May 19, 1931. M. I. MORGAN ET AL 1,805,952

CHURN ATTACHMENT FOR WASHING MACHINES

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Fig. 1.

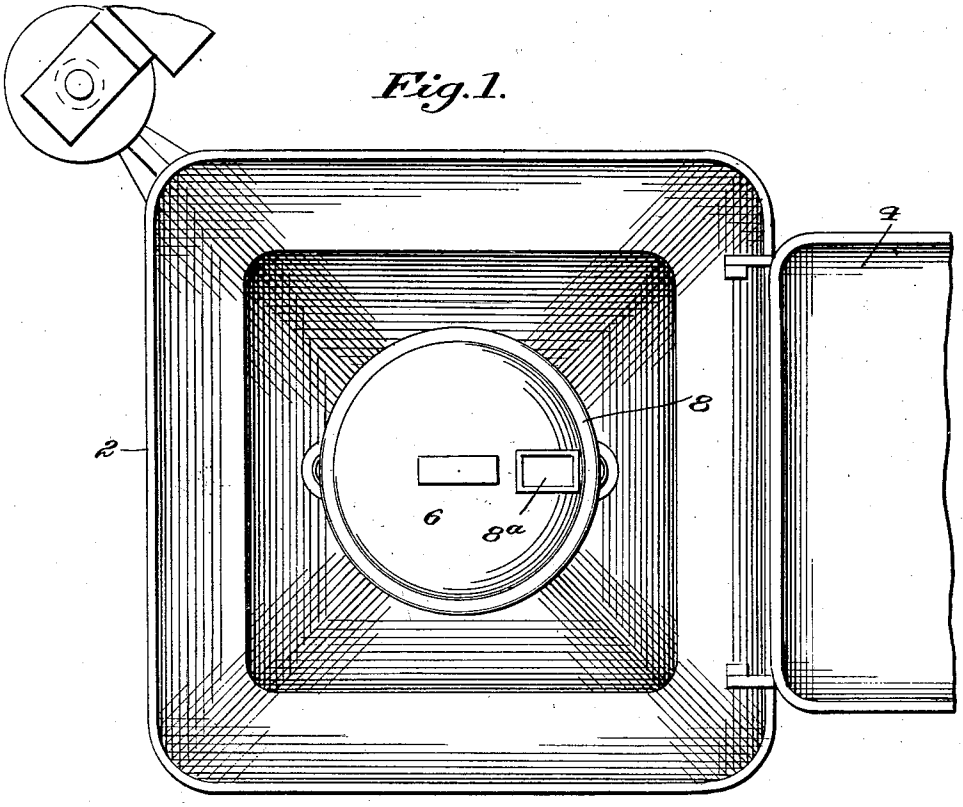
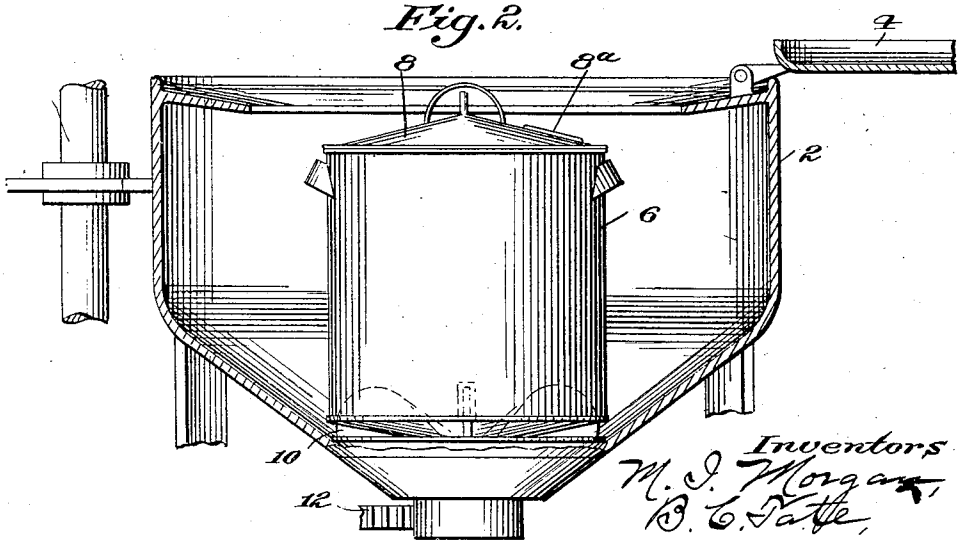



Fig. 2.




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Fig. 3.

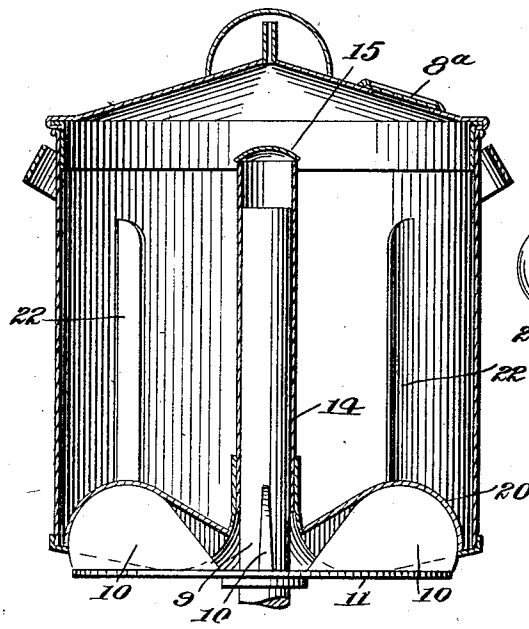



Fig. 5.

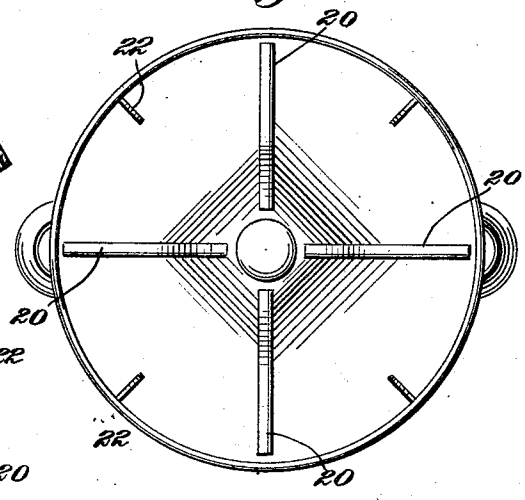



Fig. 6.

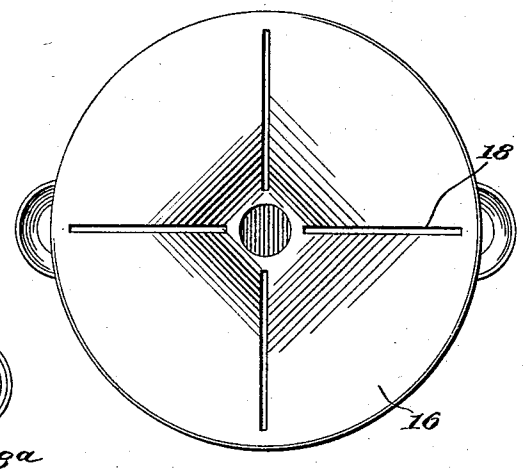
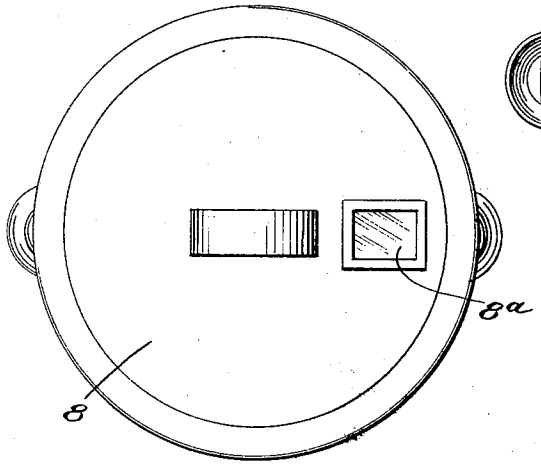



Fig. 4.




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# UNITED STATES PATENT OFFICE

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## CHURN ATTACHMENT FOR WASHING MACHINES

Application filed November 1, 1927. Serial No. 230,232.

This invention relates to certain improve-provements in churn attachments for washing machines.

The invention comprises a construction whereby a churn may be applied to the oscillating member, known as the gyrator, of a washing machine of the Maytag type, and comprises a strong and reliable construction whereby the churn may be so connected with the gyrator that the strains incident to the oscillation of the churn will be successfully resisted, and bending or distortion of the parts prevented. With a view to accomplishing the foregoing and other important results, the invention comprises as a most important feature connecting means in the form of radial pockets on the churn body, which pass over and engage with the sides of the wings of the gyrator of the washing machine. The aforesaid construction, while presenting maximum resistance to distortion in the operation of the churn, has the further advantage of providing agitating means within the churn body which performs all the functions of the ordinary churn agitator or dasher.

The invention will be best understood from a consideration of the following detailed description of a preferred construction, in connection with the accompanying drawings, and the novel elements of the invention will be pointed out in the appended claims.

In the drawings:

Fig. 1 is a plan view of the tub of a washing machine with the churn in position therein;

Fig. 2 is a vertical sectional view through the tub of the washing machine showing the churn in elevation therein;

Fig. 3 is an enlarged vertical sectional view of the churn, showing the gyrator in elevation;

Fig. 4 is a plan view of the churn;

Fig. 5 is a plan view of the churn with the cover removed, disclosing its interior, and

Fig. 6 is an inverted plan view of the churn.

The numeral 2 indicates the tub of a Maytag washing machine, or any washing machine of that type, and in which a gyrator having radial vanes 10 projecting upwardly from a bottom portion 11, and having a stem 9 which extends centrally within the tub 2 is employed, said gyrator being oscillated by the rack bar 12 which is reciprocated by power, and transmits its movement to the gyrator. Any other suitable mechanism for operating the gyrator may be employed, as will be obvious.

The churn body 6 is herein shown as cylindrical in form, and the bottom 16 thereof is provided with a plurality of radial slits 18, the number and spacing of which agree with the number and spacing of the vanes 10 of the gyrator. These slits receive the vanes 10 when the churn body is inserted in position over the gyrator, and pockets or enclosures 20 project within the body of the churn and communicate with the slits 18, said pockets serving to receive the vanes 10 when the churn is connected with the gyrator, and to form connecting means between the gyrator and churn. The pockets additionally present within the churn radial vanes or dashers to agitate the cream during the churning process.

Extending centrally within the churn body 6 is a tube 14 which is preferably closed by a cap or cover 15 at its upper end, the tube being of a size to fit snugly over the stem 9, and together with the slits 18 and pockets 20 to form the connecting means between the gyrator and churn, as well as a centering device for the churn while the latter is being inserted in position for connection with the gyrator. The parts are shown in Fig. 3 as being duly assembled, from which it will be observed that the vanes 10 of the gyrator have been caused to extend through the slits 18 and into the pockets 20 and the tube 14 has been passed over and caused to enclose the stem 9. When so assembled, the churn will be found to be rigidly connected to the gyrator of the washing machine so that the oscillations thereof may be imparted to the churn to effect the churning of cream in the usual manner. The interior of the churn body 6 may be

provided with any suitable number of blades 22, to aid in the agitation of the cream, and while we have shown four of these blades herein, it is to be understood that a greater or a lesser number may be employed, as desired. It is furthermore to be understood that these blades are not necessary to the performance of the churning operation as the pockets 20 acting alone will constitute dashers which will be sufficient for the intended purpose, so that the use of a greater or lesser number of the blades 22 is immaterial, and said blades may be used or not as desired.

The cover 8 of the churn is preferably provided with an opening having a piece of glass or other transparent material 8ª therein to enable the operator to observe the progress of the churning operation without removing the cover from the churn body.

The operation incident to the novel features of this invention will be understood without further elaboration, it being noted that the provision of the slits 18 and pockets or enclosures 20 in the bottom of the churn body constitute a strong and reliable means of connection of said body with the vanes of the gyrator, as there are no parts which are liable to be twisted or bent from the strains following the rapid and prolonged oscillating movements imparted to the churn, and in addition the pockets perform the function of dashers to effectively agitate the cream while the churning operation is being carried on.

The right is reserved to make changes in the details of construction or in the combination or arrangement of the various elements, provided such changes or rearrangement of parts are within the scope of the following claims.

We claim as our invention:

1. The combination with the oscillating member of a washing machine, of a churn and engaging means between said churn and member, said means projecting within the churn body and acting as an agitator.

2. In combination with a washing machine gyrator provided with radial vanes, of a churn body having slits in its bottom portion to receive said vanes and enclosing pockets communicating with said slits and extending within the body of the churn.

3. The combination with a washing machine gyrator having a radial vane, of a churn body having a slit extending through its bottom wall to receive said vane, and a pocket located inside the churn body communicating with said slit and arranged to enclose said vane.

4. The combination with a washing machine having an oscillating agitator member provided with upwardly projecting vanes, of a churn having openings through its bottom wall to receive said vanes, and elongated pockets above said openings communicating with said openings and adapted to enclose said vanes.

5. As an article of manufacture, a churn body provided with radial slits in its bottom wall, and elongated pockets extending within said body and communicating with said slits.

6. In combination with the oscillating member of a washing machine comprising a plurality of vanes and a central stem, of a churn body having slits extending through its bottom wall to correspond with and receive said vanes, a plurality of pockets inside the churn communicating with said slits and enclosing said vanes, and a central sleeve to receive said stem.

In testimony whereof we have hereunto set our hands this 29th day of October A. D. 1927.

MILTON I. MORGAN.
BALLARD C. TATE.