

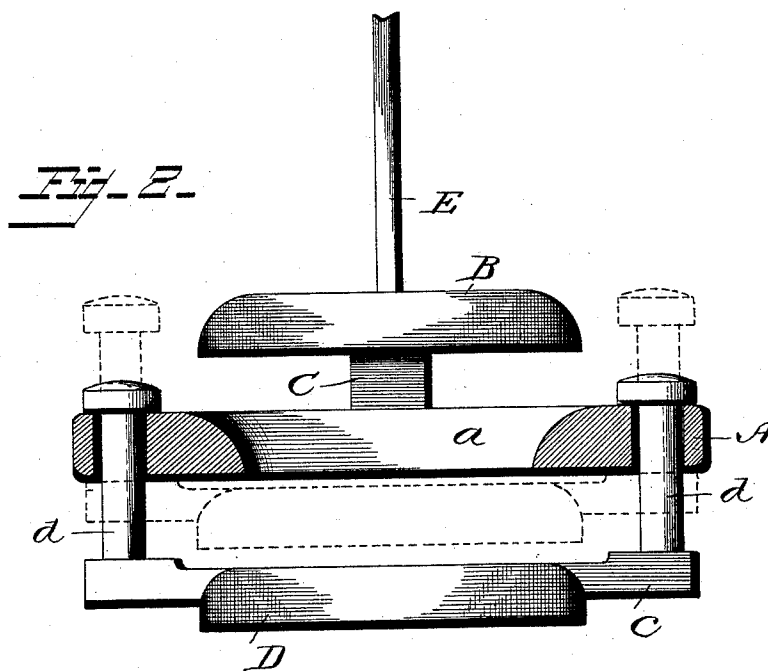
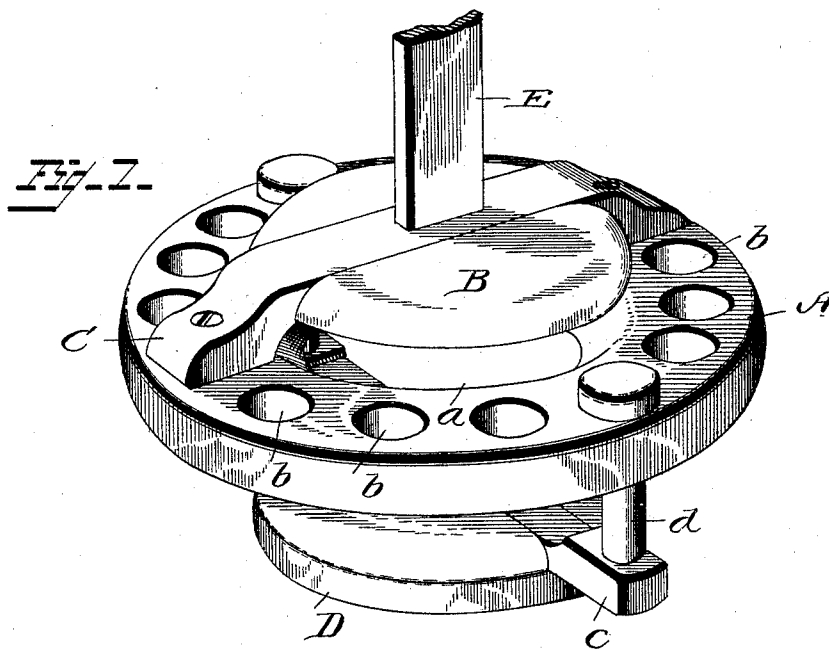
(No Model.)

2 Sheets—Sheet 1.

C. BERST.
CHURN DASHER.

No. 473,900.

Patented May 3, 1892.



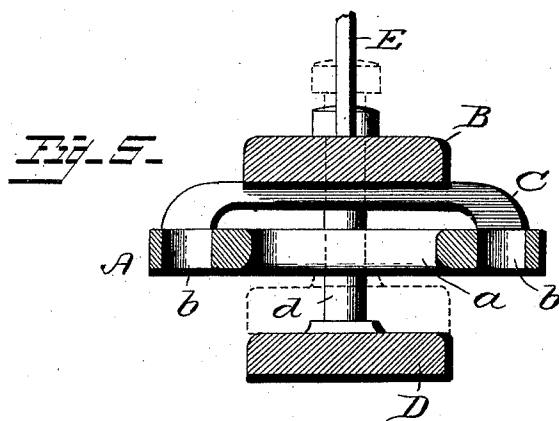
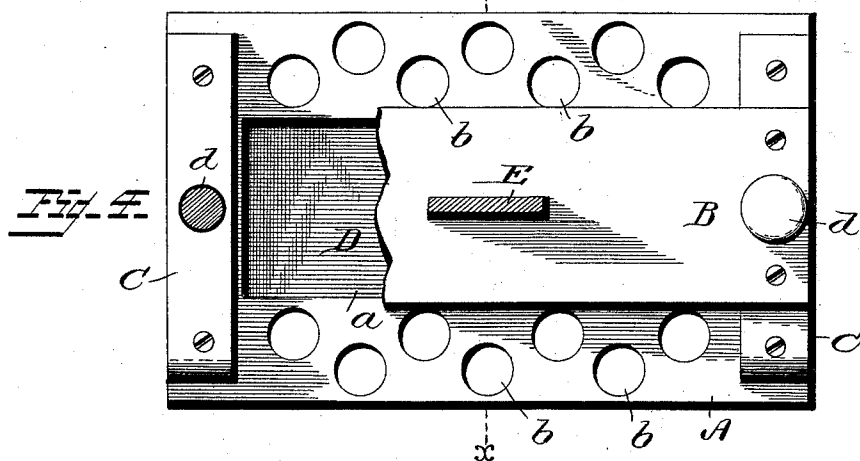
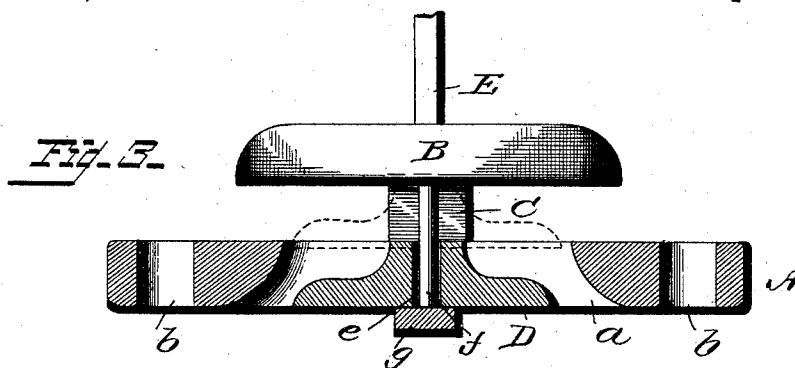
Witnesses
Albert Speiden.
H. H. Snow.

Inventor
Conrad Berst.
By his Attorneys N. S. Snow & Co.

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UNITED STATES PATENT OFFICE.

CONRAD BERST, OF KANSAS CITY, MISSOURI.

CHURN-DASHER.

SPECIFICATION forming part of Letters Patent No. 473,900, dated May 3, 1892.

Application filed December 19, 1891. Serial No. 415,572. (No model.)

To all whom it may concern:

Be it known that I, CONRAD BERST, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Churn-Dashers; 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 dashers for agitating or beating thin batters, fluids, and the like, but is more especially designed for churning, as it produces a thorough agitation of the cream and liberates the globules of butter in a comparatively short space of time.

To this end the invention consists, broadly, in a dasher so constructed that upon the downward throw the greater portion of cream will be forced toward the periphery of the dasher and upon the upward throw will be drawn to the center.

The invention further consists in certain details of construction and combinations of parts, all as more fully hereinafter described, shown in the drawings, and then pointed out in the claims.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a dasher constructed in accordance with my invention. Fig. 2 is a vertical section of the same. Fig. 3 is a like view of a modified form. Fig. 4 is a plan view of the dasher as constructed for a box-churn. Fig. 5 is a vertical section of the same on the line *xx* of Fig. 4.

Referring to the accompanying drawings, A designates the dasher-board, which is provided with a central aperture *a* and the perforations *b* near its outer edge.

B designates the upper breaker-board, which is of a larger diameter than the aperture *a* and is supported a short distance above said aperture by a yoke C, secured to the dasher-board.

D designates the lower breaker-board, of a size corresponding to the upper breaker-board, and is secured to a cross-bar *c*, from each end of which project headed pins *d*. These pins are of such size as to neatly slide in two diametrically-opposite perforations *b*, thus forming

guides for the lower breaker-board and limiting the downward movement of the same.

E designates the dasher-rod by means of which the dasher is reciprocated.

In Fig. 3 is shown a slight modification in which the lower breaker-board enters the aperture *a* and is centrally perforated, as at *e*. A rod *f*, secured between the upper breaker-board and a cross-bar *g*, passes through the perforation *e* and serves as a guide to hold the breaker-board in position.

By an inspection of the drawings it will be seen that upon the upward throw of the dasher the parts will assume the positions shown in full lines, thus allowing the larger body of cream to pass through the central aperture, and, striking the lower breaker-board, will be deflected toward the sides of the churn, where it will strike the currents of cream passing through the perforations *b*. Upon the downward throw the lower dasher-board will rise, and, acting as a valve, will substantially close the aperture *a*, which will cause the larger body of cream to be forced through the perforations near the outer edge of the dasher-board. The smaller body of cream, passing around the edges of the lower dasher-board, will strike the upper dasher-board and be deflected toward the sides of the churn into the currents of cream forced through the perforations *b*. By this operation the cream will be alternately drawn to and from the center of the churn, which, causing the meeting of counter-currents, as above described, will thoroughly agitate the cream and accomplish the desired result in the shortest possible time.

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

1. A dasher having two breaker-boards arranged upon opposite sides of a central perforated support, the one fixed and the other movable bodily in the direction of movement of the dasher, as set forth.

2. A dasher consisting of a central plate having a central aperture and vertical perforations near its periphery, an upper fixed breaker-board, a dasher-shaft, and a lower breaker-board movable bodily to and from the center plate and adapted to serve as a valve to close said aperture, as set forth.

3. A dasher consisting of a central plate
with central aperture, a fixed breaker-board,
and a movable one, the latter adapted to move
bodily in the direction of movement of the
5 dasher and close the aperture in the central
plate of the dasher, as set forth.

4. A dasher having a central plate with
central aperture and peripheral perforations,
an upper fixed breaker-board, and a lower
10 breaker-board carried by a support guided

by opposite perforations of said plate and
movable with relation to the central plate and
upper breaker-board and close said aperture,
as and for the purposes specified.

In testimony whereof I affix my signature in 15
presence of two witnesses.

CONRAD BERST.

Witnesses:

G. E. STILES,

C. J. STEIN.