W. KNAGGS.

ROTARY-CHURN.

No. 193,450. Patented July 24, 1877.

Fig. 2.

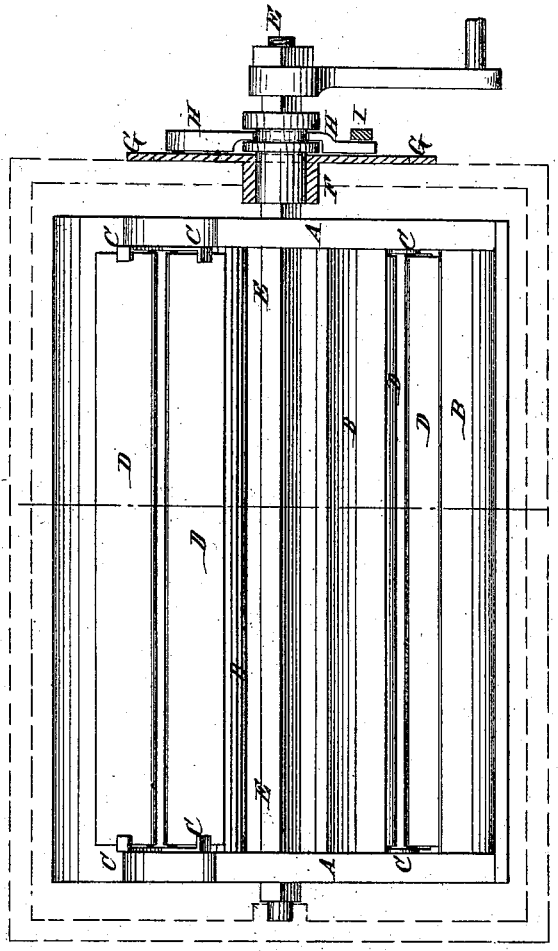


Fig. 3.

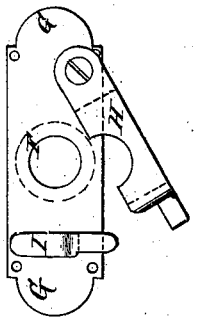
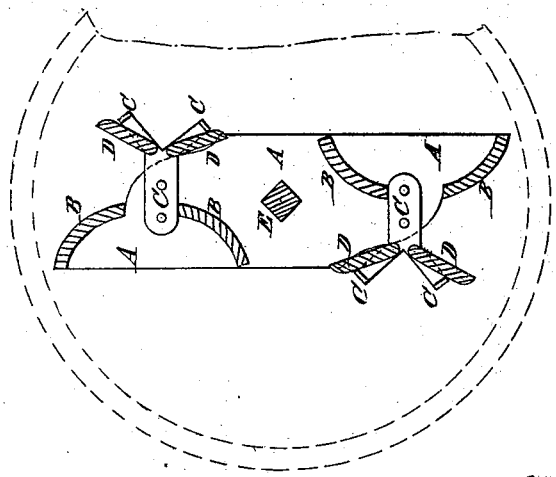


Fig. 4.



WITNESSES:

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INVENTOR:

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BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM KNAGGS, OF RICHVIEW, ONTARIO, CANADA.

IMPROVEMENT IN ROTARY CHURNS.

Specification forming part of Letters Patent No. **193,450**, dated July 24, 1877; application filed March 24, 1877.

To all whom it may concern:

Be it known that I, WILLIAM KNAGGS, of Richview, in the county of Peel, Province of Ontario, and Dominion of Canada, have invented a new and useful Improvement in Churn-Dashers, of which the following is a specification:

Figure 1 is a cross-section of my improved churn-dasher, taken through the line *x x*, Fig. 2. Fig. 2 is a side view of the dasher. Fig. 3 is a detail view of the dasher-rod fastener.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved churn-dasher which shall be so constructed as to bring the butter very quickly, and gather it quickly and thoroughly.

The invention consists in the dasher formed by the combination of the two end bars, the two pairs of concaved bars, the stop-arms, and the two pairs of pivoted bars with each other and with the dasher-rod; and in the combination of the bearing, the plate, the pivoted latch, and the catch, with the enlarged and grooved upper part of the dasher-rod, as hereinafter fully described.

A A are the end bars of the dasher, the rear corners of the ends of which are rounded off, as shown in Fig. 1.

To the forward parts of the ends of the bars A are attached the ends of two bars, B, made in the form of longitudinal sections of a hollow cylinder, and which are placed with their inner edges at a little distance from each other.

To the end bars A, between the adjacent edges of the bars B, are attached the forward ends of the arms C, the rear ends of which are forked, and provided with projections to serve as stops to the bars D. The bars D are pivoted at the inner corners of their ends to the arms C, at or near the rear edges of the ends of the bars A. The bars D are made of such a width that, when turned forward, their outer edges may rest against the rear sides of the inner edges of the bars B, and close the opening between said bars B. When the bars D are turned back they rest against the projection of the stop-arms C, and are held in an inclined position, as shown in Fig. 1.

The dasher-rod E is made square, passes through square holes in the centers of the cross-bars A, and its end revolves in a step or socket attached to the bottom of the churn-body.

The other end of the rod E is enlarged, passes through a bearing, F, inserted in a hole in the top of the churn-body, and attached to or formed upon a small plate, G, secured to the said top.

The rod E just above the plate G has a ring-groove formed in it to receive the notched edge of the latch H, pivoted at one end to the plate G. The other end of the latch H shuts beneath a keeper, I, also attached to the said plate G.

The upper end of the rod E is squared off to receive the eye of the crank by which the dasher is operated.

By this construction, when the dasher is turned forward the milk is drawn inward by the bars B, is forced through the opening between their inner edges, and strikes against the inclined bars D, by which it is divided and thrown in opposite directions. When the dasher is turned backward, the rear sides of the bars B D act as paddles or ladles for gathering the butter.

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

1. The dasher formed by the combination of the two bars A, the two pairs of concaved bars B, the stop-arms C, and the two pairs of pivoted bars D with each other and with the dasher-rod E, substantially as herein shown and described.

2. The combination of the bearing F, the plate G, the pivoted latch H, and the catch I, with the enlarged and grooved upper part of the dasher-rod E, substantially as herein shown and described.

WILLIAM KNAGGS.

Witnesses:

ISAAC N. YATTON,

THOMAS STONEHOUSE.