April 10, 1934. A. J. SCHULTZ 1,954,146

AGITATING APPARATUS

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Fig. 1.

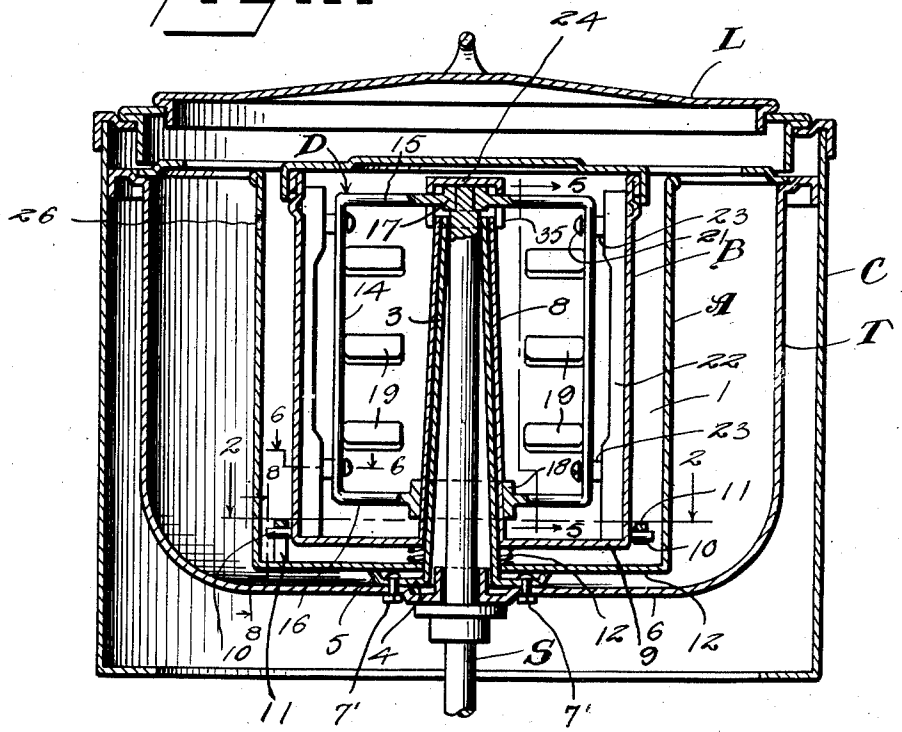
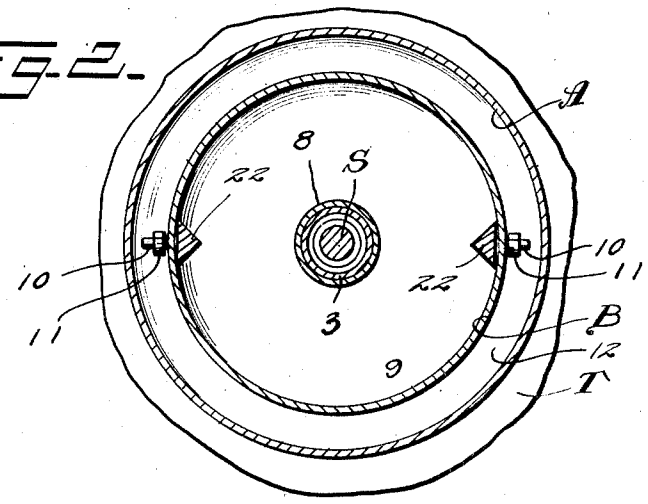


Fig. 2.



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Fig. 3.

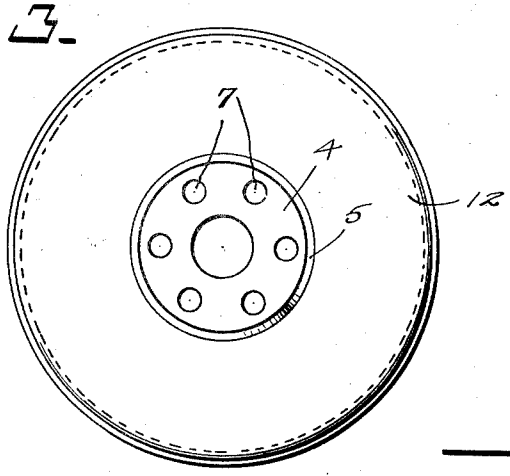


Fig. 4.

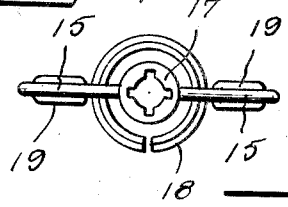


Fig. 5.

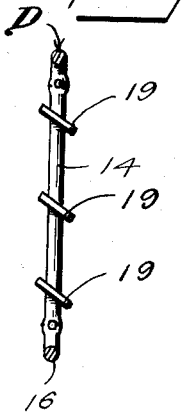


Fig. 6.

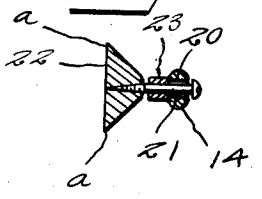


Fig. 7.

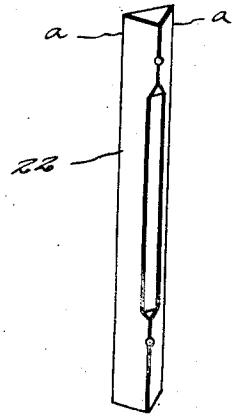
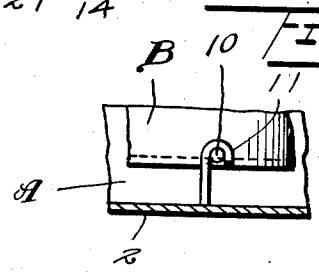


Fig. 8.



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AGITATING APPARATUS

Albert J. Schultz, Kimball, Nebr.

Application May 23, 1933, Serial No. 672,502

3 Claims. (Cl. 259—66)

This invention relates to an agitating apparatus, and it is primarily an object of the invention to provide an apparatus of this kind intended as an attachment or accessory for a washing machine whereby the power shaft of such washing machine may be readily and conveniently employed as the driver for the apparatus in making ice cream or churning butter.

It is also an object of the invention to provide an apparatus of this kind having means whereby the same may be readily and effectively engaged with the shaft of a washing machine and also to provide an apparatus including a dasher carrying scraping means.

Another object of the invention is to provide an apparatus of this kind which may be readily applied to or removed from working position without requiring any special mechanical skill on the part of the individual.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved agitating apparatus whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a vertical sectional view taken through an apparatus constructed in accordance with an embodiment of my invention and is applied or working position, certain of the parts being in elevation;

Figure 2 is a fragmentary detailed sectional view taken substantially on the line 2—2 of Figure 1 looking in the direction of the arrows;

Figure 3 is a view in bottom plan of my improvide apparatus as herein disclosed and unapplied;

Figure 4 is a view in top plan of the dasher as comprised in my improved apparatus with the scraping blades omitted;

Figure 5 is a vertical sectional view through the dasher taken substantially on the line 5—5 of Figure 1 looking in the direction of the arrows and with the scraping element omitted;

Figure 6 is an enlarged fragmentary sectional view taken substantially on the line 6—6 of Figure 1;

Figure 7 is a view in perspective of one of the scraping elements as herein comprised and unapplied;

Figure 8 is an enlarged fragmentary sectional view taken substantially on the line 8—8 of Figure 1 looking in the direction of the arrows with parts in elevation.

As disclosed in the accompanying drawings, T denotes a tub arranged within an outer casing or shell C while L denotes a lid coacting with the upper face of the casing or shell C. The foregoing are of a character as comprised in a conventional type of washing machine and in their detailed structure form no part of the present invention. This is also true of the upstanding shaft S positioned substantially axially of the tub T and which is adapted to be driven in any desired manner.

The shaft S is adapted to support the agitating members or dollies of the washing machine which, however, are removed from the shaft S and from within the tube T when my improved apparatus is employed.

My improved apparatus as herein disclosed comprises an outer receptacle A and an inner receptacle B each of desired capacity, the inner receptacle B however being materially smaller than the outer receptacle A so that when the receptacle B is placed within the receptacle A an intervening space 1 is provided in which ice or other refrigerant medium may be placed and particularly when it is desired to use the apparatus in the making of ice cream.

Extending upwardly through the bottom wall 2 of the outer receptacle A at the axial center thereof is an elongated tapered sleeve 3. As clearly illustrated in Figure 1, the lower or larger end of the sleeve 3 extends below the bottom wall 2 of the outer receptacle A and is defined by an outstanding annular flange 4 having its peripheral portion 5 angularly disposed for direct contact with the bottom wall 2 of the receptacle A whereby the flange 4 is spaced from said bottom wall 2.

The sleeve 3 and the peripheral portion 5 of the flange 4 may be welded, soldered or otherwise positively secured to the receptacle A or, if preferred, the desired assembly of the sleeve 3 may be maintained by frictional contact of the sleeve with the edge defining the opening in the bottom wall 2 of the receptacle A through which said sleeve 3 is directed. The sleeve 3, when the apparatus is in applied or working position, surrounds the portion of the shaft S within the tub T while the flange 4 has direct contact with the bottom wall 6 of the tub T and thereby provides the desired mounting for the receptacle A. This flange 4, as particularly illustrated in Figure 3, is provided therearound with a series of circumferentially spaced openings 7 which serve to facilitate the flange 4 holding the receptacle A against tendency to rotate when the apparatus is in use.

Nesting from above upon the sleeve 3 is a second tapered sleeve 8 extending upwardly from the bottom wall 9 of the inner receptacle B. The sleeve 8 freely engages the sleeve 3 so that the

receptacle B may be readily and conveniently applied within or removed from the receptacle A.

The lower portion of the receptacle B preferably at diametrically opposed points is provided with the outstanding radial pins 10, each of which engages from below the downwardly facing hook member 11 extending up from the bottom wall 2 of the receptacle A.

Surrounding the lower portion of the sleeve 3 and interposed between the bottom wall 9 of the receptacle B and the bottom wall of the receptacle A is an expansible coil spring 12 of desired tension and which operates to positively urge the receptacle B upwardly to assure the effective engagement of each of the pins 10 with its hook member 11. The spring 12, however, may be readily compressed by proper stress upon the receptacle B to allow each of the pins 10 to be engaged from its hook member 11. It is believed to be obvious that in engaging the pins 10 with the hook members 11 or vice versa partial rotation is given to the inner receptacle B.

While in Figure 1 the sleeve 8 is illustrated as being snugly engaged upon the sleeve 3 it is to be stated that there is normally sufficient play between these sleeves 8 and 3 to allow for the desired engagement or disengagement of the pins 10 with respect to the hook members 11.

Positioned within the inner receptacle B is a dasher D. As herein disclosed this dasher comprises a frame rectangular in form having the elongated side members 14, a top cross member 15 and a lower cross member 16. The central part of the upper cross member 15 is formed to provide a collar 17 having an irregular bore to conform to the upper end portion of the shaft S whereby the dasher D may be keyed to said shaft S for rotation therewith.

The central portion of the lower cross member 16 is formed to provide a split ring 18 which surrounds the lower portion of the sleeve 8 to assure the proper mounting of the dasher D. This split ring 18 is sufficiently loose, however, to offer no hinderance or obstruction to the desired rotation of the dasher D within the receptacle B.

The side members 14 of the dasher D are provided therealong with the inwardly disposed spaced paddles 19, said paddles as particularly illustrated in Figure 5 being disposed transversely on a desired incline in order to assure the maximum efficiency of such paddles in agitating material within the inner receptacle B.

The opposite end portions of each of the side members 14 of the dasher frame are provided with the transversely disposed slots 20 through each of which is directed from within a headed shank 21, the outer extremity of which being engaged within an end portion of a scraping member 22. This member 22 as herein disclosed is triangular in cross section with its apex inwardly disposed. By providing a transversely disposed slot through which each of the shanks 21 passes, it is believed to be apparent that irrespective of the direction of rotation of the dasher D a longitudinal edge *a* of the scraping member 22 will have desired effective contact with the inner face of the side wall of the receptacle B. To assure the proper placement of the scraping member 22 each of the shanks 21 has mounted thereon a spacing sleeve 23 of desired length and positioned between the side member 14 of the dasher D and the blade 22.

When the apparatus is in assembly and in applied position a guard cap 24 is disposed over the upper end of the shaft S and the applied collar 17, the side wall of the cap being slotted, as at 25, so that the upper member 15 of the dasher will offer no hinderance or obstruction to the desired application of the cap 24.

From the foregoing it is believed to be clearly understood that when the attachment is in use only the dasher D rotates. The receptacles A and B are held against relative rotation by their interlocking means as comprised in the pins 10 and hook members 11 while rotation of the applied container A is prevented by the bolt heads 7' or kindred elements extending above the bottom 6 of the tub T and which are received within the openings 7 of the flange 4.

The container A is provided in its side wall adjacent its upper end with an overflow opening 26.

From the foregoing description it is thought to be obvious that an agitating apparatus constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. An attachment of the class described comprising an outer receptacle having a centralized upstanding tubular sleeve to surround an oscillatory shaft, a pair of internal diametrically disposed hook members attached to the bottom of the receptacle, an inner receptacle having a centralized sleeve fitting telescopically over the first named sleeve, a pair of diametrically opposed retaining pins carried by the lower portion of said inner receptacle and detachably engageable with said hook members a coil spring interposed between the bottoms of said receptacle, and a detachable dasher unit working in the inner receptacle.

2. An attachment of the class described comprising an outer receptacle having a centralized upstanding tubular sleeve to surround a drive shaft, a pair of internal diametrically disposed hook members attached to the bottom of the receptacle, an inner receptacle having a centralized sleeve fitting telescopically over the first named sleeve, a pair of diametrically opposed retaining pins carried by the lower portion of said inner receptacle and detachably engageable with said hook members, and a coil spring interposed between the bottoms of said receptacles.

3. An attachment for a washing machine comprising a receptacle for placement within the tub of the washing machine and to freely receive through its bottom the drive shaft of the machine, a sleeve carried by the bottom wall of the receptacle to surround the drive shaft, said sleeve having a flange underlying the bottom of the receptacle, said flange having an opening to receive an element carried by the tub to hold the receptacle against rotation with the drive shaft.

ALBERT J. SCHULTZ.