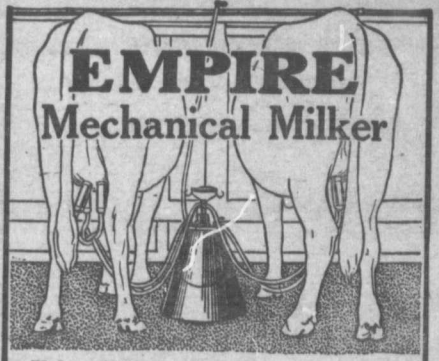
EMPIRE Mechanical Milker



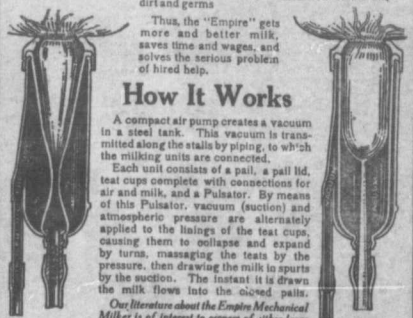
Takes all the Drudgery out of Dairying—Turns Wages Into Profits

Frees you from depending on hired help—
Makes it possible to keep more cows—
Milks them more Regularly and Uniformly—
Coaxes them to Let Down Milk more Freely—
Protects the Milk from Dirt, Germs and Odors

What it Accomplishes

One man with one double or two-cow unit will milk 20 to 30 cows per hour—one man can operate two double units. An Empire Mechanical Milker will quickly pay for itself with even a very few cows. With one or two double units you can handle a good big herd alone, and do it quickly and easily.

The "Empire" so successfully imitates the action of a sucking calf that it is easier on the cows than hand milking, and usually gets more milk. Flowing directly through the tubing from the closed teat cups to closed pails, the milk is always protected from stable air, dirt and germs



Thus, the "Empire" gets more and better milk, saves time and wages, and solves the serious problem of hired help.

How It Works

A compact air pump creates a vacuum in a steel tank. This vacuum is transmitted along the stalls by piping, to which the milking units are connected.

Each unit consists of a pail, a pail lid, teat cups complete with connections for air and milk, and a Pulsator. By means of this Pulsator, vacuum (suction) and atmospheric pressure are alternately applied to the linings of the teat cups, causing them to collapse and expand by turns, massaging the teats by the pressure, then drawing the milk in spurts by the suction. The instant it is drawn the milk flows into the closed pails.

Our literature about the Empire Mechanical Milker is of interest to owners of either large or small dairies. We will send it to you on request without any obligation to you. Just write us saying, "Please send me information about Empire Mechanical Milkers". Address Dept. E 31

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The Makers' Corner

Butter and Cheese Makers are invited to send contributions to this department, to ask questions on matters relating to cheese making, and to suggest subjects for discussion.

The Small Sized Cheese

Wilfred Sadler, B.S.A., Macdonald College, Que.

ONE reason why the householder and the hotel keeper is not a more enthusiastic buyer of cheese is because of the impracticability of dealing with a large quantity at a time. On the other hand if a small portion be purchased the extent of cheese surface exposed to the air tends towards drying, and deterioration of flavor and general quality. This can be overcome by the adaptation of modern methods in the direction of the manufacture of small cheeses. The chief difficulty hitherto experienced has been that practically all attempts to reproduce in miniature such cheeses as Cheddar, Cheshire or Leicester have resulted in a cheese having a thick rind, this causing much waste at cutting up, and further, one which fails to ripen properly, due to the fact that it dried up and became hard and chalky in texture with little or no flavor.

That there is not only an opening, but a demand for a cheese of small size in Canada is acknowledged; for in the December issue of the Agricultural Gazette, Mr. Barr, of the Dairy Division, describes experiments conducted at the Finch Dairy Station in Ontario. These experiments have been successful and the cheese produced, one pound in weight, is being retailed at 25 cents each.

The utensils required for small cheese making are in general those common in a cheese-making dairy or factory; but if such need to be purchased it may be taken as a fair average that the initial outlay is about $10 per cow. When small quantities of the cheese are to be made, the whole outfit can be purchased for $50; and if large quantities are to be manufactured the only additional expense entailed is that of a larger sized vat.

Making the Cheese.

In the making of this, as in all varieties of cheese a fundamental essential is clean, wholesome milk, free from taint. Starter is added at the rate of one per cent. The cheese may be made either white or coloured, and if the latter, one dram of annatto to four or five gallons of milk gives a suitable color. The temperature of the milk is now raised to 84° F. and the amount of acidity determined by means of the rennet test, a test which for milk at rennetting is much more satisfactory, and one which gives much more uniform results than the acidimeter test. When the temperature and the proportion of acidity are satisfactory, the rennet is added at the rate of one dram to 2 1-2 gallons of milk, 2 1-2 ozs. to 1,000 lbs. milk, or such amount that coagulation is completed in 40 to 45 minutes. For the cutting of the coagulum ordinary curd knives are used, vertical and horizontal, the blades of the former being 3-8 inch apart, and those of the latter 1-2 inch apart. The coagulum is cut lengthwise and across in such a way that it will leave the sections of curd 1-2 inch by 1-4 inch. The particles of curd are gently loosened with the hand, and this is continued for 10 minutes or so.

After having remained for a few minutes in the whey, the curd is subjected to the process of heating, cooking or scalding. This procedure should take some 20 minutes, the curd meanwhile being stirred until a final temperature of 90°F. is reached.

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