(No Model.)

J. S. OSTER.

CchurN.

No. 456,839. Patented July 28, 1891.

Fig. 2.

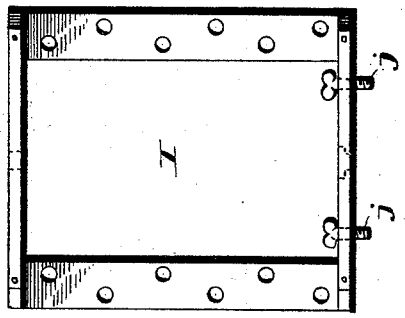


Fig. 3.

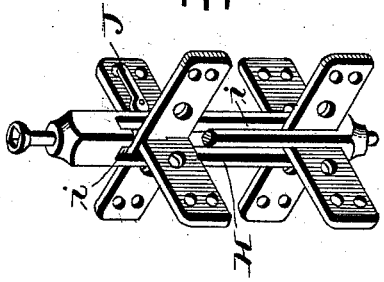
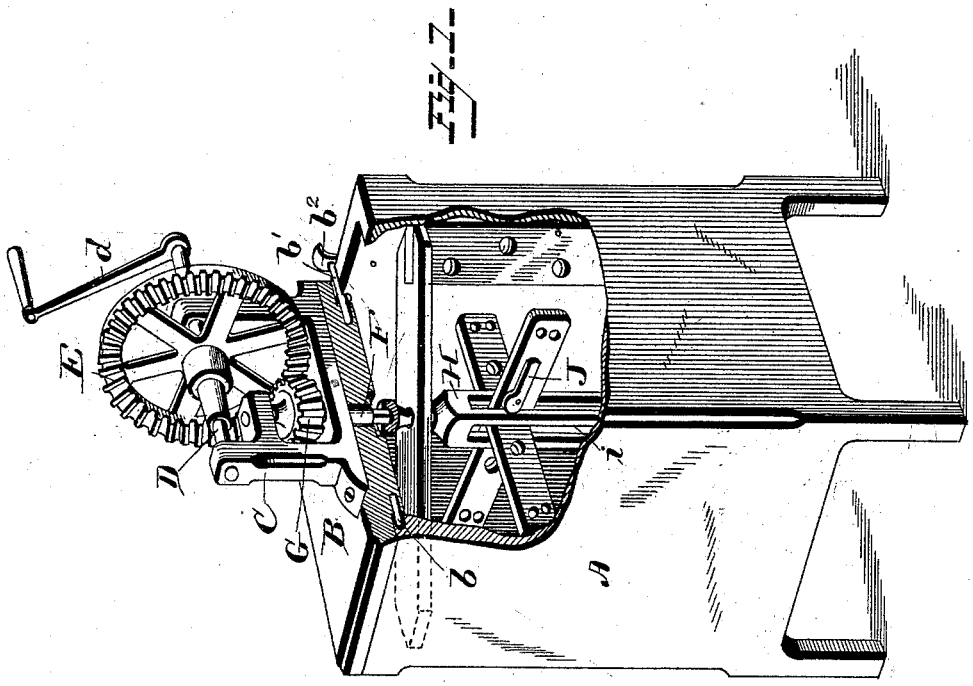


Fig. 1.



Witnesses
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Van Buren Hillyard.

Inventor
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UNITED STATES PATENT OFFICE.

JAMES S. OSTER, OF BRAYMER, MISSOURI.

CHURN.

SPECIFICATION forming part of Letters Patent No. 456,839, dated July 28, 1891.

Application filed April 14, 1891. Serial No. 388,862. (No model.)

To all whom it may concern:

Be it known that I, JAMES S. OSTER, a citizen of the United States, residing at Braymer, in the county of Caldwell and State of Missouri, have invented certain new and useful Improvements in Churns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to churns and aims to secure a thorough agitation of the cream and a self-adjustment of the dasher to the quantity of cream in the vessel and to provide simple instrumentalities for effecting the desired result.

The improvement consists of the novel features and the peculiar construction and combination of the parts, which will be hereinafter more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a perspective view of a churn embodying my invention, parts being broken away to show the relative arrangement of the parts. Fig. 2 is a front elevation of the dasher-frame detached. Fig. 3 is a perspective view of the dasher, parts being broken away.

The vessel A is rectilinear in cross-section, and its open end is closed by the cover B, which is rabbeted at the edges to overlap the end of the vessel and which is held in place by the pins b and b'. The pin b enters an opening in the inner side of the vessel, and the pin b' is engaged by the spring-catch b^2 on the diametrically-opposite side of the vessel. The dasher-operating mechanism is mounted on the cover and is composed of the head C, the horizontal shaft D, journaled on the head and having a crank d at its outer end, the bevel gear-wheel E, secured on the shaft D, the vertical shaft F, having its lower end projected below the head and made angular to enter a correspondingly-shaped socket in the upper end of the dasher-shaft H, and the bevel-pinion G on the shaft F, meshing with the gear-wheel E.

The dasher-shaft H is journaled in a rectangular-shaped frame I and is provided in its sides with two intersecting slots i, which extend relatively at right angles to each other in cross-section and nearly the entire length of the said dasher-shaft. The slots extend through the dasher-shaft from one side to the other. The dasher is cruciform and composed of a lower and an upper part, each part comprising two blades which cross at the center, the ends of the blades projecting through the slots in the sides of the dasher-shaft. The lower dasher is fixed near the lower ends of the slots i, and the upper dasher is free to rise and fall in the slots i to adapt itself to the level of the cream in the vessel A. The dasher, being of wood or like light material, will be buoyed up or floated by the cream. Obviously, if the level of the cream is low the upper dasher will fall, and should the said level rise the dasher will also rise. Sometimes it is desirable to fasten the upper dasher, and for this purpose the cam-lever J is provided and pivoted to the said dasher, the cam end binding against the side of the dasher when the said lever is turned into a nearly horizontal position.

The frame I is placed diagonally in the vessel, and its side bars, as also the blades of the dashers, are perforated to obtain an increased agitation of the cream in the rotation of the dasher. The frame is supported on adjustable supports j, which are provided in the bottom cross-bar. By means of these supports the dasher-frame can be adjusted relative to the vessel and the driving mechanism to insure a firm connection between the dasher and the driving mechanism and allow for variations in the mechanical construction of the parts.

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

1. In a churn, the combination, with the dasher-shaft having longitudinal slots in its sides which extend through the opposing sides of and intersect in the center of the said shaft, of two—a lower and an upper—dashers having their blades crossing and projecting beyond the sides of the dasher-shaft, and the lower dasher being fixed and the upper dasher adapted to automatically adapt itself to the level of the cream in the churn, substantially as set forth.

2. In a churn, the combination, with the vessel and the dasher-supporting frame, of ad-

justable supports provided at the lower end of the said frame, the dasher journaled in the said frame, and the dasher-driving mechanism, substantially as and for the purpose described.

3. In a churn, the combination, with the dasher-shaft having intersecting longitudinal slots in its sides, of two—a lower and an upper—cruciform dashers arranged in the said slots, the lower dasher being fixed and the upper dasher adjustable, and a cam-lever on the said upper dasher to bind against the side of the dasher-shaft, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES S. OSTER.

Witnesses:
ROLLA MCCUBBIN,
JOHN WHEELER.