

(No Model.)

J. B. SIEWERS.
CHURN DASHER.

No. 489,336.

Patented Jan. 3, 1893.

Fig. 1.

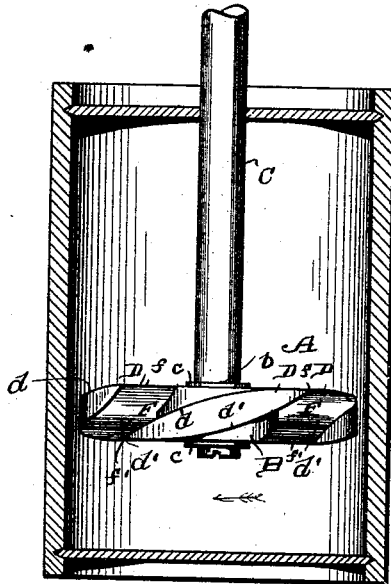
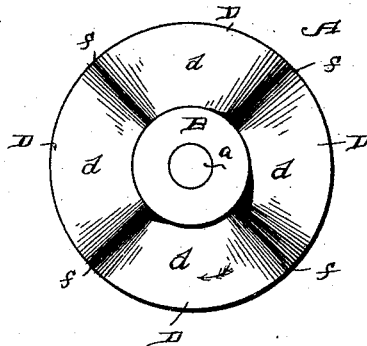


Fig. 2.



Witnesses
Jesse Heller.
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UNITED STATES PATENT OFFICE.

JOSEPH B. SIEWERS, OF DECATUR, ILLINOIS.

CHURN-DASHER.

SPECIFICATION forming part of Letters Patent No. 489,336, dated January 3, 1893.

Application filed June 30, 1892. Serial No. 438,572. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. SIEWERS, a citizen of the United States, and a resident of Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Rotary Mixing and Beating Devices; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side view of the mixer and Fig. 2 is a bottom plan view of same.

This invention has relation to certain new and useful improvements in churn dashers and mixers or beaters, the object being to provide a device of this character so constructed as to be peculiarly effective upon the article subjected to its action for the purpose of separation, beating or mixing; and the invention consists in the novel construction and combination of parts, all as hereinafter specified.

In the accompanying drawings, the letter A designates the dasher, having the central solid body portion B, in which is a central vertical bearing aperture *a*, which is loosely engaged by a journal *b* on the lower end of the handle C. This journal may consist of a reduced cylindric portion of the handle, or, as shown, may be a pin or screw driven in the lower end of the handle, and passing loosely through the dasher. In order to prevent undue wear, washers *c, c*, are provided. Said body portion B is provided with a peripheral series of radial, spiral, or oblique wings or blades D, having curved upper and lower faces *d, d'*, the upper face *d* having a downward curve from left to right, and the lower face an upward curve from right to left. At each extremity of the wings or blades, the upper and lower faces join each other forming the oblique horizontal sharp or cutting edges *f, f'*. The upper face of any one of

said blades and the lower face of the next succeeding one to the right form between them a spiral groove or channel F.

The dasher is designed to be vertically reciprocated in the ordinary manner by the hand, or by suitable mechanical devices and its peculiar effect upon the liquid subjected to its action is derived from the double reverse rotary motion given said dasher by the resistance of the liquid as the former is reciprocated, as will now be described.

As the dasher descends into contact with the cream or other liquid, the resistance imparted thereto, by the displacement of the cream or liquid, upon the curved under faces of the blades, will impart a rotary movement in the direction of the arrow 1. When however, the dasher is withdrawn, this resistance is brought to bear upon the upper faces of the blades, and a reverse rotary motion is given the dasher, these two reverse movements occurring upon each reciprocation. These rotary movements are favored by the peculiar conformation of the blades, and the upper and lower horizontal sharp edges *f, f'*, thereof, which reduce the resistance encountered by such movements to a minimum.

It will be apparent that the combined movements will produce a lively agitation of the liquid, and this agitation has been found to be of a character which greatly hastens the accomplishment of the desired result.

While the dasher is especially designed for use in churns, where its action greatly accelerates the separation of the butter, it is no less effective in beaters and mixers, of various characters.

Having described this invention, what I claim and desire to secure by Letters Patent is:

The herein described rotary dasher or beater, comprising the handle having a journal at one end, a central circular body portion B, having a central bearing aperture to receive said journal, and the series of peripheral, similar, radial, spiral, or oblique blades, extending each from the peripheral edge of the lower face of the body obliquely to the peripheral edge of the upper face of said body,

and having each curved convex upper and lower faces, joining each other at each extremity of the blade to form the oblique horizontal cutting edges f' , the upper face of any
5 one blade and the lower face of the next succeeding one forming between them a spiral groove or channel F , both faces of said dasher having the same form, and presenting the ap-

pearance of a disk when viewed from above or beneath, substantially as specified. 10

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

JOSEPH B. SIEWERS.

Witnesses:

FRANK. B. KRAMER,
GEORGE A. SMITH.