J. A. DURYEE.

CHURN.

No. 187,525. Patented Feb. 20, 1877.

Fig. 2.

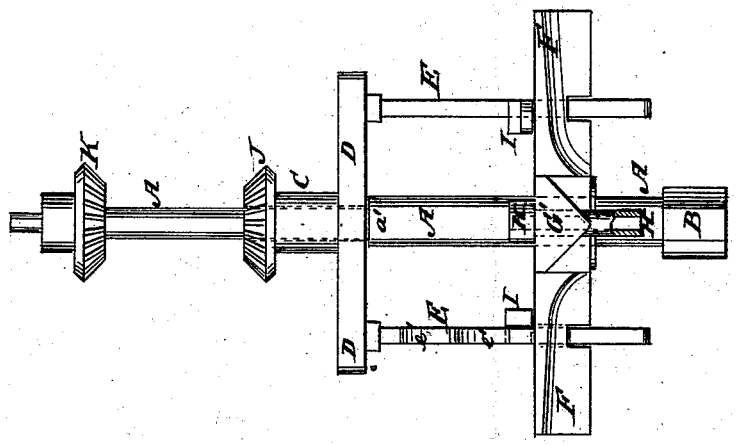
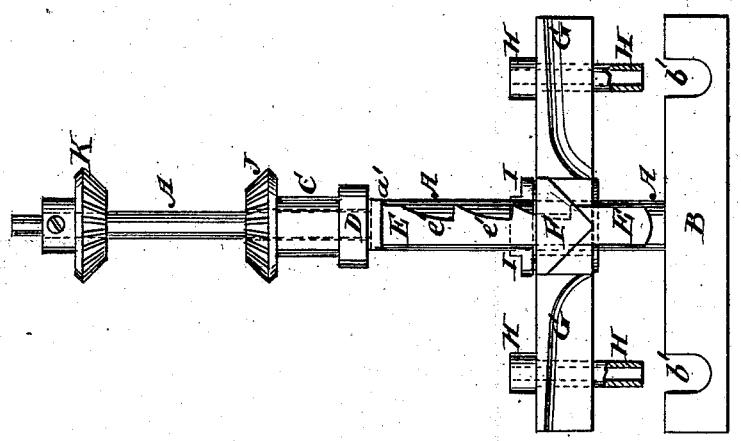


Fig. 1.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES A. DURYEE, OF NUNDA, NEW YORK.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **187,525**, dated February 20, 1877; application filed December 23, 1876.

To all whom it may concern:

Be it known that I, JAMES A. DURYEE, of Nunda, in the county of Livingston and State of New York, have invented a new and useful Improvement in Churn-Dashers, of which the following is a specification:

Figure 1 is a side view of my improved dasher. Fig. 2 is a view of the same turned one-quarter around.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved churn-dasher which shall be so constructed that it may be readily adjusted according to the amount of milk in the churn, which will bring the butter very quickly, will gather the butter thoroughly, which shall be easily operated, and will work equally well when turned in either direction.

The invention consists in the combination of the sleeve, the cross-bar, the notched blades, the two cross-bars beveled in opposite directions upon their lower sides, and the buttons with the main shaft and its cross-bar, as hereinafter fully described.

A is the main shaft of the dasher, to the lower end of which is attached a cross-bar, B. Upon the shaft A, above the milk, is formed a shoulder, *a'*, upon which rests the lower end of a tube or sleeve, C. To the lower end of the tube C is attached a cross-bar, D, to the outer ends of which are attached the upper ends of two downwardly-projecting bars or blades, E, upon one edge of each of which is formed a series of notches, *e'*. The blades E pass down through slots in the cross-bar F. To the center of the cross-bar F is halved a cross-bar, G, which is placed at right angles with the said cross-bar F. The cross-bars F G, at their point of intersection, have a hole formed through them to receive the lower part of the shaft A, so that the said bars can revolve upon the said shaft as a pivot. In the end parts of the cross-bar G are formed holes to receive the short vertical tubes H, which receive air from the upper part of the churn, and carry it down into the milk. The tubes H are placed farther from the shaft A than the blades E, so that the said blades and tubes may move in different paths. When the cross-bars F G are placed low down, the lower ends of the tubes H pass through notches *b'*, formed in the upper sides of the end parts of the cross-bar B. The cross-bars F G, when adjusted in proper position upon the blades E, are secured in place by buttons I, pivoted to the cross-bar G in such positions that they may be turned against the said blades E. To the upper end of the tube C is attached, or upon it is formed, a bevel-gear wheel, J, and to the upper end of the shaft A is detachably attached a bevel-gear wheel, K. The bevel-gear wheels J K are placed at such a distance apart that their teeth may mesh into the teeth of a gear-wheel interposed between them and attached to the crank-shaft, so that the shaft A and its attachments, and the sleeve C and its attachments, may be revolved in opposite directions. The lower sides of the cross-bars F G are beveled in opposite directions upon their edges, so that the dasher may work equally well when turned in either direction.

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

The combination of the sleeve C, the cross-bar D, the notched blades E, the cross-bars F G, beveled in opposite directions upon their lower sides, and the buttons I with the shaft A and cross-bar B, substantially as herein shown and described.

JAMES A. DURYEE.

Witnesses:

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