No. 647,191. Patented Apr. 10, 1900.

W. B. F. LITTLE.

CHURN DASHER.

(No Model.) (Application filed June 9, 1899.)

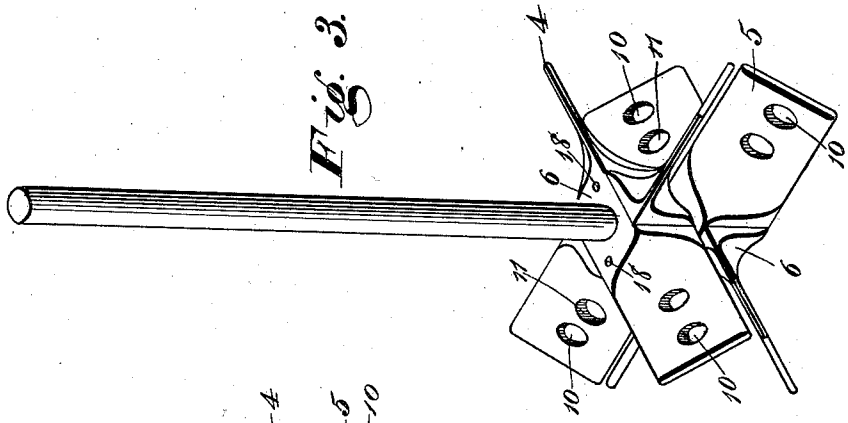


Fig. 3.

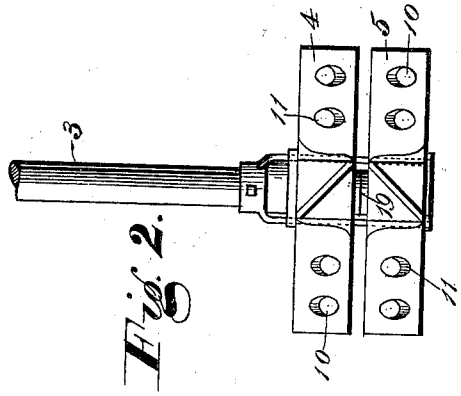


Fig. 2.

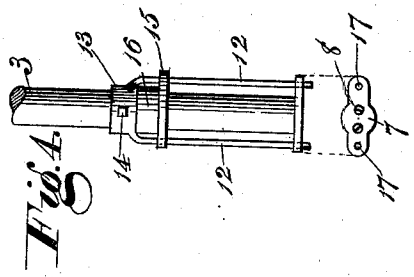


Fig. 4.

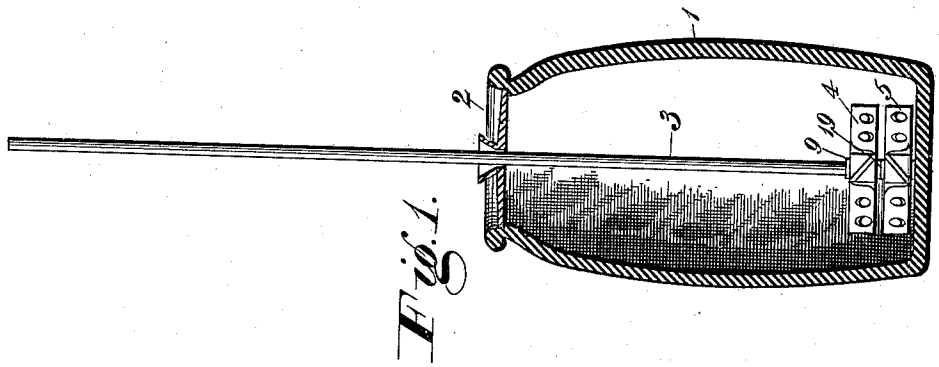


Fig. 1.

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UNITED STATES PATENT OFFICE.

WILLIAM BENJMON FRANKLIN LITTLE, OF ELMO, ARKANSAS.

CHURN-DASHER.

SPECIFICATION forming part of Letters Patent No. 647,191, dated April 10, 1900.

Application filed June 9, 1899. Serial No. 719,999. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BENJMON FRANKLIN LITTLE, a citizen of the United States, residing at Elmo, in the county of Independence and State of Arkansas, 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.

My invention relates to churns; and it consists of certain novel features of combination and construction of parts necessary to provide a churn-dasher which will be found to be reliably efficient in the performance of its office.

One object of my invention is to provide a dasher which may be very cheaply constructed and readily applied to use and which may be easily kept in a cleanly condition.

A further object is to provide a combined rotary and fixed dasher by a simple adjustment which will be hereinafter fully set forth.

Other objects and advantages will be made fully apparent from the following specification.

In the accompanying drawings, Figure 1 is a vertical section of a churn-body, showing in side elevation my improved dasher in position ready for use. Fig. 2 is a side elevation of my improved dasher, showing a locking attachment for the blades. Fig. 3 is a perspective view of my improved dasher complete without the locking device. Fig. 4 is a side elevation of the locking device separated from the rotary blades.

In order to conveniently refer to the several details involved in my invention and their coöperating accessories, numerals will be employed, of which 1 indicates the churn-body, which may be of the usual or any preferred construction and is provided with a suitable form of lid 2, as shown, having a central aperture in which the dasher-shaft 3 is designed to be reciprocated. Rotatably secured to the lower end of the dasher-shaft are the upper and lower dasher-blades 4 and 5, respectively, which by reference to Fig. 3 will be seen to consist of the central or body portion 6, which is provided with a vertical centrally-disposed aperture designed to rotatably receive the lower end of dasher-shaft 3, said blades being held in position upon said shaft by the retaining-plate 7, held in place by the screws 8, as clearly shown in Fig. 4. In order to hold the upper dasher against upward movement, a fixed collar 9 may be secured to the shaft 3 at this point or a suitable shoulder formed thereon, as will be readily understood.

By reference to Fig. 3 it will be observed that the blades 4 and 5 are oppositely disposed with respect to each other—that is to say, one of the blades is inclined forward, while the next succeeding blade is inclined backward—the object being to more thoroughly agitate the cream, and thus insure that the globules of butter will be separated from the milk and brought together in the form of butter. In each of the blades thus provided I form two or more apertures 10, which are preferably vertically disposed, thereby insuring that said holes will be provided with beveled edges, as indicated by the numeral 11, which will insure that the cream will be more thoroughly acted upon and will be thrown in diverse currents, the result being that a violent agitation will be imparted to the contents of the churn. I have so constructed and mounted the blades 4 and 5 in position upon the shaft 3 that they may be left to freely rotate in accordance with the impelling force brought to bear upon said blades due to the resistance of the contents of the churn, while additional means have been provided to lock said blades and hold them stationary if for any reason it is deemed desirable to thus secure them.

In the construction illustrated in Figs. 1 and 3 the blades 4 and 5 are left free to rotate, and since the inclination of the blades 4 and 5 is exactly opposite the result will be that the upper and lower blades will move in opposite directions, due to the force or resistance of the cream. It will be further observed that each of the body-sections 6 is provided with four blades and that each blade is inclined in the same direction, thereby insuring that the entire upper dasher will be freely rotated by simply drawing the same through the contents of the churn, and since the lower dashers 5 are each disposed or inclined in the same way, though oppositely with respect to the upper blades 4, the result

will be that the lower dasher will be turned in an opposite direction from that taken by the upper series of blades.

When it is desired to lock both of the dashers against rotation, I employ the adjustable fingers or rods 12, which are integrally formed with or attached to the adjustable collar 13, held in position upon the shaft 3 by the set-screw 14, as clearly shown in Figs. 2 and 4. When the locking device is employed, I secure immediately above the upper dasher-blades 4 in contact with the body-section 6 the fixed plate 15, which is attached to the collar 16. The collar 16 is permanently attached to the shaft 3 in any suitable way, and the plate 15 is provided with apertures adapted to loosely receive the fingers or rods 12, and as the plate 7 is provided with lateral extensions in which are formed apertures 17 the lower ends of said fingers are received by said apertures after loosely passing through suitable apertures 18 provided in each of the body-sections 6, said apertures 18 being so disposed in said body-sections that they will register with each other, and thereby freely receive the fingers 12, which may be thrust downward through them and into the apertures 17 and held in such position by the set-screw 14. When it is desired to unlock the blades and permit them to freely rotate, the collar 13 is drawn upward upon the shaft 3 and secured in such elevated position by the set-screw 14 until it is again desired to lock said blades.

It will be seen that I have provided a simple, cheap, and efficient construction for the purpose specified and that the complete dasher thus provided may be very readily cleansed, as by placing the same in hot water or pouring such water over it. In order to hold the body-sections 6 slightly separated from each other, I prefer to form upon their immediate faces a rib or collar 19, as shown in Figs. 1 and 2.

Believing that the advantages and construction of my improved dasher have been made fully apparent, I deem further reference to the details thereof unnecessary.

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

1. As an improvement in churns, the herein-described dasher consisting of a series of upper and lower dashers; retaining-plates secured to the shaft respectively above and below said blades, said plates being provided with registering apertures, in combination with an adjustable collar having depending fingers adapted to pass through the apertures in said plates and through apertures provided in said blades whereby said blades may be locked against rotation as specified and for the purpose set forth.

2. As an improvement in churns, the herein-described dasher consisting of a series of rotatable upper and lower blades adapted to move in opposite directions and suitable means carried by the shaft to hold said blades against rotation or adapted to release them at will, said means consisting of the adjustable collar 13 and fingers 12 secured thereto adapted to take into holes provided in said blades, as specified and for the purpose set forth.

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

WILLIAM BENJMON FRANKLIN LITTLE.

Witnesses:
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