(No Model.)

W. W. BRIGG.

CHURN.

No. 541,917. Patented July 2, 1895.

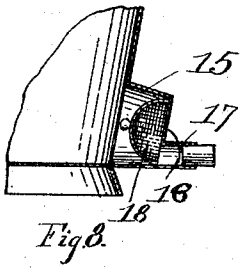

Fig. 8.

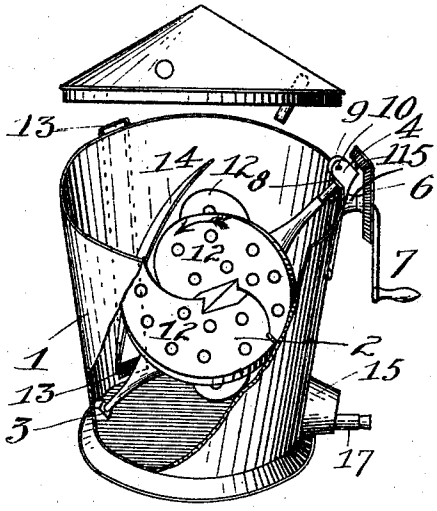

Fig. 1.

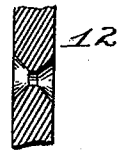

Fig. 6.

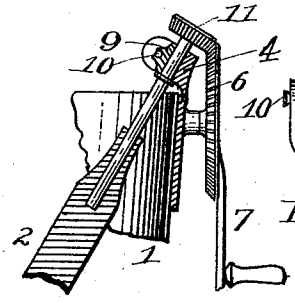

Fig. 2.

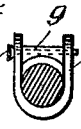

Fig. 3.

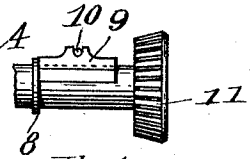

Fig. 4.

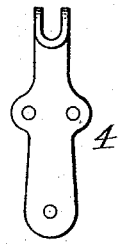

Fig. 5.

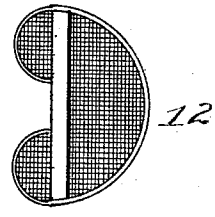

Fig. 7.

Witnesses
L. F. Haydn
E. P. Wood

Inventor
William W. Brigg
By his Attorneys.
A. A. Woodbridge

UNITED STATES PATENT OFFICE.

WILLIAM W. BRIGG, OF ATLANTA, GEORGIA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 541,917, dated July 2, 1895.

Application filed September 21, 1894. Serial No. 523,728. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. BRIGG, a citizen of the United States of America, and a resident of Atlanta, in the county of Fulton and State of Georgia, have made a certain new and useful Churn; 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, reference being had to the accompanying drawings and to figures of reference marked thereon.

The invention is illustrated in the accompanying drawings as follows:

Figure 1 is perspective view of the device fully assembled, a part of the side of the churn receptacle being cut away to show the interior arrangement of parts more clearly. Fig. 2 is a detail in section of the gearing and upper bearing for the dasher. Fig. 3 is an end elevation of the bracket, being a plan thereof as same is in operative position. Fig. 4 is a side elevation of the gear and removable portion of the upper bearing therefor. Fig. 5 is a side elevation of the bracket. Fig. 6 is a section of a portion of one of the dasher blades, showing the restricted aperture therein. Fig. 7 is a detail of a dasher which may be substituted for the other kind if desired. Fig. 8 is a detail of the draining tube leading from the receptacle.

In the figures like reference characters are uniformly employed in the designation of corresponding elements of construction in all the views.

1 is the receptacle into which the cream is placed, and 2 is the dasher which is revolubly mounted therein, its lower end being set in the step-bearing 3 whence it is easily removable, and its upper end being journaled in the bracket 4 which is secured to the side of the receptacle 1, and carries a stud 5 projecting horizontally therefrom, whereon is revolubly mounted the spur-wheel 6 provided with a crank 7. The bracket 4 is bifurcated as shown at its top end and within this bifurcation rests the gudgeon of the shaft of the dasher, a collar or annular flange 8 serving to prevent upward movement of the said shaft therein, while a box 9 rests on top of said shaft, being there held by the pin 10 and prevents the shaft from being forced laterally in a direction which would disengage the gear 6 and the pinion 11, which latter is carried on the upper end of the dasher-shaft. Near the point at which the upper edge or rim of the receptacle 1 coincides with the bracket 4, said bracket is cut away as shown in Fig. 2, so that any milk or oil flowing from the bearing will not by any chance flow into the receptacle, but will flow down the under side of the bifurcated portion of said bracket and thence down the outside of the receptacle. The collar is so formed as to prevent any oil or other liquid from flowing down the shaft. Blades 12 are secured in a spiral position to the shaft and are perforated over their entire surfaces, said perforations being restricted in their centers whereby the cream is forced through them under considerable pressure as the dasher is revolved, and a vacuum (partial) formed on the rear of each dasher producing a suction of air which in connection with the action of the dasher in thoroughly dividing the cream mixes it with air, as should be done in churning. The dasher revolves in the direction of the arrow thereon in Fig. 1 which produces a motion of the cream causing a vortex thereof with an axis coincident to the axis of revolution of the piston and progressing upwardly. If air is fed to the mouth or lower end of this vortex, still further aeration will result. This is done by means of a tube 13 which is secured to the outside of the receptacle 1, and opens thereinto through a screen near the bottom of said receptacle. The periphery of this revolving mass of cream or milk is aerated by means of the current of air passing upwardly from the embouchure of the tube 13 behind the deflector 14 secured to the inner side of the wall of the receptacle and inclined at an angle about parallel to the axis of the dasher.

The outlet or drain to the receptacle consists of a tube 15 which leads therefrom near the bottom as shown in Fig. 8 and is truncate-conical in form having an end 16 which is perforated and a tube 17 secured thereto and internally connected therewith. A removable screen or strainer 18 is inserted in the part 16 and being forced along the taper thereof to a tight fit. This strainer is preferably hemisperical in order to afford as large a surface as possible and is removable in order to be cleansed thoroughly and that the butter par-

ticles adhering thereto may be removed after draining off the refuse of churning.

Fig. 7 shows a form of dasher which may be employed in place of those shown in Fig. 1, being arranged in like manner spirally upon the shaft, but at present I prefer the form shown in the latter named figure.

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

The combination of a revolving dasher, with a suitable receptacle, a tube on the outer side of said receptacle opening thereinto near its bottom, and a wing secured to the inner side of the receptacle near the periphery of the dasher, and lying substantially parallel to the axis thereof its lower end lying near the embouchure of the tube, substantially as specified.

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

WILLIAM W. BRIGG.

Witnesses:
A. P. WOOD,
HARDIE L. KEITH.