIOT'S To Dairymen or others who will send 30c. to pay postage.

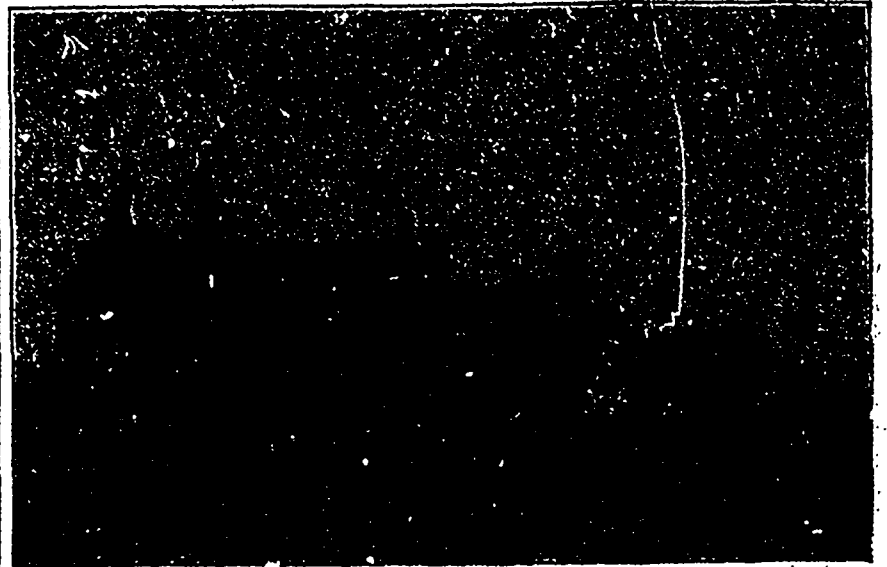
PARCHMENT USE THE BEST **BUTTER** BEWARE OF
WRAPPERS IMITATIONS

A. G. ELLIOT & CO., Paper Mfrs.,

Dealers in
all descriptions
of Papers.

Philadelphia, Pa.,

PAPERS



Kingston Dairy School.

1898.

Kingston has reason to be proud of the Dairy School and the work being done. Much good has been done by the school, the pupils coming from various sections of the country and district, and a buyer of cheese has said that on entering a factory he could generally decide whether the cheesemaker or his assistant was a graduate of a dairy school. Cleanliness is insisted on by the superintendent and staff, and this being ingrained in the pupil, he sees the benefits derived from keeping his work tasty.

The building is a modern building provided with all the necessary utensils and improvements for turning out the best class of cheese and butter, and for giving to the pupil all the information attainable in the business. The classes are divided into sections. There are five classes of two weeks each and one class of six weeks, the students attending the latter having an examination to pass at the end of the session. The local government grants \$3,200 each year for the maintenance of the school and \$1,500 for experiments, the fee to each pupil being but a nominal one of \$2—the only real outlay being in their board. Every morning five tons of milk, 1,000 gallons, is received, and after a lecture delivered generally by the superintendent, operations are begun. It is generally ten o'clock before a start at either the butter or cheesemaking is made, and as all work commenced in the morning must be finished that day, it is sometimes eight in the evening before all are through.

The school throughout has every accommodation that will assist in instructing students as to the best and cleanest way to make the sweetest butter and most tempting cheese. Each student and instructor wears a clean, white apron and a neat white cap, and a visit to the building is a revelation to one who has never seen anything better than the ordinary cheese factory or creamery, with its untidy appearance and unpleasant odor. The store-rooms are models of order, and the neat manner in which the cheese cloths are placed about the cheese indicates that even the most minor details are carefully looked after.

The Kingston Dairy School opened Nov. 21st, '98 for the season under most promising circumstances. There are sixty-three students now enrolled, most of them coming from eastern Ontario. One, however, belongs to New Hampshire. This number will be somewhat increased in a short time. J. W. Hart is very much pleased

with the fine beginning the school has made. There will be, he says, an abundant supply of milk, and that for the most part of good quality. A few of the farmers have delivered milk that has been tainted owing to their cows having been fed turnips. He has warned them that they must stop feeding this root, otherwise their milk will be refused.

The staff of instructors is composed as follows: J. W. Hart, superintendent; C. G. Publow, Perth, instructor in cheese making; W. M. Singleton, Newboro, assistant instructor; J. A. Kerr, Sarnia, instructor in butter-making; W. A. Wilson, Renfrew, assistant instructor. Prof. L. A. Zusselt, who has been fitting up several cheese factories throughout the Province, will take charge of the milk-testing department.

Arrangement for the Milk Supply by the Superintendent.

Milk will be received at the Kingston Dairy School from November 21st from patrons for regular daily supply. The prices for the season of 1898-9 are to be:

From November 21st till December 31st, 18c. per lb. of butter fat and 10c. per 100 lbs. of milk; for January and February, 20c. per lb. of fat and 10c. per 100 lbs. milk; from March 1st to April 5th (date of closing of school) 18c. per lb. of fat and 10c. per 100 lbs. milk. The prices are guaranteed, and if the proceeds from the sale of butter and cheese amount to more than the cost of the milk at the guaranteed price, the surplus will be divided among the patrons in proportion to the amount of butter fat in the milk supplied by each. Under the above arrangement, it is to the interest of each patron to deliver his milk in the best possible condition thereby contributing towards the manufacture of butter and cheese of the finest quality, commanding the highest market prices. While the patrons and not the school will reap all the financial advantage of sales at high prices, the school will be benefited by the increased prestige the high quality of its butter and cheese will give it amongst its friends, the dairymen of Eastern Ontario. If impure or tainted milk is received from a patron it cannot fail to injure the quality of the product, entailing financial loss on the other patrons and injuring the reputation of the school.

The Aylmer Spray Pump Still in the Lead.

Received the Highest Award over the Best Canadian and Foreign Pumps at St. Petersburg, Russia, in 1897-8.

Awarded first place at Manchester, Eng., before the Royal Botanical and Horticultural Society. Diploma at Ottawa, 12 diplomas and awards during the past two years.

Fifty-two furnished the Agricultural Department of Ontario Government, 80 furnished Agricultural Department of Russian Government, 2 furnished Agricultural Department of Dominion Government, (the only pumps used by this department), one furnished Department of Agriculture, Manitoba Government.

Some of the leading points of the Aylmer Sprayer:—

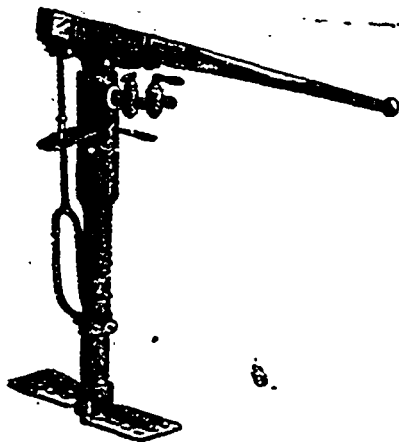
(1) Requires no fibrous packing to keep it tight.

(2) It agitates from the handle without disconnecting any part of pump.

(3) It always agitates at the very point of intake, thus preventing clogging. (We claim this to be the only pump manufactured that will not clog.)

(4) It has almost double the power of any other pump in the market.

(5) It can agitate and drain pump into barrel without disconnecting any parts whatever or forging solution to nozzles.



TESTIMONIAL OF DEPARTMENT OF AGRICULTURE OF ONTARIO GOVERNMENT.
Fruitland, Feb. 12, '98.

Aylmer Iron Works Co., Aylmer, Ont.:
Gentlemen,—Another year's experience with your Aylmer Sprayer confirms our high opinion of them. The fourteen that we got from you in the spring of 1897 for the experimenting work carried on by the Department of Agriculture for Ontario worked splendidly. They were all sold at the places where the work was done, and we will require fourteen more for this season's work.

Yours very truly,

W. M. ORR, Superintendent.

For Particulars Address

The Aylmer Iron Works,

L. L. SHELDON, PROP.

AYLMER, ONTARIO.

TESTIMONIAL FROM RUSSIA.
St. Petersburg, Russia,
Feb. 28, 1898.

We have found the Aylmer sprayer a superior machine, and of great benefit to fruit growers. We cannot praise it too much. It works well and creates great power, with ease of operation.

PRINCE ANATOL GOGARIN,
Vice-President of the Dept. of Agriculture, St. Petersburg, Russia.

TESTIMONIAL AS USED FOR
WHITEWASHING.

Toronto, April 20, '98.

Aylmer Iron Works:

Dear Sir,—Our large toolhouse, 125 ft. by 83 ft. was badly scorched and burned over most of the ceiling and side walls, so that a whitewash brush could not be used on it. The spray apparatus which you sent us, covered this charred wood with whitewash thoroughly, and has made the interior look almost new. Yours,

WARREN, SCHARF ASPHALT CO.



TESTIMONIAL AS USED FOR
PAINTING.

Toronto, Aug. 17, 1898.

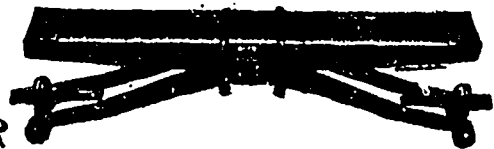
Aylmer Iron Works:

Gentlemen,—We have used one of your sprayers for painting the sides and roofs of buildings, and nothing could be more satisfactory. It drives the paint into every crack, and under the shingles where it would be impossible to reach with a brush. Your pump has great force, forcing paint to the roof of the highest bank barn. We have whitewashed the side of a house in this city 20 ft. high and 40 ft. long, satisfactorily in 30 minutes; no clogging or trouble of any kind.

Yours,

FINCH WOOD, PAINT & PRESERVATIVE COMPANY.

Carry your Stock and Farm Produce on Wagons fitted with the celebrated



“XXX” BOLSTER
- SPRINGS. -

They are the Only Perfect Spring Made. In comparison with these all others are useless. Address

J. H. MORROW,

General Sales Agent, BRIGHTON, ONT.

Special inducements to introduce where we have no agents.

THE NAME IS SUFFICIENT

KINGSTON BUSINESS
COLLEGE

And Remington

SCHOOL - OF - SHORTHAND.

Write for Information to

J. B. MCKAY,

KINGSTON, ONT.

“OUR LOSS IS YOUR GAIN.”

We're crowded for room and have to sell, and to do so quickly are offering low price on Ayrshires and Tamworths.

Three yearling Ayrshire Bulls; 3 Bull Calves, 4 to 6 mos. Also yearling Zeifers, bred.

Tamworth Boars, ready for service, and sows bred; Some to Berk. Boars. Also young pigs, all ages.

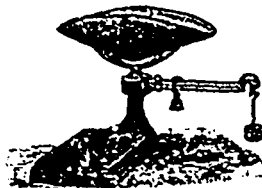
Caldwell Bros.,

“Briery Bank Farm,”

ORCHARD, ONT.

100 STYLES OF

Cheese Scales.



Hay and Platform Scales.

CATALOGUE FREE.

G. WILSON & SON,

71 Esplanade St., Toronto.

COLD STORMS.

It is not advisable to keep either cows or heifers out in the pasture during cold fall storms, of which we sometimes have so many. Such exposure is a losing business and what is the barn for if not to protect the cows when they most need protection. No matter if a cow is not giving milk, that even is no reason at all for neglecting her in these particulars.

COLORED CHEESE.

One of the peculiarities of the western cheese trade is the exclusive demand for colored cheese. White cheese cannot be sold in the west. In eastern Canada the make of white cheese is increasing all the time, as compared with colored goods, and both there and in Great Britain the demand for white goods seems to be on the increase. This is not surprising when it is understood that the col-

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.

CHEESE-MAKER WANTED —
STATE salary and experience; average cheese manufactured for season about 35,000 lbs; no assistant furnished. Address FRED. FREEMAN, Secretary, Haliburton, P. O.

or is simply a matter of appearance. Many consumers have evidently not been aware of the fact that white is the natural color, while the other is artificial. The circulation of this knowledge is probably the cause of the growing demand for white cheese. In fact some experts declare that they prefer the natural white cheese, as they can detect the flavor of the coloring in the colored goods. Custom, however, is often a hard thing to overcome, and in the west at least the trade still demands colored cheese only. Possibly the popular error still prevails here that the colored cheese is a richer and superior article, compared with the white goods. — The “Exporter.”

A German Death Notice.

Under the “collective mourner” system in Germany all the relatives of the deceased bind themselves together to mourn his loss and to defray collectively the cost of advertisement. The case of Mrs. Regina Werschan is an instance in point. She lived to the age of 111 and left behind her many relatives, whose testimony, quoted textually from the Werschan Gazette, reads as follows: “Filled with sorrow we announce to all our relations and acquaintances the Departure of our innermost loved Mother, Mother-in-law, Grandmother, Great-Grandmother, Great-Great-Grandmother and Great-Great-Grandmother, who departed this life on August 23, 1895.” The signatures of the parties affected follow. The German for the last title is “Urarargroes-mutter.”

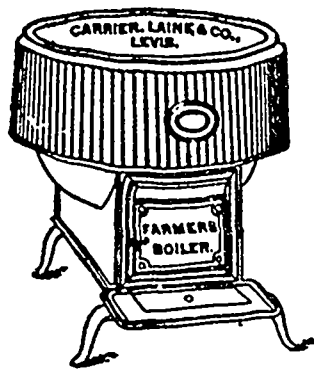
An Appreciative Reader.

Thomas Scott, the celebrated commentator on the Bible, published an edition of Bunyan's “Pilgrim's Progress” with explanatory notes. A copy of this work he benevolently presented to one of his poor parishioners. Meeting him soon after, Mr. Scott inquired whether he had read it.

“Yes, sir,” was the enthusiastic reply.

“Do you think you understand it?”

“Oh, yes, sir,” the parishioner answered, with the unexpected and disappointing addition, “and I hope before long I shall understand the notes.”

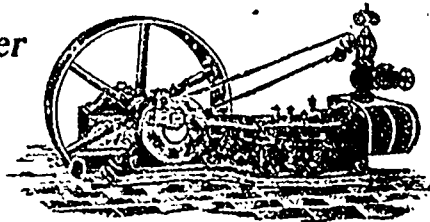


The Farmer Who is up-to-date in modern scientific methods of securing all there is to be got out of his stock will have a feed boiler on his farm.

Quebec,

The Cheese and Butter

Maker knows the advantage of a Space Saving, Power Giving, Fuel Encouraging, Boiler and Engine.



CARRIER,

LAINÉ & CO.,

Our facilities for making these boilers are such that we defy

The New Celebrated

UNIT ENGINE

Was specially designed by us for Cheese and Butter Factories.

competition in Quality and Price.

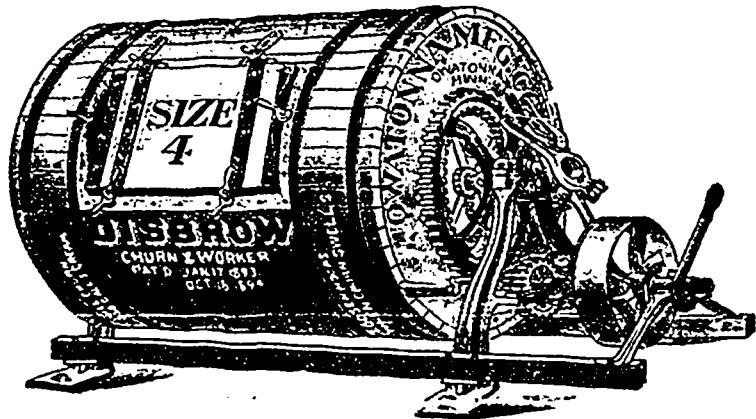
We make three sizes. Write us for particulars.

Our One Price BOILER is without exception the most economical and satisfactory boiler ever placed on the market.

Mention this paper

Levis,

THE DISBROW



HOW TO MILK.

Why Some Milkers Get Better Results Than Others.

Various devices have been invented to milk cows, but aside from little things, like clips to hold the animal's tail, no great progress has yet been made. There is great difference, however, in people who milk. The Country Home says: A more foolish practice could not exist in a dairy barn than to change milkers every day. Each milker should not only have his own cows, but should milk them every time, in the same order. Dry cows stand in two rows, and we always milk the north row first. By the time we have finished this row certain cows in the south row will begin to call for their milker and will watch that milker, paying no heed to the others, until their turn comes.

More than once I have been called from the milking stable, just as I was ready to milk some certain cow, and she had to wait beyond her time, and when I came back there would be loss of milk. I have never tested it to determine the loss in butter fats, but all experiments clearly prove there is a perceptible loss in butter fats whenever anything unusual occurs to disturb the cow. We have one cow that is now past 12 years old, a remarkably good one, or she would not be in the herd at her age. She is an exceedingly nervous cow. I have always endeavored to milk her myself, but as I cannot always be on hand, some one else occasionally takes my place. Invariably he fails to get the

two quarts more than usual.

Dairymen are very slow to learn that the dairy cow possesses strong individuality, and the better the cow the more pronounced is this individuality. Take, for instance, one of your slow, poky animals that a whole menagerie with two elephants could not frighten, and she would not be seriously affected by a change of milkers, but I will guarantee she is not the best cow in the herd.

Regularity in time of milking is as necessary as that the cow should have the same milker. The dairy cow is a good timekeeper and knows very well when milking time comes. If she is neglected and allowed to go far beyond the regular time, she begins to worry and loss follows. There are some cows that certain milkers will never get clean. They milk out all that flows readily, strip around once or twice and call her finished. With some cows this will do, but with others the milker must reach well up on the udder and work it with a sort of kneading process. A little manipulation of this sort will cause the whole quantity to flow into the teats, whereas without it there will be from a gill to a pint of the richest milk left in the udder every time, which certainly means a prematurely dry cow.

Gentleness and firmness should be the rule always.

I believe more milkers fail in the matter of cleanliness than in anything else. Some will never learn to properly brush off the udder and as far around as they can reach, and consequently little bits of dirt and sometimes larger bits, find their way into the milk pail. A certain dairymen remarked the best of all strainers was care in not allowing foreign substances of any kind to get into the milk. It would seem that one brought up on a dairy farm ought to know how to milk, but experience teaches me that even among such there are comparatively few first class milkers.

COMBINED CHURN AND BUTTER MAKER, THE "PERFECT" BUTTER MAKER.

Requires no more room than a box churn. Look this picture over Carefully. It is not a MASS OF COGS. The leading churn in the United States and the coming churn in Canada. Easy to operate. Write for Booklet free, giving full particulars to those interested. Write to the

Exclusive General Sale's Agents,

The Creamery Package Mfg Co.

1, 3 and 5. W. Washington Street, Chicago, Ill., U. S. A

We have a few of the Booklets at our office, free to Canadians who will write us. The "Canadian Cheese and Butter Maker."

W. D. Flatt,
Hamilton P. O. and
Telegraph Office,
OFFERS FOR SALE

5 FASHIONABLY BRED 5 YOUNG SHORTHORN BULLS

Also cows and heifers representing the leading popular families. Imported Golden Fame—20056—at head of herd. A few good Roadster horses. Farm six miles from Hamilton. Catalogue on application. Visitors met at G.T.R. or C.P.R. if notified.

\$45 DOLLARS \$45

invested in a six month's course of training in Shorthand, Telegraph and General Commercial Subjects in the

Central Business College,

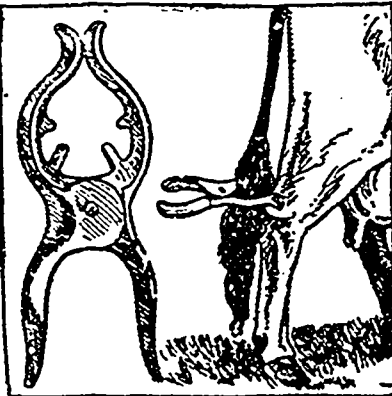
OF TORONTO

Will pay an invaluable dividend to any bright, intelligent young man or woman who attends this school.

The best time to invest will be on and after January 2 for the winter term. Scores of young people sent direct to good situations every session. Particulars cheerfully given.

W. H. SHAW, Principal

Gerrard and Yonge Sts., Toronto



CLIP TO HOLD A COW'S TAIL

usual quantity of milk, and if I milk her the next time I am sure to get more than her usual mess. Yesterday morning I was unable to go to the barn, and one of the other milkers milked her, getting only a portion of her milk. Last night I milked her myself and got fully

A PERSONAL APPEAL.

We promised a French edition with our paper.

This month we put in sixteen columns.

If our French-speaking friends sustain us in this effort, we will give them a regular edition in their own language.

We propose also, in a short time to get our paper out twice each month, instead of monthly, at no extra cost.

We appeal to you most heartily to send in your subscription NOW. Help us while we need help.

It is true! We are getting on last for a youngster. Yet we wish to "get there" quicker. Your subscription will do the work.

Yours faithfully,

J. O. LINGENFELTER.

Mention this paper when answering advertisements.



DE KOLS.

What a Leading Breeder Claims For These Butter Producers.

Henry Stevens & Sons of New York are among the most extensive breeders of Friesland-Friesian cattle. In a recent interview with O. W. Jennings, published in Hoard's Dairyman, Mr. Stevens expressed great preference for the De Kol family. He said: "We have De Kol II, the foundation cow of that family, with a butter record of 83 pounds 6 ounces in seven days, the largest record of any cow in the breed. It was



DE KOL II

made in her fourth year. During her eleventh year she made an official test under very unfavorable circumstances of 26 51-100 pounds of butter in seven days, 80 per cent fat, her milk averaging 3.96 per cent. J. W. Howard of the New York state dairy department of agriculture made the test, being present each time the cow was milked and taking the samples himself. Her largest one day's yield was 43-10 pounds of butter. We think this official record quite largely substantiates her earlier unofficial one. All of her daughters, with one exception, are now in our herd.

"Some of their records are: De Kol II's Queen, as a 3-year-old, 28 pounds 7 ounces butter in 7 days; Netherland De Kol, at 2 years, 20 pounds 5 ounces in 7 days, 827 pounds 12 ounces of milk in 80 days, the largest milk record by a 2-year-old of the breed. De Kol II's Pauline, tested officially as a 4-year-old, made 24 148-1,000 pounds of butter in 7 days, thus winning the first prize in the official test in 1896-7, her milk averaging during the week 4.86 per cent fat. Mildred de Kol, another daughter, purchased at the Hayes sale at Cleveland in December, 1897, has a reported record of 60 pounds of milk in one day, testing 4.6 per cent fat, when in her 2-year-old form. Later she gave 12,000 pounds of milk in 10 months, testing on different occasions as high as 6 per cent fat. During the last seven or eight years the herd has been headed by some one of the sons of De Kol II. There is no other herd of the breed on this continent so rich in the blood of De Kol II as is this one.

"One of the leading bulls is Manor de Kol, 4 years old, sired by a son of De Kol II, thus combining the blood of the two richest butter families of the breed. Another service bull is De Kol II's Butter Boy III, now in his second year. He is a son of the cow De Kol II,

sired by Manor de Kol. All of our young bulls go now in the herd are very strong in the blood of De Kol II and Netherland Hengerveld. In the young herd are 22 bulls, and for rich breeding as well as for individual merit it will be hard to find their superiors in the breed. The young heifers are beautifully formed, show large udder development and have every appearance of making large producers of milk both of quantity and quality."

Bran For Dairy Cows.

Whenever it is made an item to get the most out of the dairy cows, especially through the winter, more or less wheat bran can be fed to them with advantage. In fact, if there is any one material that can be made a part of their daily ration, it is wheat bran. In many cases, in order to make sure of a full supply at the lowest cost, it will be found best to lay in a full supply now and store it away. If put where it will keep dry, bran will keep in good condition all winter, and the difference in price at which it can be bought now and what must be paid in the spring or winter will give a good profit, saying nothing of the advantage of having a full supply when needed. The bran can be used to advantage with ground grain or with roughness and will help materially not only in making up a variety, but in supplying a complete ration, so that ordinarily there is little danger of storing away too much.—St. Louis Republic.

Latest Improvement in Pumps.

Of the many different makes of pumps for handling the milk and water in creameries, and skimming stations, none seem to have filled all the requirements, and the result has been many vexatious stops through the pumps getting out of order or breaking down, occasioning a loss of time and money thereby. So owners of creameries and buttermakers will hail with pleasure the announcement of the Lancaster Machine Works of Lancaster, Ont., that they have perfected and patented a new pumping device which bids fair to eclipse all other similar inventions offered to the trade. If we can credit all the claims made for it, and we have no reason to doubt them, as competent judges affirm that it is all that the manufacturers claim. The contrivance is little short of a God-send to dairymen. Besides being a pumping device, about three horsepower is generated from the little engine, and it can be utilized to drive the separator, churn, etc. The whole affair is put together in compact form, the construction is strong, quickly adjusted, and should meet with ready acceptance. A few of the engines are at work in some of the Eastern Ontario and Quebec factories, and are said to be doing good work. We understand that the manufacturers are going to put up a large number of this latest addition to their already long and good line of dairy machinery, so as to be prepared for the anticipated rush.

SALESMEN

Still for a few good townships to sell for the MOST POPULAR PURELY CANADIAN NURSERY; no other firm can offer equal inducements to purchasers. For particulars address E. D. SMITH, proprietor of Helderleigh Fruit Farms and Nurseries, Winona, Ont.

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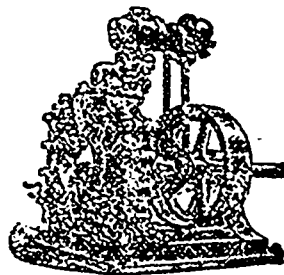


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Advertising rates made known on ap-
plication.

NOVEMBER.

Brockville cheese men, owing to the
Warrington failure, have decided to in-
sist on payment of all cheese in future
before shipped.

There is no industry in Canada
which is making the progress that is
being made by the dairy industry.
There is no industry that offers bet-
ter prospects of advancement and
emolument to young men of brains and
integrity.

It has been arranged that the Onta-
rio Agricultural and Experimental
Union will hold its next annual meet-
ing at the Guelph Agricultural College
on December 6th, 7th and 8th, the
same time that the Guelph Fat Stock
Show and the Ontario Bee-keepers' As-
sociation convention will be held in
that city.

The R. & O. Company Carried Many
Boxes.

The Richelleu & Ontario Navigation
Company has had quite a cheese for-
warding business this season from Cape
Vincent to New York. The cheese from
places in New York State was form-
erly shipped to Montreal by steam-
barges. This year a change was made,
as the R. & O. Company could do it
cheaper. The steamer Richelleu
brought the cheese to Kingston from
the Cape, and it was then transferred
on the steamers for Montreal.

How Canadians Pack Butter.

Consul Loton S. Hunt, in a report to
the State Department, tells of the
methods of the packing and making of
butter from Canada to the dealers in
Manchester and other large cities in
England:

Weekly consignments of creamery
butter are being exported from this
district at present to commission brok-
ers in Manchester and other English
cities. The butter is being put up in
new pine boxes, nonny square and
lined with oil paper, each box contain-
ing 56 pounds. The boxes are con-
structed about three-fourths of an inch
wide all around at the top (which
is screwed on), in order to permit the
contents being easily shaken there-
from by the consignees, who weigh noth-
ing but the butter. The weight of
the contents of the lightest box in each
consignment is taken as the average
weight per box of the whole. Thus
great care is necessary, in order that
the full quantity shall be packed
therein. Coverings of baggage open-
ed at the top and gathered with
a stout string are made for each box,
to keep the packages perfectly clean
for ultimate distribution.

English dealers are insisting upon
every particular of the foregoing de-
tails being carried out. In pursuance
of recent legislation, boxes are all
marked with the name of the maker
and the number of the factory, and
the bagging is marked with the
initials of the maker, Government num-
ber and country of production.

Make Butter to Suit the Con- sumer.

One thing should always be borne in
mind by the person making butter to
sell. The butter is for somebody else to
eat, and it is for your interest to
suit them, whether it just suits your
taste or not. Habit has a great deal
to do with your likes and dislikes. You
may have been accustomed to sweet-
cream butter; if so, you probably like
that best. Or, you may have got used
to a very decided flavor and taste,
and so you look upon fine, delicate
flavored butter as insipid. Or, you
may like little or no salting or
high salting, light color or high color.
But all this is of no consequence. It
is no matter what you like. You want
to make it to suit your customers and
you want your customers to be those
who are able and willing to pay a
good price for what suits them. If
the customer wants sweet-cream but-
ter, make it; if unsalted, make it so;
if he desires it high salted, salt it high,
and so on. Always make it the same
for the customers. They are getting
tastes formed which you can make it
profitable to gratify. It is not the
province of the maker of dairy butter
to try to educate the tastes of the
people who buy butter, but rather to
cater to their tastes when he finds out
what they are. If one is making but-
ter to put on the general market he
wants to make what the market de-
mands and will pay the best price for.
The best way to learn the market de-
mand is to have the butter inspected
by an expert judge who is a dealer
and knows what takes best in the mar-
ket. Ask him to criticize it and tell
you just what he thinks of it; and
don't get angry at what he tells you,
but try to profit by what he says.
The object of this article is to help
farmers to make such butter as the
best-paying customers in the general
market demand.

A Word of Warning for the Cheese Trade.

There is a time to speak and a time
to keep silence, but we entertain a
very strong conviction that there is
now need for a few plain words in con-
nection with the cheese industry of
Canada. We are nearing a turn in the
road. It is true that out of over
\$28,600,000 worth of cheese imported
into Great Britain we sent last year
over \$16,000,000 worth, or \$4,000,000
worth more than all our competitors
combined. But Holland, Australia, New
Zealand, France, and the United States

are not asleep on the cheese question,
and the cheesemakers of Great Britain
themselves are very much awake. We be-
lieve we are within the mark in saying
that of English and Scotch Cheddar
and Cheshire, considerably more than
the whole quantity of cheese exported
from Canada is sold at from 10 to 18
shillings per cwt., or practically from
2 1-2 to 4 cents per pound higher
than Canadian cheese! We are not
yet in the top class, but we certainly
should be. The Canadian cheesemaker
should doubtless know how just as well
as his British rival, but is he doing his
best? We believe as a rule he is, and
also, while the farmer and maker each
have their responsibilities, that the dif-
ference in quality is largely due to the
fact that the Canadian cheese are
curd and carried to market at a tem-
perature too high to develop that cool,
mild flavor and rich body for which
the English consumer pays the highest
prices. More than that, the English
market is becoming more critical, and
the firm, dry cheese that would an-
swer some years ago is not wanted
now. The old time curing room with
any sort of temperature might serve
in those days, but it will not do with
the different type of cheese now re-
quired. We have the extremes of heat
and cold, to which English and Scotch
cheesemakers are not subjected. The
judges at the recent Toronto Indus-
trial state that even the cheese ex-
hibits there did not as a class show
the improved quality that might rea-
sonably be expected. During the past
year different members of the Farm-
er's Advocate staff have been taking
note of both making and curing rooms,
also the equipment and surroundings
of factories, in different parts of the
country, and we must confess that
many of them are out-of-date and dis-
creditable. We have no hesitation in
saying to the factorymen and makers
concerned that they must consider this
question and at once lay plans for im-
provements to be made before another
season's operations begin. Tempera-
ture must be controlled and during
summer held at a much lower point.
In the next place the methods and fa-
cilities under the direction of the Domi-
nion Dairy and Agricultural Commis-
sioner, Prof. Robertson, there has been
a cold storage equipment for cream-
eries inaugurated, and encouraged by
a small Government bonus, but the
cheese factories need attention quite
as much as the creameries. It might
be more pleasant for us to indulge in
flattery and boast of past achieve-
ments, but our present status was
not won in that way, and it cannot
be retained if dairymen and those in
the export trade do not start a for-
ward movement. Farmers will not
long be content to accept the low
prices realized for milk during the
present season.

FALL CHEESEMAKING.

By J. A. Rudick, Superintendent King-
ston Dairy School, Just Appointed
Dairy Commissioner For New
Zealand.

It was the writer's intention to con-
tinue the series of articles in regular
sequence, but it seems to be an oppor-
tune time to say something on the
above topic.

Many makers get into trouble by
trying to make their fall cheese, and
spring cheese, also, on a different plan
from that which they make during the
summer months. 'Tis true the process
requires some modification when car-
ried on in one factory from early
spring to late fall, under the condi-
tions which prevail in the average fac-
tory, and when the demands or circum-
stances of the market are taken into
consideration. From the fact that the
year's supply of cheese is practically
all made in seven or eight months, it
is evident that the first of the sea-
son's output will go into consumption
at once, and may be cured more quick-
ly, while as the season advances the
stock on hand gradually accumulates
until at the close of the manufacturing
season there is supposed to be suffi-
cient surplus to last the balance of the
year. It is obvious then, that the

later made goods should be cured more
slowly in order to be at their best
when required for use.

In order to discuss the thing in a pro-
per light we must consider first the
character of the milk during the
months as compared with other parts
of the season. The general rule is
that the cows are fresh in milk in the
spring, going dry in the late fall or
early winter. It follows, then, that
the milk will contain the greatest per-
centage of fat at the close of the
cheesemaking season, for it is a well-
known fact that the milk gets gradual-
ly richer as the period of lactation ad-
vances. The difference in the quality
of the milk at these seasons is usually
as much as 10 per cent., and some-
times more; that is to say, if the milk
averages 8.2 per cent. during the
months of April or May, it will run
as high as 4.2 or over during October
and November.

As the percentage of fat in the milk
increases, the curd made from it
shows more and more tendency to re-
tain moisture. It is this tendency
which is the cause of "pasty" cheese,
for pastiness is nothing more than an
excess of moisture. "Pastiness" is one
of the most common faults of fall
cheese. To overcome the difficulty it
is necessary to adopt some means of
getting rid of this excess of moisture.
It may be done by more hand-stirring
of the curd, or the addition of more
salt, or by raising the "cooking" tem-
perature from one to three degrees.

Such curd does not stand hand-stir-
ring without causing too much loss of
fat and curd particles in the shape of
"white whey"; we are limited in the
amount of salt that may be used;
therefore, the application of more
heat would seem to be the best plan.

I would recommend that the cooking
temperature be raised from one to
three degrees as the season advances
and the percentage of fat is four per
cent. and over. If the milk is "set"
somewhat sweeter it will have more
time to harden in the whey. Cheese-
makers will find it of the greatest ad-
vantage if they study the relation of
these factors.

There are some factories where the
conditions which I have mentioned are
gradually changing. I refer to those
where winter buttermaking is car-
ried on and the cows are coming in
at different seasons of the year. This
has a tendency to equalize matter,
and there is not the extreme range of
variation in the percentage of fat in
the milk. If the cheesemaker watches
it closely the amount of fat will be
his best guide in handling the curd to
control moisture and regulate the salt-
ing, for it is the best indication of
what the probable yield will be.

Certain undesirable feed flavors are
liable to appear in the fall, particular-
ly as it is more difficult to detect
them on account of the low tempera-
ture of the milk. The party who
weighs the milk should be more criti-
cal on that account. I have no method
for treating milk tainted with tur-
nips or other strong flavored foods.
There is only one successful way to
deal with such milk, and that is to re-
fuse it.

A temperature of 60-65 is probably
the best for curing fall cheese. It is
frequently allowed to go as low as
50, but there is danger at this point
of developing a bitter flavor in the
cheese.

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Ontario Wind Engine and Pump Co., Limited.
LIBERTY STREET, TORONTO.

WINTER DAIRYING

The winter creamery offers many advantages to dairymen with few or many cows milking during the winter. The chief of these are a better average quality of butter, which is sure to bring a higher price, and the extra yield of butter per 100 pounds of milk which is got by using the cream separator. Either of these advantages will pay the cost of manufacturing the butter, which ought not to exceed three and one-half cents per pound where the milk is delivered at the creamery. Again, the labor is very much less for the farmer's wife where the milk is sent to the winter creamery. In addition, the farmer and his wife feel much better when going to town to buy household necessities, if they have five to ten dollars in a pocket as a result of the sale of creamery butter, than if they have twenty to fifty pounds of butter in a basket.

Location.—The creamery may be located in a summer cream-gathering creamery, in a summer separator creamery, in a summer cheese factory, or in a place where there are none of these. If an average of 15,000 pounds of milk per week can be relied upon during the winter season, it will pay to purchase winter creamery apparatus and hire a buttermaker. There is no reason why our cream-gathering creameries and cheese factories should hang out this sign about October 15th each year: "Gone out of business until May 1st. Patrons must make dairy butter and trade it at the corner grocery, until we open up again, or else manage a 'dry' dairy for the winter."

This ought not to be. The money lost through "dairy" butter, dry cows, and ignorance of the first principles of economic dairying, would pay the municipal taxes in every dairy township of the Province.

Machinery and Building.—The building should be made as warm as possible with paper and dead air spaces, and should, where practicable, be heated with "live" steam or with "exhaust" steam from the engine. (A room 20 x 30 to 30 x 30 is required for making the butter, also an office, boiler and engine room, a refrigerator and an ice house—say 600 square feet of ground space for these latter.)

The cost of the building will be from \$1,000 to \$1,200. The machinery to handle 15,000 to 25,000 pounds of milk weekly will cost about \$1,000.

The leading makes of separators used in Canadian creameries are:

Alpha de Laval, sold by the Canadian Dairy Supply Co., Montreal.

Alexandra, sold by J. S. Pearce & Co., London, Ont.

Russlan, sold by D. Derbyshire & Co., Brockville, Ont.

Danish Weston, sold by Richardson & Webster, St. Mary's, Ont.

These separators cost from \$350 to \$550 each, depending upon the make and size. They all have their good points, and we do not care to recommend any one of them in preference to another. The agents will explain the good points of each, and quote prices on application.

Next to the separator the most important part of the machinery is the boiler and engine. The boiler should have a capacity of from twelve to twenty horse-power, and the engine from six to eight. A "half-trunk-rod" churn made of whitewood or pine is convenient. A narrow cream vat with plenty of space at the sides and ends for ice is needed to cool the cream rapidly where a cooler is not used.

Where the cream vat is not adapted to rapid cooling, one of the various coolers on the market may be used; or a coil of galvanized iron pipe having cold water running through it may be placed in the cream vat and be worked by the engine. This will cool the cream rapidly.

A Babcock tester for dividing proceeds among patrons and for detecting losses of butter fat in skim-milk and buttermilk, is an essential part of the machinery in every creamery.

A complete list of all machinery needed, together with their prices, may be obtained from any of the dairy supply firms.

To the Patrons.—Aim to have about half of the cows fresh for the winter creamery. Feed them liberally. Give the cows plenty of salt and water. Care for them regularly, treat them kindly, keep them clean and you will have your reward. We find that corn silage, mangels, clover, hay, bran, peas, oats and some oil-cake, if it can be got for twenty dollars per ton or less, give us good results in the milk flow. Swede turnips or rape should not be fed to cows giving milk for butter or cheese-making.

Do not allow the milk to freeze or be exposed to any bad odor. Three times per week is often enough to deliver the milk at the winter creamery. Make arrangements with one or more of your neighbors to "take turns" hauling the milk and bringing back the skim-milk. This will lessen the labor. If the skim-milk is properly fed to calves and young pigs, it will pay for the hauling of the milk to, and the skim-milk from, the creamery. Our future dairy cows depends largely upon the judicious use of skim-milk.

Finally, help the butter-maker by supplying him with first class milk, and you have your reward.

To the Buttermaker.—Be on your guard against stable, turnip, potato, brewer's grains, or other flavors which taint milk and injure the quality of butter. If the milk is frozen or very cold, you will have difficulty in detecting these flavors, and it will be safer for you to heat a small portion of such milk separately, where you suspect bad flavor. Where a can has been used, heat the milk in a clean vessel before weighing and sampling, or else melt it before sampling, as the frozen part, containing an undue proportion of water, will not allow you to take a fair sample.

To preserve the milk for testing, use in each composite bottle about what will lie on a ten cent piece, a mixture of seven parts bi-chromate of potash and one part corrosive sublimate. Once a month is often enough to do the testing. Test very carefully and exactly, so as to render to each patron his just reward for labor done in caring for his cows and milk.

Look over the machinery each evening to see that it is in good condition for the morning run and thus avoid delays to patrons.

Heat the milk from 100 to 130 degrees before separating. The higher temperature will increase the capacity of your separator and enable it to skim more closely. It will also give smoother cream with some separators. Speed the separator to its full rate and maintain it at full speed during the whole skimming. (It is economy to use the exhaust steam for heating the whole milk or the skim-milk.) Use hot water for heating rather than "dry" steam, and the milk will not cook on your heater so much. (To remove cooked milk from heater or vat, add some washing soda to warm water and allow it to stand in the heater for some time before washing.) Aim to have about twenty-five to thirty per cent. of fat in the cream. If the milk requires to be lifted to the separator use a pump which may be easily cleaned, in preference to an ejector.

To insure a uniform flavor of good quality, we recommend the system known as pasteurizing. Either pasteurize the whole milk before separating, or heat the cream and skim-milk after separating. For heating the whole milk a channel heater about eight or ten inches deep with six or seven channels about four feet long and three to four inches wide would answer the purpose after a portion of the heating has been done in the receiving vat. Place this channel vat in a tank or pan with a steam pipe under it for heating the water. The milk or cream enters one side and passes out at the

other, having been heated to 100 degrees on the way. Keep the cream covered by means of a tin cover placed over the channel vat. The cream may be pasteurized in one of four ways:

(1) By using ordinary shot gun cans (8 in. diameter by 20 in. deep) set in a tank of water kept at about 180 degrees. Keep the cream stirred all the time it is heating, and when it reaches 160 degrees remove the can from the water. Allow it to stand for twenty minutes, then empty into the cream vat and begin the cooling.

(2) By the use of a smaller channel vat, similar to the one described for pasteurizing whole milk. Size, three feet long, twenty inches wide, three inches deep, with six or seven channels. This is the least labor and expense.

(3) By heating the cream in the ordinary cream vat.

(4) By means of a pasteurizer, which is a machine specially built for the purpose of heating milk or cream.

(For ordinary creamery work, pasteurizing the cream is likely to be more practicable than heating the whole milk.)

The next step is the cooling of the cream. It should be cooled to about ninety to ninety-five degrees (after pasteurizing), and then the "starter" should be added. (We recommend making the starter from pasteurized skim-milk, and using the same cultures as far as possible during the winter, thus insuring the uniformity of flavor during the whole season.)

Use from ten to twenty per cent. of starter when ripening in twenty-four hours, and about five per cent. when ripening in forty-eight hours. (If pasteurizing is not practised the starter may be added to the cream vat as soon as, or before, the cream is put in.) Continue the cooling until the cream reaches a temperature of sixty-five to seventy degrees, when it should be allowed to stand until the acid begins to develop quite strongly and thickening commences. The cream should then be cooled to churning temperature, which will be from fifty degrees to fifty-five degrees. This may be done in the evening and during the night. To insure good grain in the butter, be sure to cool the cream to churning temperature for two to four hours before churning, to allow the fat to harden. When ripening at a high temperature (seventy degrees) allow the cream to remain over night at churning temperature, if at all possible.

Use the alkali test for determining the acidity of the cream the first thing in the morning. If there is from six to seven-tenths of a per cent. of acid present, the cream is ready for churning. Do not allow over eight-tenths of a per cent. of acid in the cream if you wish the finest flavor in the butter.

The square box churn, or the combined churn and worker, will give good results. If the butter is for export to Great Britain, use little or no coloring in the cream. Have the temperature of the cream such that the butter will come in granular form in forty to sixty minutes. After drawing off the buttermilk, wash very lightly for quick consumption, and once for the regular trade. Salt at the rate of about one-half ounce per pound of butter for export, and three-quarters of an ounce to one ounce for home market. Work the butter until the salt is thoroughly mixed through it, the color is even, and until the water is not more than twelve per cent. of the finished butter.

For the home market there is no form more suitable than the oblong print, wrapped in good parchment paper which is stamped with the name of the creamery. For export, use the square box lined with paraffine wax and parchment paper. Pack the butter in the box firmly, so that when emptied it will look like a solid cube of butter, without holes into which gather the brine and buttermilk, giving the butter an unsightly appearance.

Ship the butter weekly to a reliable commission house, or directly to exporters or importers of the finest Canadian creamery butter, thus building up for our better branch of the dairy industry a reputation similar to that which Canadian cheese has required.

The winter creamery is a branch of dairying which needs and is capable of almost unlimited extension.

REFERENCES:

MITCHELL NATIONAL BANK, - FIRST NATIONAL BANK.

Mitchell, S. D.

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REV. THOS. FULLERTON, Mayor, Mitchell, S. D.

Northwestern Creamery Managers' and Buttermakers' bureau,
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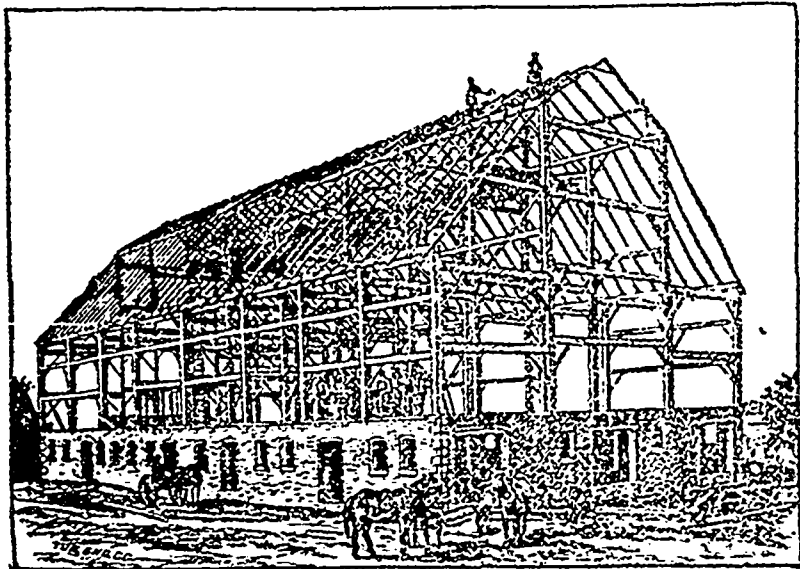
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Agents Wanted in Unrepresented Districts.

For full Particulars
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THORALD, ONTARIO.

FAT GLOBULES OF MILK.

Excess May Be a Burden to Digestion.

The present condition of scientific knowledge, says a writer in The Country Gentleman, totally ignores this old idea of the French scientists, as to this inclosing pellicle of the fat globule, and if anything is now certain it is that milk is an emulsion, holding in a viscid fluid these suspended particles of fat in precisely the same way that the globules of codliver oil are suspended in the emulsion of gum water prepared by the physician. This process of emulsifying this oil as a remedy for consumption (tuberculosis) has been in use since the investigations of the first scientific medical association in the world, by whom exhaustive experiments were made some few years ago, the result of which was for one thing that the oils of these fatty liquids were emulsified by the pancreatic fluid and then passed into the intestines, where they were immediately absorbed into the blood by the villi of the intestines and taken up immediately into the blood along with the digested food. Thus the fats of the food are not digested at all, except so far as they may be separated and distributed, not in any way dissolved, and this word "digest" among its several other meanings has this "separation and distribution" as two of them, but it has been shown that the as yet incomplete blood carried to the portal vein from the digestive organs contains the fats of the food distinctly in their natural condition and that from this great supply canal of the system the fat globules are poured into the heart and then into the lungs and thence back to the heart to be diffused throughout the body and assimilated by the final absorption into the system.

Thus, giving up its load of nutriment, the current goes back to the heart, whence it is forced again through the lungs, where its load of effete and used up matter—the wastes of the system—are oxidized and the blood is purified, and, having its supply of nutriment again poured into it, goes on its way again by the impulse of the heart at every beat of the pulse. So that while we may reasonably think that the fats of the food may in some way be changed in form by the act of emulsion in the intestines we have no reason to believe that there is any change in the condition of the fat globules, but rather that they enter into the circulation unchanged in every respect and are actually deposited in the tissues in the same form in which they are ingested, or are returned to the lungs as unassimilated matter to be oxidized there.

Right here is the pith of this whole matter. For if any part of the fats of the food is not healthfully disposed of in this way this remains in the blood and gives rise to disorders of various kinds. So that this disposal in a healthful manner of the fats of the food is one of the most important matters for the physician to study and meet in his practice. We all know the evil results of an excess of fat in our food, how it leads to disturbance of those organs (such as the liver) whose functions are the purification of the blood. If there is an excess of work thrown on these organs, the system is disturbed and various diseases occur. As the infant's ability to digest and assimilate food is weak, we are to ease the action of its functions in every way that may be possible, and as the growing infant does not need fat so much as sugar to sustain the vital heat and nitrogenous matter, any excess of fat is injurious as tending to throw excessive work on the weak system, and this of course is detrimental, and in weak infants may be easily too much for the system to bear, and fatal results may occur.

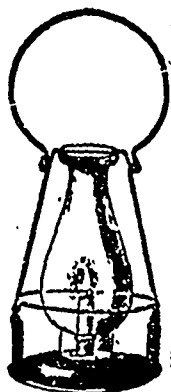
Give the Creameries a Fighting Chance

The Manitow creamery was recently forced to shut down owing to lack of patronage, the local storekeepers having bid up the price of farm dairy butter beyond its market value. As soon, however, as the creamery shut down, the price of butter at these same stores dropped three cents a pound. The result of this "penny wise, pound foolish policy" of local storekeepers in striving to crowd out the creameries will undoubtedly come back upon themselves, and they will be sick enough of the dairy butter trade before they are through with it, and those farmers whose short-sightedness allowed the bids of the storekeepers to entice them away from the creamery will rue their bargain when they get waked up to what the results of their action really means in the closing of the creamery. If the creameries of the Province were all closed down, farm dairy butter would not be worth five cents a pound at country points. The fact that the butter made in the creameries is an exportable article, and can be handled with some degree of certain profit by the trade, clears the local market for the produce of the home dairy; in Winnipeg, for instance, nearly the whole supply of butter is farm dairy make, and the price has kept up fairly well throughout the season; but close the creameries, and how quickly would this market be flooded with farm dairy butter of all sorts of qualities from country store cellars, and a slump in prices would inevitably result. The creameries, even those struggling for existence and working under heavy expenses on account of lack of patronage, are a direct benefit to those very people who do not patronize them, but allow their women folk to slave away under unfavorable circumstances, making a butter that brings a few cents a pound more, just because the product of the creameries is of a uniform quality and good enough to export out of the country, thus leaving the home market for the product of the home dairy. We understand a number of the patrons of the Manitow creamery have arranged with the Pilot Mound creamery to take their cream for the rest of the season, and if this arrangement proves satisfactory, and there appears no reason why it should not, the Manitow storekeepers will yet wish they had given their own creamery half a chance. Storekeepers at a good many other points throughout the country have been playing at the same game. It is difficult enough even under favorable circumstances to build up the creamery business, but each shortsightedness on the part of the storekeepers makes it well-nigh impossible. One would expect a greater display of business common sense on the part of business men.

Skim Milk.

Skim milk is of great value. It contains all the protein or casein of the milk as well as the sugar and mineral matter that promotes growth of bone, and it is a most healthful beverage for man, building up and nourishing the tissues of the body and it is much to be regretted that its sale has been prohibited in large cities. To sell skim milk as skim milk is all right, but dealers and vendors in the city have practiced such gross frauds in the palming off of the skimmed for the entire milk that the authorities have felt themselves obliged to put some stringent regulations into force. But no matter what is to be said for or against selling skim milk to the human family, there can be no question about the utility and value of this, which is both food and drink, for all farm live stock. Skim milk is without equal for calves, lambs, pigs, and poultry. For example take all kinds of fowls. The young chickens grow big frames and sturdy bodies very rapidly, and the old fowls are encouraged as they never did before. Then this skim milk is excellent for manure, as it renders the excrement of all stock fed upon it rich and of high fertilizing power.

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Many of our salesmen have been with us from 10 to 22 years, working constantly over the same ground.

We Want a Good Salesman in your neighborhood.

Can you not give us all your time or part of it—if you are well paid for it? Write us for particulars.

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100 lbs. covers 50 sq. feet,
1 inch thick
3-4 in. for pipes, 1 to 1 1/4
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HELP WANTED.

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 cheesemaker convenient to the factory. Address **JOHN BALLANTYNE**, President, Pine River P. O.; **DONALD BLUE**, Secretary, Amberly, P. O.

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. G.

CHEESE-MAKER WANTED — STATE salary and experience; average cheese manufactured for season about 35,000 lbs.; no assistant furnished. Address **FRED. FREEMAN**, Secretary, Haliburton, P. O.

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

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

CHEESEMAKING.

Modern Methods an Improvement Over Former Ways.

Only a few years ago cheesemakers were not cheesemakers from December to April. As regarded the cheese business, they folded their hands or embarked in some other pursuit as soon as the factory closed to mechanically take it up again at the opening of the new season. I mean by this that there was no material advance in cheesemaking, at least not such an advance as we have now.

We had some strong thinkers and investigators then in the cheese field, but the great army of makers, the men who were doing the real practical work from day to day, were not as well informed or qualified as the makers of 1896.

The strong point about modern cheesemakers is that they themselves are thinkers and investigators. They possess more advantages than their older brothers had, and they are wisely making the most of them. I think it would be hard to find a stinking rennet jar in a factory now or annotto of crude and uncertain quality.

When commercial rennet took the place of the homemade variety, it inaugurated a greater advance in cheese manufacture than is generally thought. A certain per cent of old time cheesemakers knew how to prepare and handle crude rennet preparations most judiciously. They made fine cheese from it, finer perhaps than is found on too many factory shelves now. Still, except in the most careful and experienced hands, it was difficult to get uniformity of cheese quality.

I have made cheese in both rennet eras and know whereof I speak. Of course a great deal of bad or imperfect cheese is made with rennet extract, provided the brand used is unreliable.

When I prepared this fluid myself, as used to be the common custom, I found that eternal vigilance over the care of the rennet jar was the price of good cheese quality. In visiting other factories where trouble was experienced in manufacture I soon learned the importance of examining the rennet used. Convinced that this was all right, one could then turn in other directions for sources of difficulty.

A soluble, high grade salt is of far greater importance in cheesemaking than is usually imagined. There have been greater advances in other lines of cheese manufacture than in the adoption of a uniform soluble salt. In the butter making field they appreciate this matter as it should, be and creameries are most careful in the selection of the salt they use. In a barrel of hard, cheap, insoluble salt I have frequently found a cause for bad cheese. The intelligence of modern cheesemaking should renounce poor salt as it has the old rennet jar, and the season of 1898 is the best time I know of in which to do it. — Secretary E. Newell in American Cultivator.

Common Cows in the Dairy.

There is not much lack in this country of advanced dairy teaching of the highest kind, but there is a notable absence of the intermediate instruction of the kind necessary to advance, by regular steps, the dairy methods in vogue on western farms. As a very large portion of the butter made in the country is still made on the farms, such instruction as would raise the quality of farm butter 2 or 3 cents per pound would be of vastly more importance than an improvement in the methods that would raise the price of creamery butter to the same extent. We have already had occasion to note that the Kansas Agricultural college is devoting a chief share of its attention along dairy lines of instruction of the kind calculated to im-

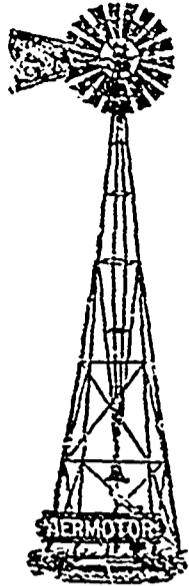
prove farm dairy methods. Among other things the college has secured a herd of good average Kansas cows. There is no pretense that they are the best cows. They weigh from 1,000 to 1,100 pounds and do not have the dairy form to any notable extent. The effort will be made to see not whether dairy cows will pay in Kansas, but whether average cows, such as are common in the country, will pay. The results obtained from them will also be contrasted with the results given by herds selected for dairy excellence. The student will be taught the difference in remunerativeness between the carefully managed herds of dairy cows and similarly managed herds of common cows, thus furnishing an object lesson with regard to the relative profitableness of the average cows and the good ones. — Homestead.

New Uses For Skim Milk.

The past year several new methods have been proposed for the utilization of skim milk. These proposed methods are mostly in the line of drinks for summer use. The most promising thus far that you have seen is that known as champagne milk. The following is the process used: "The milk is first skimmed to prevent the formation of clots during the process. It is then sweetened and flavored and placed in a closed vessel. A current of oxygen gas passing through the vessel sterilizes the milk, which is champagne milk. The introduction of the necessary amount of carbonic acid gas. The drink thus produced is spoken of as extremely refreshing and of exquisite flavor." Such processes as the above are very promising. There ought to be a large demand for such a beverage. The summer drinks we now have are almost universally sweet, highly flavored compounds which are much more likely to increase thirst than to prevent it, and they certainly do not appeal to the average thirsty man. We have no doubt that a glass of clean, cool, carbonated milk, without sugar or flavoring, would be most acceptable to a large class of men, who have no choice at present between soda water and beer and reject both. It is about time that this class of consumers be catered to, and we are confident that the man who supplies them a drink like the above will reap a rich reward. — Hoard's Dairyman.

Individuality of Cows.

Major Henry E. Alvord, chief of the dairy division, United States department of agriculture, says in The Daily Herd that cows differ in their tastes and in their requirements in the way of food just as human beings do, although perhaps not to the same extent. To feed all the cows in the herd alike day after day and month after month, as is so often done, is an absurd and wasteful practice. Some are sure not to get enough for the greatest profit, and others are likely to get more than they will use to advantage. This is as to quantity only, but differences in kind of feed may be equally desirable. In a thorough study and comprehension of the question of feeding lies the greatest opportunity for the exercise of real economy in the management of the dairy herd. Each animal ought to be watched and its habits, appetite and condition known at all times. If it leaves its feed in the trough through lack of taste for it or restlessly throws it about, at once shorten the supply of that particular feed and try to find as a substitute something the cow will relish. Its distaste for the food that it has long been accustomed to is an evidence that the system is demanding some change of diet rather than that the cow has lost its appetite to a harmful extent. Give her something she will like, and the appetite will be found all right.



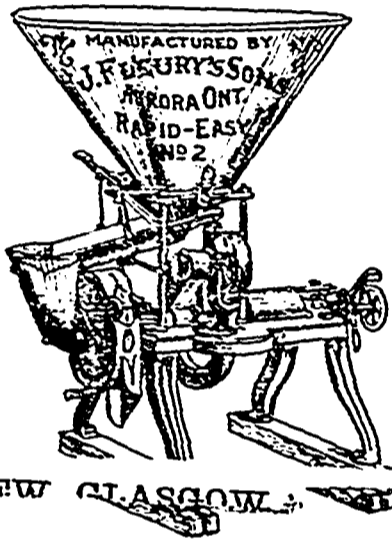
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It is non-poisonous—will not injure the clothes or skin—Very healthy to cuts or wounds of any kind.

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30 HOSPITAL ST.

MONTREAL.

The Cow Bells.

Not because of their own music
As they tinkle down the lane,
But from memories interwoven
Would I hear the bells again,
With their jingle, jangle, jangle,
As up from woodland tangle
Boss and Moll come home.

Melody I've heard that's sweete,
Swelling from the thrasher's throat,
But there's country peace and quiet
Mingled in the cowbells' notes,
With their jingle, jangle, jangle,
As up from woodland tangle
Kate and Nell come home.

Possibly because I'm weary
Of a city's ceaseless strife,
That my heart swells out in longing
For the quiet rural life
Where, with jingle, jangle,
Jingle,
From woodland dale and dingle
All the cows come home.

ELIZABETH D. PRESTON.

MILK VS ALCOHOL

If you question science on the comparison which exists between foods and alcohol. She shows you a natural and all sufficient and natural food. She calls it milk. She takes it to pieces, she says it is made up of caseine for the construction of muscular and other active tissues; of sugar and fat, supplying food to the body for the animal warmth, of salts for the earthy and of water for the liquid parts.

Alcohol holds no comparison with milk. alcohol is entirely alien to the structure of man, while milk builds it up.

DR. RICHARDSON.

There are hundreds of men who are employed as cheesemakers during the summer months and who unwillingly are comparatively idle during the winter months. If the capacity and ability which they possess, can be applied to making butter during the winter months, so much will be gained.

An Opinion.

Winnipeg, Nov. 17th, 1898.

Canadian Cheese & Buttermaker, Kingston, Ont.

To the Editor:

Dear Sir,—Your sample copies of the Cheese & Buttermaker to hand this morning. I consider that your paper should be placed in the hands of every cheese and buttermaker in the Dominion of Canada. The dairy industry of Canada at the present time is one of the most important ones, and every cheese and buttermaker should take advantage of the means placed at their hands in your paper. They have to play one of the most important parts in this work; in order to keep the dairy industry upon its present footing and for effective work for the future, it will be necessary for them to study and keep abreast of the times. I consider that your paper should be used as an official organ of the cheese and buttermakers of Canada. Through that they can express opinions which they should freely do; give their experiences for the past summer; give a statement of the proceedings of their factories; give some idea of how the milk was cared for at their respective places by the farmers, what instructions they gave out and how they were followed; suggest improvements, and ask and answer questions; they should tell of the difficulties they had to contend with, and how they overcame them. I think if they would take the trouble to do so, which is nothing more than their duty to do, being as it were public servants, it would not only create an interest among the cheese and buttermakers, but would be the means of bringing them all closer together.

Wishing you and the Cheese and Buttermaker every success.

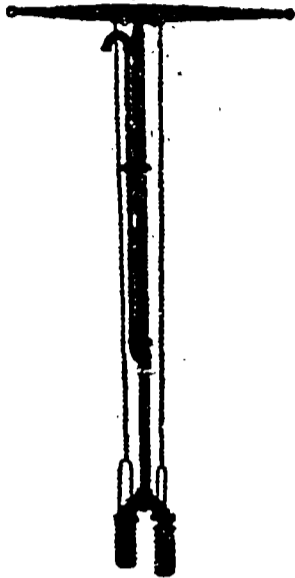
I am, yours very truly,

C. MACDONALD,
Dairy Supt.

Subscribe for Cheese and Butter Maker, only 50¢ per annum.

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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.



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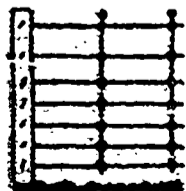
of Mississippi—specially adapted to the raising of

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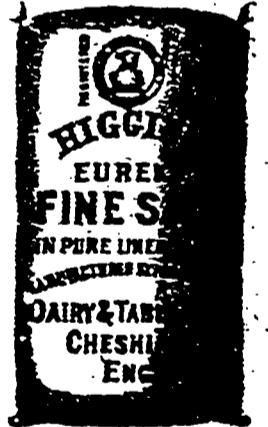
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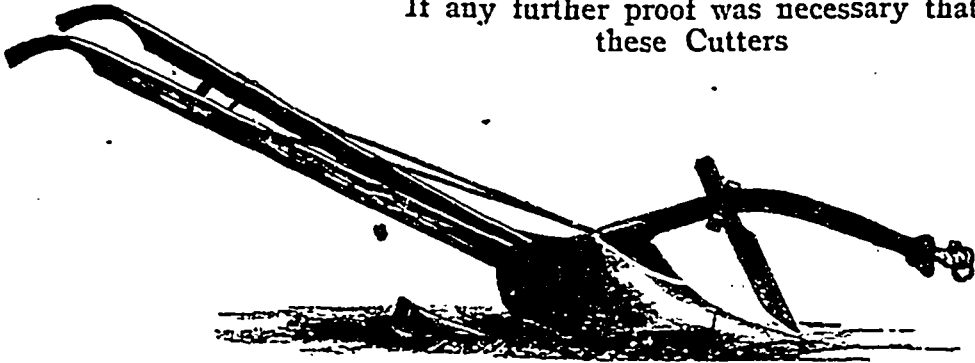
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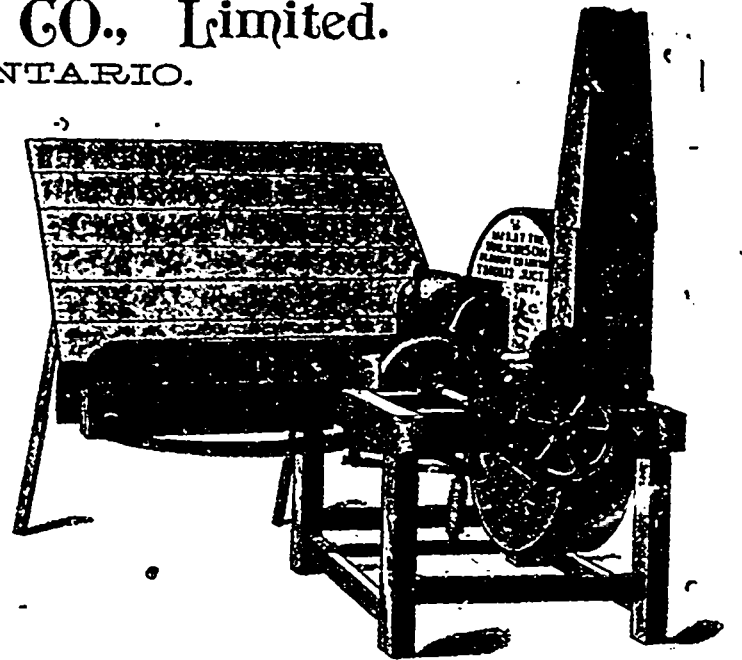
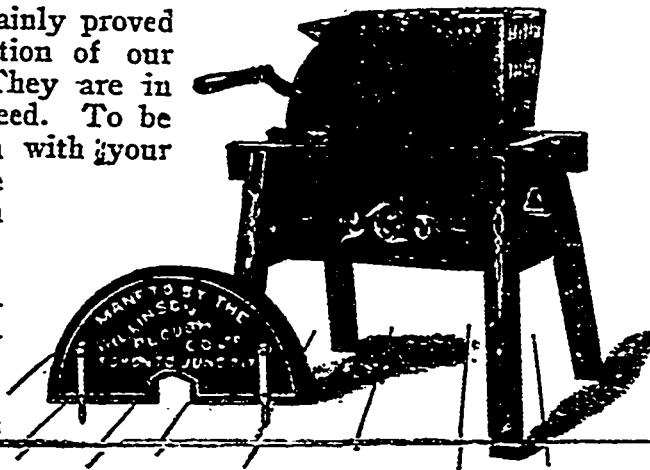


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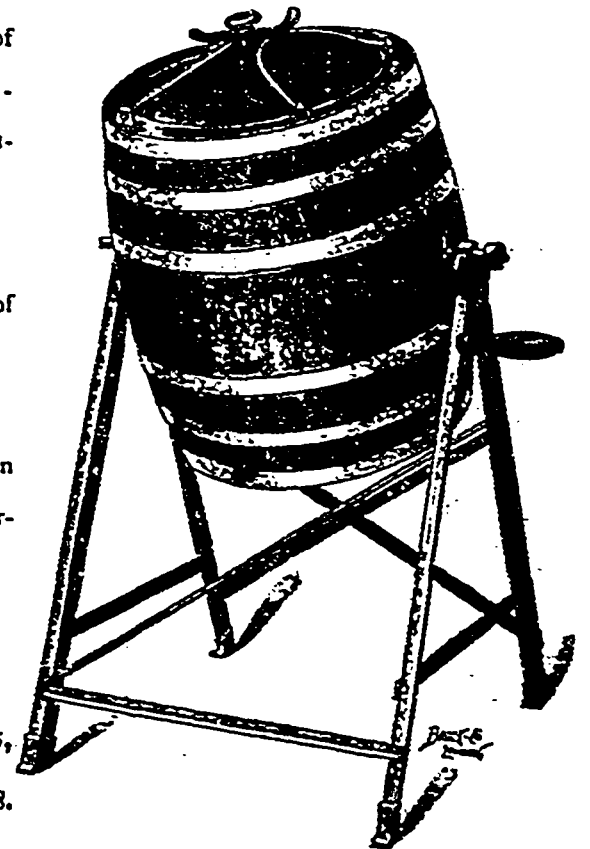
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