(No Model.)

C. BERST.

CHURN DASHER.

No. 565,130. Patented Aug. 4, 1896.

Fig. 1.

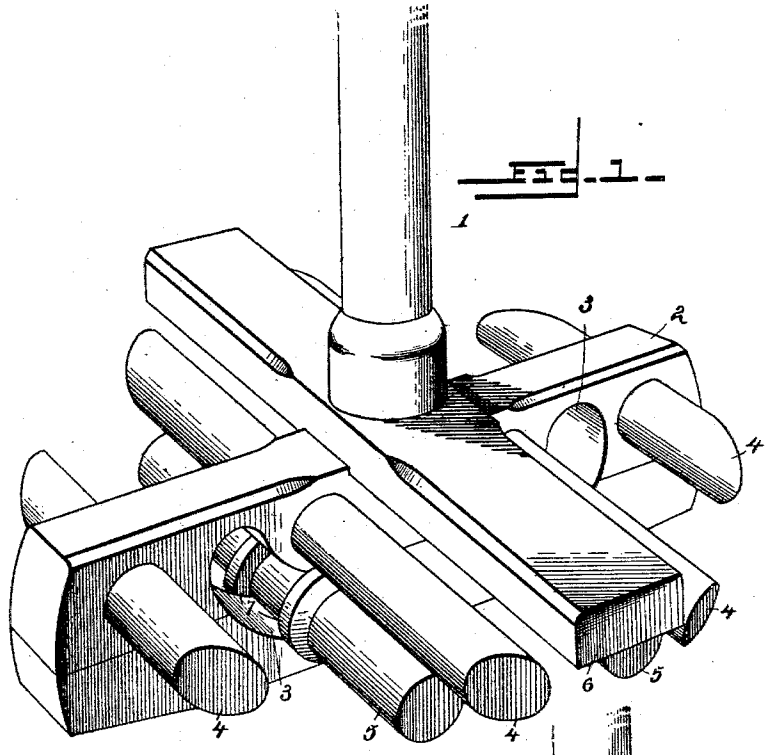


Fig. 2.

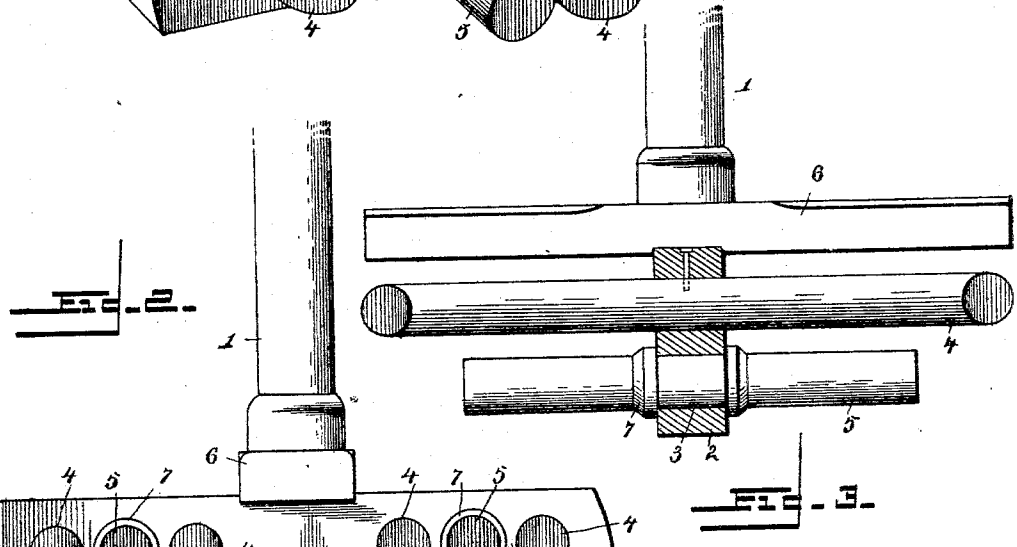
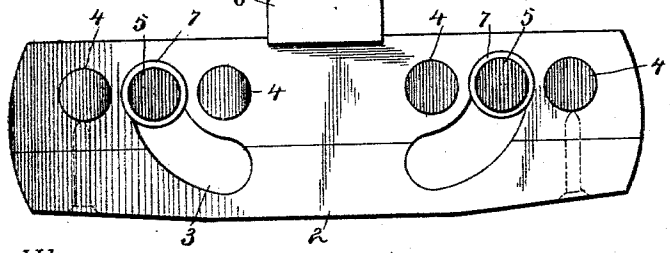


Fig. 3.



Inventor

Conrad Berst.

Witnesses

Thos. W. Riley.

U. B. Hillyard.

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

CONRAD BERST, OF KANSAS CITY, MISSOURI.

CHURN-DASHER.

SPECIFICATION forming part of Letters Patent No. 565,130, dated August 4, 1896.

Application filed May 22, 1896. Serial No. 592,608. (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 a new and useful Churn-Dasher, of which the following is a specification.

This invention relates to that class of dashers which in operation have a reciprocating movement imparted thereto; and the object of the improvement is to provide a dasher which will offer a minimum amount of resistance to the substance being whipped or churned when returning to a normal or starting position, thereby lessening the effort required in the churning process and facilitating the return of the dasher to an initial position after it has advanced to the required point in its forward movement.

With these and other objects in view the invention consists, primarily, of movable beaters, which are adapted to move in a curved path and to assume a position immediately below and in vertical alinement with corresponding fixed beaters when the dasher is returning to a normal position or is in a quiescent state and not immersed in the cream, batter, or other substance to be whipped or churned, and which movable beaters will occupy a position in the plane of and side by side the said fixed beaters when the dasher is depressed or advancing on its forward stroke.

The improvement also consists of the novel features which hereinafter will be more particularly set forth and claimed, and which are illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a dasher constructed in accordance with this invention, showing the movable beaters at their lower position. Fig. 2 is a side elevation thereof, showing the movable beaters at their highest position and in the plane of the fixed beaters. Fig. 3 is a transverse section of the dasher, showing the movable beater at its lowest position.

Referring by numerals to the drawings, in which similar characters denote corresponding parts in all the figures, 1 indicates a staff, 2 a cross-bar having oppositely-curved slots 3 near its ends and supporting the fixed beaters 4 and the movable beaters 5, and 6 the breaker-bar, which is centrally disposed and arranged at right angles to the cross-bar 2.

The fixed beaters 4 are attached about midway of their ends to the cross-bars 2 in any convenient manner, preferably by being secured in transverse openings formed therein, and they are spaced the proper distance apart. The curved slots 3 are quadrants and are arranged in such relation so that their extremities terminate, respectively, about in the plane of the fixed beaters 4 and immediately below the contiguous fixed beaters, as shown most clearly in Fig. 2. The movable beaters 5 are mounted in the curved slots 3 and have circular enlargements 7 to come upon opposite sides of the cross-bar 2, so as to maintain the said movable beaters in working relation.

When the dasher is at rest and not immersed in the cream, batter, or other substance to be churned, the movable beaters will occupy a vertical position immediately below the adjacent fixed beaters, and when the dasher is in working position and is moved forward the said movable beaters will occupy a position in the plane of the fixed beaters, as shown most clearly in Fig. 2. The movable beaters being of wood, are buoyant and on the initial movement of the forward stroke of the dasher the said movable beaters will start upwardly in the curved slots 3 by reason of their buoyancy in the cream, batter, &c., being agitated, and this upward movement will be accelerated by the forward or downward movement of the dasher, as will be readily understood. When the dasher returns to a normal position the movable beaters will descend to the lowest position of the curved slots 3 under the action of gravity, and the resistance of the substance exerted upon the said movable beaters, thereby lessening the effort required to elevate or return the dasher to its initial position.

The purpose of the breaker-bar 6 is to cause a lateral circulation of the cream on the forward or down stroke of the dasher, and the lateral movement of the greater bulk of the cream will cause a corresponding movement of the fine jets passing between the several beaters and will result in the cream being thrown violently against the sides of the vessel containing the same, thereby breaking up the butter globules and securing a thorough

agitation, which results in the churning or whipping in a comparatively short interval of time and in a thorough and effective manner.

In order to facilitate the placing of the movable beaters within the curved slots, the cross-bar is separated horizontally and the parts are secured together by screws S or other fastenings, by means of which the desired result is attained.

What is claimed is—

1. A dasher comprising a support formed with curved slots, a series of beaters attached to the said support and incapable of independent movement, and movable beaters placed in the said curved slots and adapted to move automatically therein in the operation of the device and to occupy a position in the plane of the fixed beaters when the dasher is moved forward, and to occupy a position immediately below and in vertical alinement with the adjacent fixed beaters so as to offer no resistance to the return stroke of the dasher, substantially as specified.

2. The dasher constructed substantially as herein specified, the same comprising a staff, a cross-bar having oppositely-disposed curved slots near its ends of quadrantal shape, fixed beaters supported between their ends at intervals in the length of the cross-bar, movable beaters arranged in the said curved slots, and having annular enlargements to engage with the opposite sides of the cross-bar, said movable beaters occupying a position in the plane of the fixed beaters when the dasher is moving forward, and in vertical alinement with and immediately below the adjacent fixed beaters when the dasher is returning, and a breaker-bar arranged intermediate of the fixed beaters and at right angles to the said cross-bar, substantially as set forth for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CONRAD BERST.

Witnesses:
H. S. COLEMAN,
JOHN L. HIGGINS.