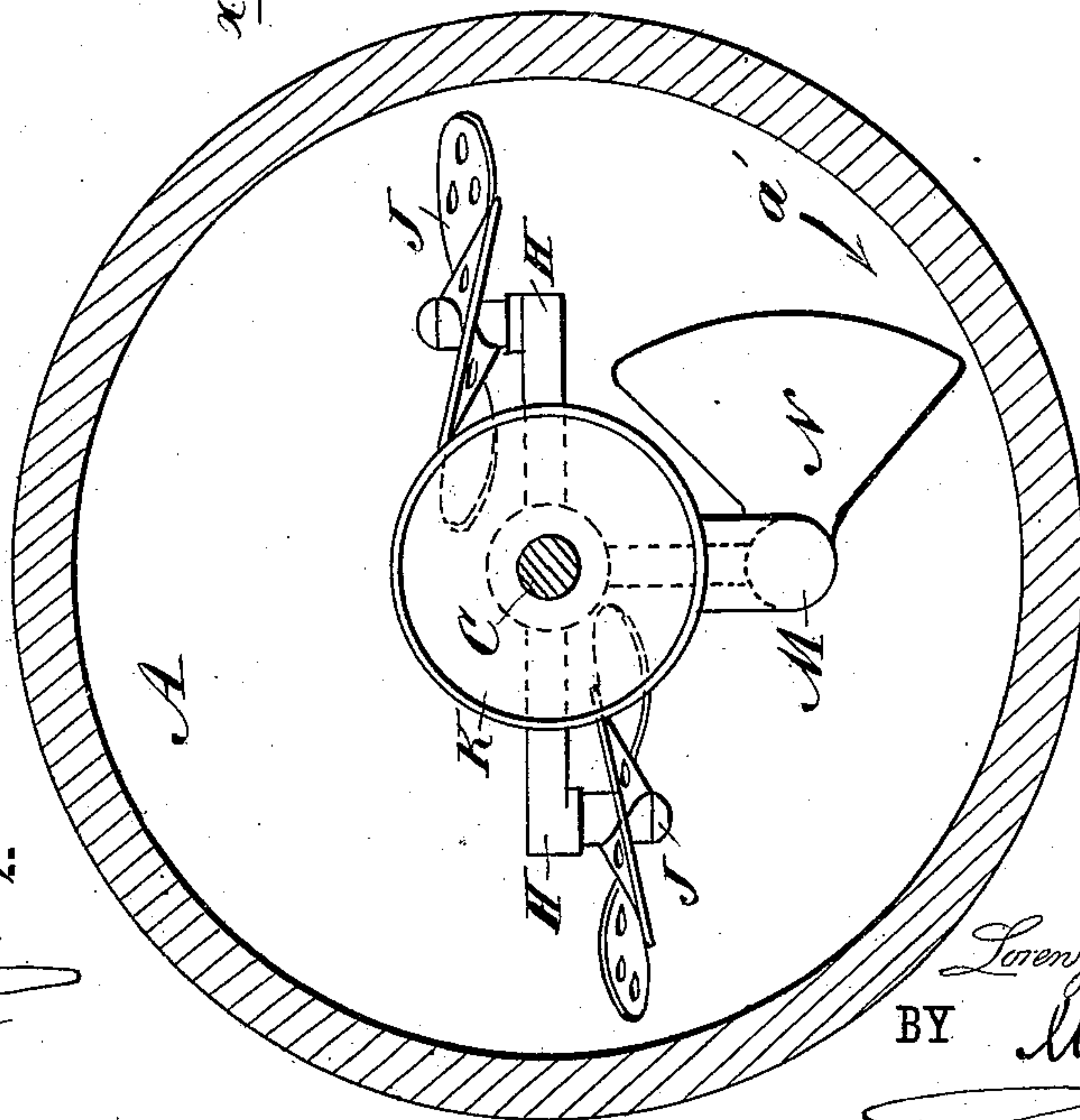
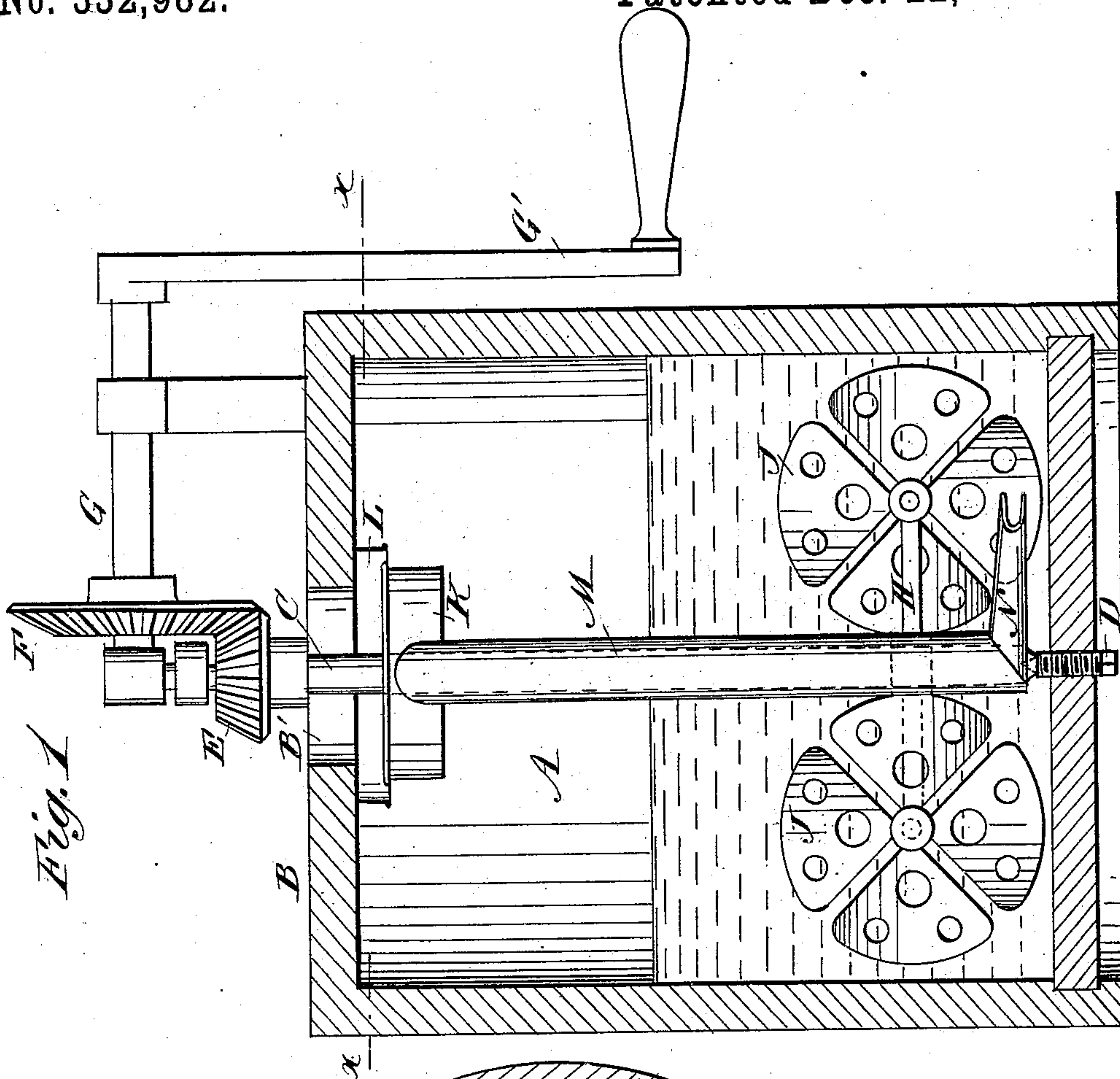


(No Model.)

L. J. WICKS.
CHURN.

No. 332,982.

Patented Dec. 22, 1885.



WITNESSES:

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C. M. Clark

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UNITED STATES PATENT OFFICE.

LOREN J. WICKS, OF PATERSON, NEW JERSEY.

CHURN.

SPECIFICATION forming part of Letters Patent No. 332,982, dated December 22, 1885.

Application filed September 18, 1885. Serial No. 177,448. (No model.)

To all whom it may concern:

Be it known that I, LOREN J. WICKS, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and Improved Churn, of which the following is a full, clear, and exact description.

This invention, which relates to certain new and useful improvements in churns, consists in the construction and combination of parts and details, as will be fully set forth hereinafter, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a cross sectional elevation of my improved churn. Fig. 2 is a sectional plan view of the same on line *x x*, Fig. 1.

A is the cream-vessel, and B its cover, having a central aperture, B'. The vertical central shaft, C, is journaled in an arm on the cover and on a pivot, D, projecting upward from the bottom of the vessel A, and the shaft C carries a bevel pinion, E, engaging with a bevel cog-wheel, F, on a shaft, G, having a crank-handle, G'. The shaft C is provided at its lower end with the two opposite arms H, each having a propeller-wheel, J, pivoted on the outer end, said propeller-wheels having apertures in their blades for the purpose of permitting the wheels to pass through the cream more readily and to assist in agitating the cream. The said wheels are shaped and mounted to revolve in opposite directions. A cup, K, is secured on the shaft C directly below the cover B, and a guard, L, is secured on the under side of the cover, and has a greater diameter than the cup, and has its bottom edge slightly below the top edge of the cup K. A tube, M, extends downward from the cup K at the side of the shaft C, and on the lower end of said tube a flaring flattened nozzle, N, is formed, which nozzle has a segmental mouth.

The nozzle is a short distance above the bottom of the vessel A.

The operation is as follows: The shaft is revolved in the direction of the arrow *a'*, whereby the wheels J are revolved and agitate the cream very thoroughly. The nozzle N is moved through the cream very rapidly, and thereby a suction is produced and air is drawn through the tube M into the cream.

The opening of the nozzle being long and narrow, and the nozzle being so formed that the cream in passing over its opening closes together in a solid and unruffled body, it produces great suction and delivers the air at the bottom part of the cream, and the air in its upward motion is constantly being mixed with the whole mass of cream in the process of churning.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a churn, the combination, with the cream-vessel, of the vertical shaft C, mounted on the same, the screw-wheels J on arms on the lower end of the shaft, a cup on the shaft near its upper end, a tube extending down from the cup, and a nozzle on the lower end of the tube, substantially as herein shown and described.

2. In a churn, the combination, with the cream-vessel, of the shaft C, mounted vertically in the same, the screw-wheels J on arms on the lower end of the shaft, the cup K on the shaft near the upper end, the tube M, extending from the cup downward at the side of the shaft, and of the flaring flattened nozzle N on the lower end of the said tube, substantially as herein shown and described.

LOREN J. WICKS.

Witnesses:

CHAS. P. SMITH, Jr.,
FRANKLIN WOOLMAN.