

No. 835,672.

PATENTED NOV. 13, 1906.

E. A. FRANKLIN.
CHURN DASHER.

APPLICATION FILED SEPT. 20, 1906.

Fig. 2.

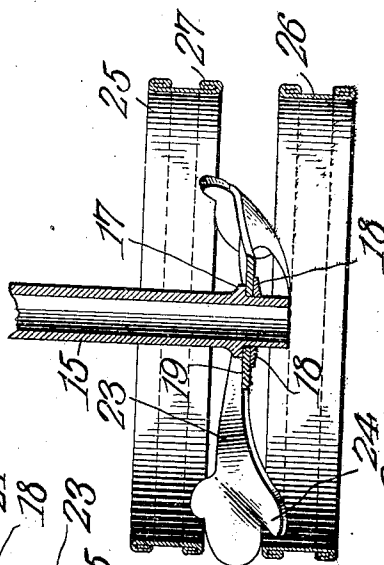
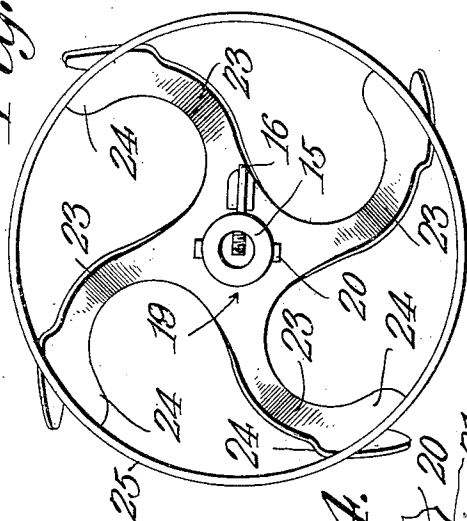


Fig. 3.

Fig. 4.

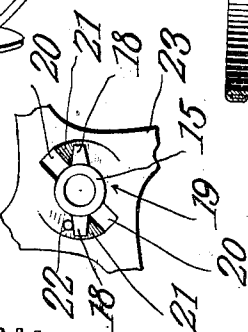
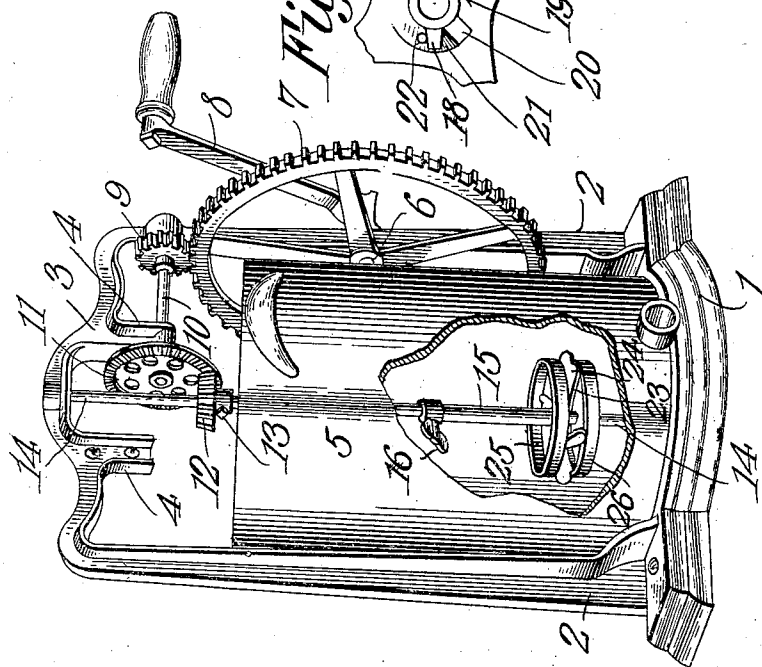


Fig. 1.



WITNESSES:

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EDWARD A. FRANKLIN, OF NORTH CHICAGO, ILLINOIS.

CHURN-DASHER.

No. 835,672.

Specification of Letters Patent.

Patented Nov. 13, 1906.

Application filed September 20, 1906. Serial No. 335,470.

To all whom it may concern:

Be it known that I, EDWARD A. FRANKLIN, a citizen of the United States, residing at North Chicago, in the county of Lake and State of Illinois, have invented a new and useful Churn-Dasher, of which the following is a specification.

This invention relates to churns, and more particularly to a rotary dasher for use in connection therewith.

The object of the invention is to provide a rotary dasher of novel construction which will agitate the contents of the churn in a thorough and efficient manner, and thereby expedite the formation of butter.

A still further object is to provide a dasher which is of durable and compact construction and which will not splash the contents of the churn.

With the above and other objects in view the invention consists of certain novel features of construction and combinations of parts, which will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings, Figure 1 is a perspective view of the churn, a portion thereof being broken away to show the dasher. Fig. 2 is a plan view of the dasher. Fig. 3 is a vertical section therethrough, and Fig. 4 is a bottom view of the central portion of the dasher.

Referring to the figures by characters of reference, 1 is a base having standards 2 extending upward therefrom and connected at their upper ends by a cross-strip 3 of suitable contour and provided with depending arms 4. A churn-body 5 is arranged upon the base, and journaled in one of the standards is a short shaft 6, having a drive-gear 7 at its inner end and a crank 8 or other operating device at its other end. The gear 7 meshes with a small gear 9, secured upon a shaft 10, which is journaled in one of the standards 2 and one of the arms 4. A beveled gear 11 is secured upon the shaft 10 and meshes with a gear 12, secured by means of a set-screw 13, upon a rod 14, which is journaled at opposite ends in the bottom of the churn-body 5 and in the cross-strip 3.

The dasher used in connection with this churn is secured upon the rod 14 and comprises a tubular core 15, adapted to receive the rod 14 and having a set-screw 16, whereby said core may be secured in adjusted posi-

tion upon the rod. A collar 17 extends around the lower portion of the core, and oppositely-extending fingers 18 also project from the core at points slightly removed from the collar. A plate 19 is arranged upon the lower portion of the core and has oppositely-disposed slots 20 therein adapted to slip over the fingers 18, so as to enable the plate to bear against the collar 17. Said plate is gradually thickened adjacent the center thereof, as shown at 21, and said thickened portions constitute wedges for clamping the plate 19 between the collar 17 and fingers 18 when said plate is rotated in one direction. After the parts have been tightened together in this manner a pin 22 is inserted through the plate and across one of the fingers, so as to prevent the plate from turning back to its initial position and becoming detached. If preferred, the fingers may be soldered to the plate after the parts have been assembled, or the solder may be used in conjunction with the pin.

Extending from the plate 19 at regular intervals is a plurality of radial blades 23, which are bowed rearwardly with respect to the direction of rotation and are twisted or tilted vertically so as to present inclined faces to the material to be agitated. Oppositely-extending wings 24 project from each blade adjacent its free end. The upwardly-extending wings 24 are soldered or otherwise secured to the inner surface of a band 25, which rests upon the end portions of the blades, and the lower wings 24 are also secured to a band 26, which contacts with the lower edges of the end portions of the blades and is similar to the band 25. Both bands are preferably formed of sheet metal having their edges turned in to form reinforcing-beads 27. These bands serve to hold the ends of the blades firmly braced, and the openings formed between the bands facilitate the agitation of the contents of the churn. The end portions of the blades project between and beyond the peripheries of the bands.

By disclosing the blades and bands in the manner set forth a rotary and vertical movement is imparted to the contents by the blades, a portion of said contents being drawn between the bands, while another portion thereof is thrown outwardly by the projecting ends of the blades. As a result of the various movements which are simultaneously produced by employing a dasher of

this construction the churn is rendered very efficient, because the agitation produced is such as to quickly and thoroughly form butter.

5 The preferred form of the invention has been set forth in the foregoing description; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of the claims.

What is claimed is—

15 1. A rotary churn-dasher comprising a tubular core, similar bowed and inclined blades radiating therefrom, and similar bands secured upon opposite edges of, and spaced apart by the blades, the ends of said blades extending beyond the peripheries of the
20 band.

25 2. A rotary churn-dasher comprising a tubular core, inclined blades radiating therefrom, oppositely-extending wings upon the blades, and bands surrounding the wings and secured the eto, said blades serving to space

the bands apart and projecting beyond the peripheries thereof.

3. A rotary churn-dasher comprising a core, bowed, inclined blades radiating from the core, oppositely-extending wings upon the blades, and bands surrounding and secured to the wings, said blades projecting between and beyond the peripheries of the bands. 30

4. A rotary churn-dasher comprising a core, an annular collar thereon, oppositely- 35 extending fingers adjacent the collar, a plate rotatably mounted between the collar and fingers, said plate having finger-receiving openings, means upon the plate for wedging said plate between the collar and fingers, 40 means for preventing rotation of the plate upon the core, and inclined blades radiating from the plate.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 45 the presence of two witnesses.

EDWARD A. FRANKLIN.

Witnesses:

B. P. NEUGEL,

S. S. SMITH.