L. BUDAHL.

ROTARY-CHURN.

No. 192,675. Patented July 3, 1877.

Fig: 1.

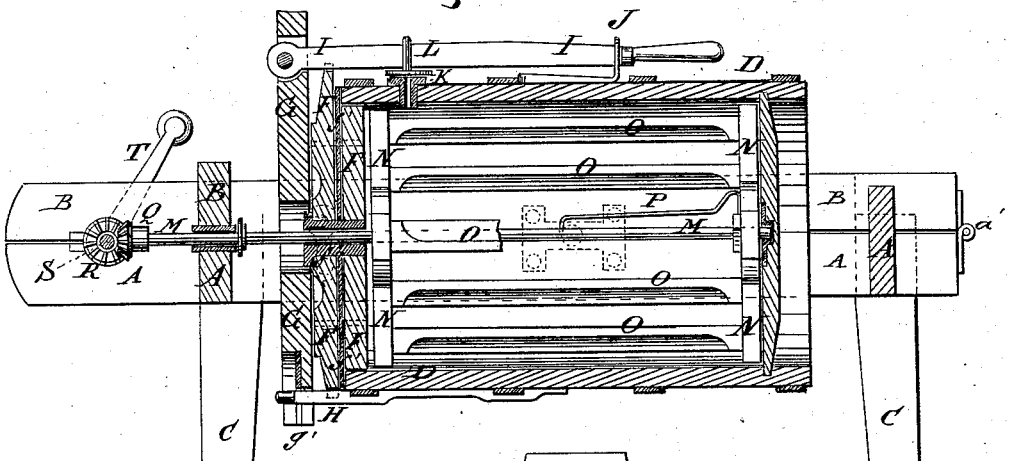


Fig: 3.

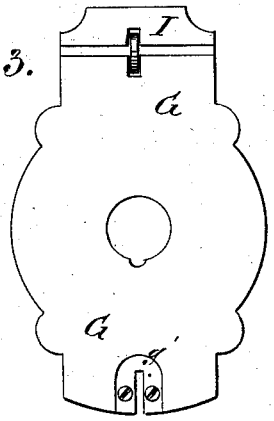
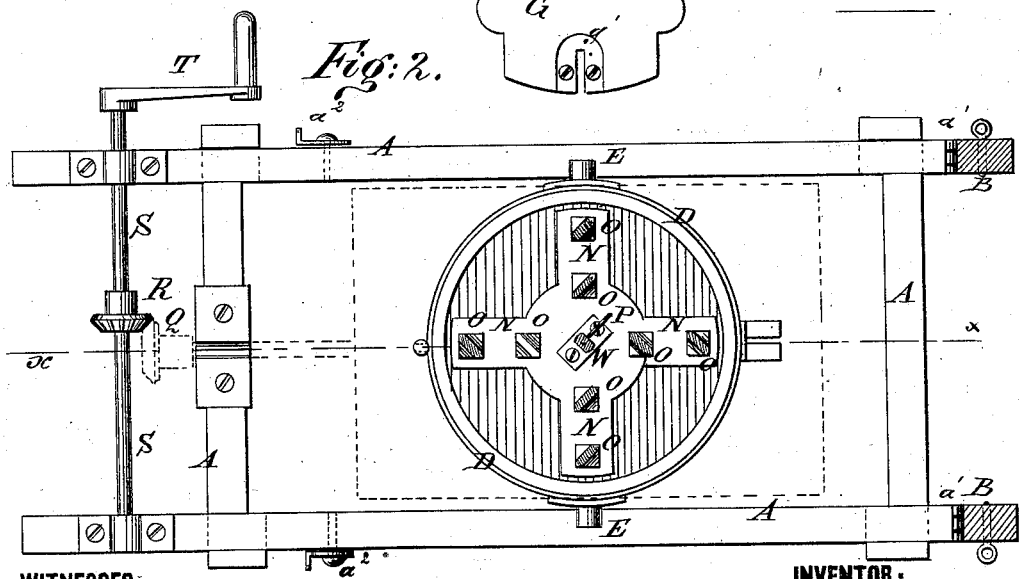


Fig: 2.



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LARS BUDAHL, OF SPRING GROVE, (RICEFORD P. O.,) MINNESOTA.

IMPROVEMENT IN ROTARY CHURNS.

Specification forming part of Letters Patent No. **192,675**, dated July 3, 1877; application filed May 28, 1877.

To all whom it may concern:

Be it known that I, LARS BUDAHL, of Spring Grove, (Riceford P. O.,) in the county of Houston and State of Minnesota, have invented a new and useful Improvement in Churning Apparatus, of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved churning apparatus, taken through the line *x x*, Fig. 2. Fig. 2 is a top view of the same, the upper frame being turned back and cut away, and the churn being shown in cross-section. Fig. 3 is a detail view of the plate for fastening on the cover.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved apparatus, which shall be so constructed as to enable the churning to be done easily and quickly, and which shall be convenient in use.

The invention consists in the combination of the rod, the bar or plate, the lever, and the slotted catch with the churn-body and the cover; in the combination of the hook with the detachable dasher, and with the dasher-shaft, and in the frame made in two parts to adapt it to receive and hold the pivots and dasher-shaft of the churn, as hereinafter fully described.

A represents the lower, and B the upper, horizontal frames, which fit upon each other, and are connected by hinges a^1 at their rear ends, and by hooks a^2 at their forward ends. To the lower frame A are attached the legs C, by which the apparatus is supported. D is the churn-body, which is made cylindrical in form, and has gudgeons E attached to the opposite sides of its middle part, which work in notches or half-bearings formed in the adjacent sides of the side bars of the frames A B. F is the cover, which is made in two parts securely bolted together, the inner part being made of such a diameter as to fit into the mouth of the churn-body D, and the outer part being made of such a diameter as to rest upon the edge of said churn-body.

Between the parts of the cover F is clamped a rubber ring or plate, f^1, the edge of which projects beyond the edge of the inner part of said cover to rest upon the edge of the churn-body D to serve as a packing and prevent leakage. Upon the outer side of the cover F is placed a bar or plate, G, one end of which is recessed and notched, and has a notched metal plate, g', secured in said recess to prevent wear.

The notch of the bar or plate G is designed to receive the neck of a rod, H, attached to the side of the churn-body D, the head of said rod H resting against the metal plate g'.

To the other end of the bar or plate G is pivoted the end of a latch or lever, I, which extends along the side of the churn-body D, and is flattened, or has a neck formed upon it to fit into the notched or slotted catch J, attached to the side of the said churn-body, and thus fasten the cover F securely in place.

In the side of the churn-body D, near its mouth, is formed a hole, in which is inserted a perforated rubber plug, K, to serve as a vent, and which is closed, when desired, by a cap, L, sliding upon the lever I.

M is the dasher-shaft, which passes through a hole in the bar or plate G, and through a perforated rubber block, f^2, inserted in a hole in the center of the cover F to prevent leakage. The inner end of the shaft M revolves in a socket in the center of the bottom of the churn-body.

To the shaft M is attached the dasher, which is formed of two four-armed plates, N, the arms of which are connected by bars O, two to each arm. The bars O are flat, and are set at an angle of about forty-five degrees (45°) with the length of said arms, as shown in Fig. 2.

The dasher N O is secured to the shaft M by a spring-hook, P, attached to one of the armed plates N, and which hooks into a hole in the said shaft M, so that the dasher can be readily detached, when desired, for convenience in cleaning it.

The outer part of the dasher-shaft M revolves in half-bearings secured in notches in the adjacent sides of the forward cross-bars of the frames A B, and to the outer end of said shaft is attached a small bevel-gear wheel, Q, the teeth of which mesh into the teeth of the small bevel-gear wheel R attached to the cross-shaft S. The shaft S revolves in

bearings attached to the upper sides of the bars of the lower frame A, and to one of its ends is attached the crank T, by which the dasher is operated.

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

1. The combination of the rod H, the bar or plate G, the lever I, and the slotted catch J, with the churn-body D, and the cover F, substantially as herein shown and described.

2. The combination of the hook P with the detachable dasher N O, and with the dasher-shaft M, substantially as herein shown and described.

3. The frame made in two parts, A B, to adapt it to receive and hold the pivots E, and the dasher-shaft M of the churn, substantially as herein shown and described.

LARS BUDAHL.

Witnesses:
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