Aug. 13, 1929. A. M. WHEELER 1,724,240

WASHING MACHINE

Filed June 11, 1927 2 Sheets-Sheet 1

Fig. 1.

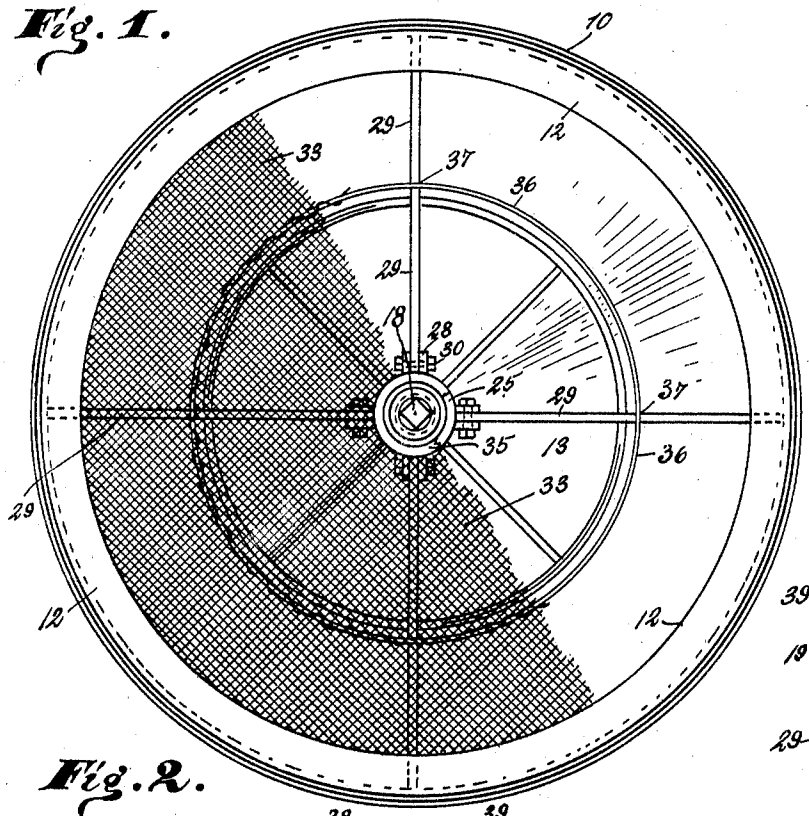


Fig. 3.

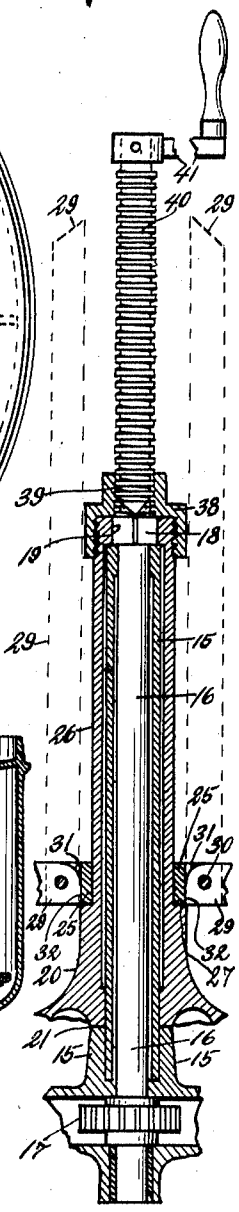
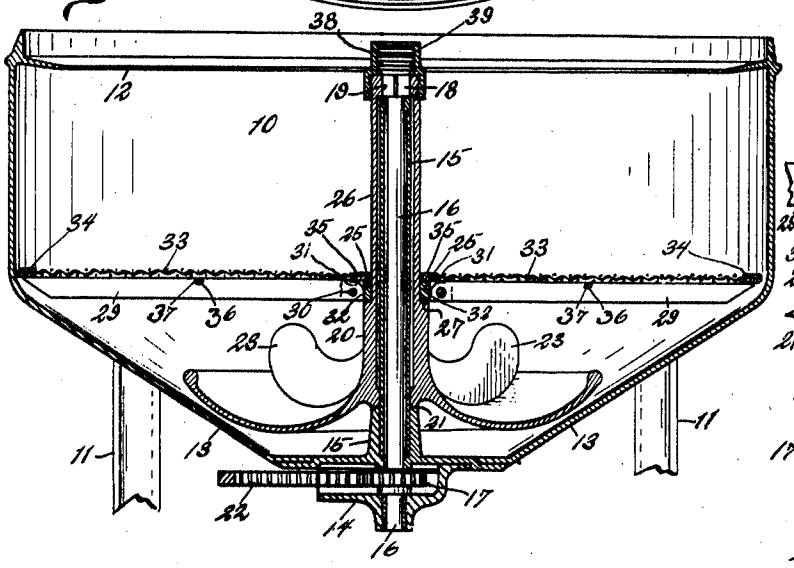


Fig. 2.



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Fig. 4.

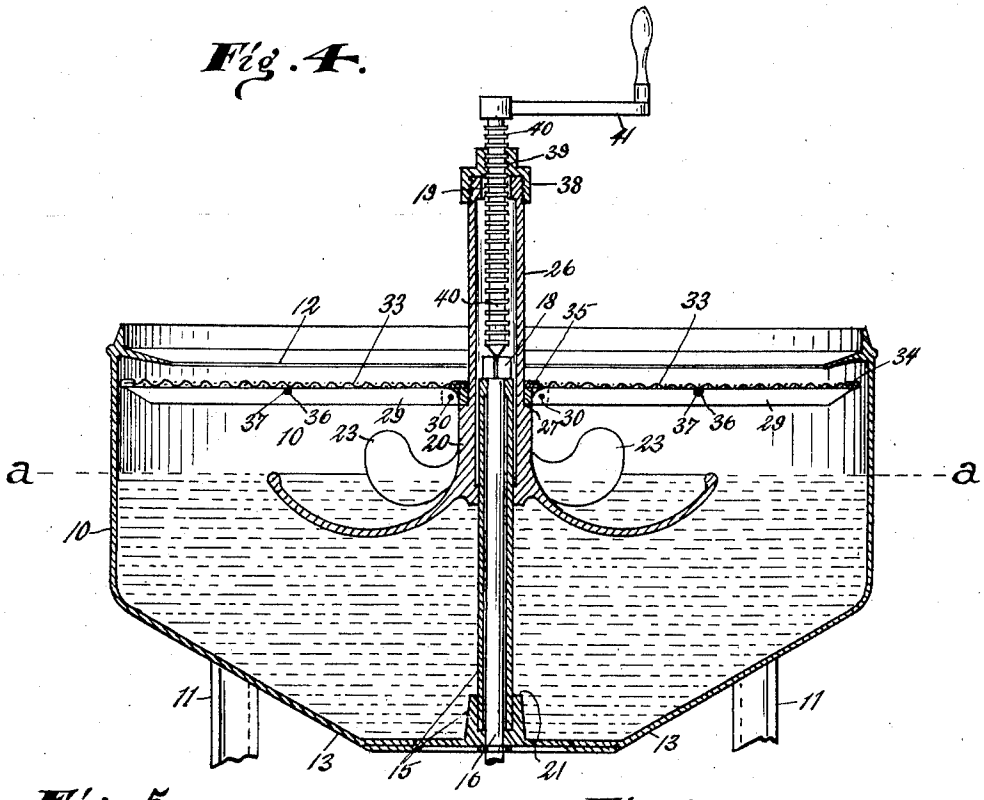


Fig. 5.

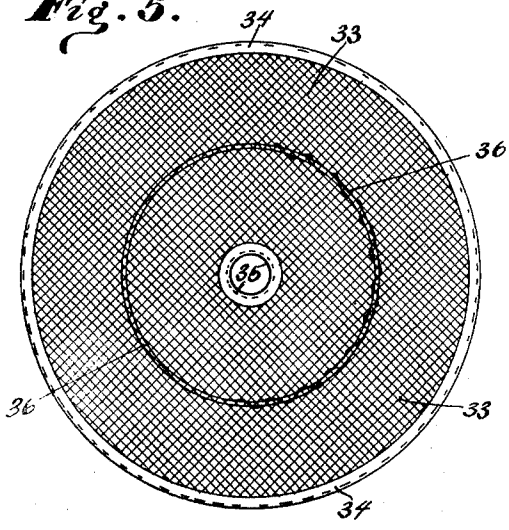
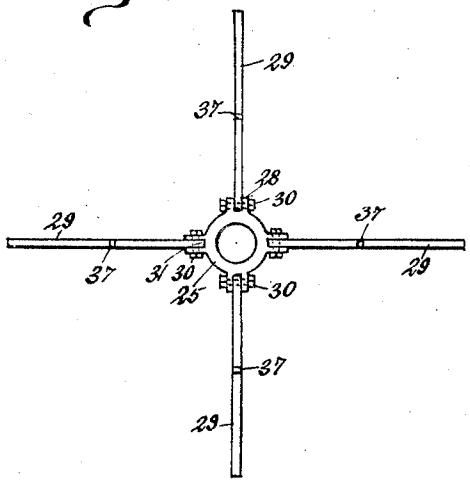


Fig. 6.



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UNITED STATES PATENT OFFICE.

ALBERT M. WHEELER, OF SAN FERNANDO, CALIFORNIA.

WASHING MACHINE.

Application filed June 11, 1927. Serial No. 198,231.

This invention relates to an attachment for converting a clothes washing machine into a dish-washer and an object thereof is to provide a simple and efficient means that is attachable and detachable to and from an ordinary oscillating clothes washing machine for the purpose hereinbefore stated. That is, I provide an attachment for holding dishes that can be easily and quickly attached to the agitator of an ordinary clothes washing machine to thereby convert the machine into a dishwasher, and this attachment is easily and quickly removed so as to reconvert the machine back into a clothes washer.

Another object of the invention is to provide an attachment that can be easily lowered into the hot washing water or lifted out of it without the hands of an operator contacting with the water. To that end I provide a centrally arranged screw operable with a hand crank to raise and lower the appliance into and out of the water.

A feature of the invention is shown in novel means for supporting the dishes on the washing machine agitator.

Other objects, advantages and features of invention may appear from the accompanying drawings, the subjoined detailed description and the appended claims.

The accompanying drawings illustrate the invention:

Figure 1 is a plan view of an ordinary reciprocating washing machine with an attachment connected thereto that is constructed in accordance with this invention.

Fig. 2 is a fragmental central vertical section through the tub and dish washing attachments.

Fig. 3 is an enlarged fragmental vertical section through the washing machine agitator, support and driving means; and showing a detail of the screw and crank for raising and lowering the agitator and attachment; and also showing by dotted lines the radial arms moved parallel to one another in which position they are arranged when they are to be inserted or removed from the tub.

Fig. 4 is a sectional view analogous to Fig. 2 showing the lifting screw operated to raise the agitator and attachment to a position in which dishes on the mat will be above the top surface of the water in the tub, the water level being indicated by the line *a*—*a*.

Fig. 5 is a plan view on a reduced scale of the wire mat that is adapted to support the dishes.

Fig. 6 is a plan view on a reduced scale of the support for the wire mat.

The clothes washing machine includes a tub 10 supported on legs 11 at the usual height and way; and preferably the tub is round with an annular splash-board 12 at the top and with a closed bottom 13 that is tapered downwardly toward a gear housing 14 to which it is secured so as to prevent leakage. A cylindrical tower bearing 15 is secured to the housing 14 and arranged to extend upwardly through the center of the tub; and inside of this bearing is arranged a drive shaft 16 having a gear 17 on its lower end and a squared upper end 18 that is adapted to fit into a socket 19 on the upper end of a stem 26 of the agitator 20 that is arranged to extend down over the tower bearing 15 and normally rest on a shoulder 21 of the tower bearing 15.

A rack 22 engages the gear 17 and by means not shown but well understood in the art is oscillated to rock the shaft 16, gear 17 and agitator 20 first in one direction and then in another.

The agitator is provided with a number of wings 23 that are adapted to engage the clothes and water in the tub when in use to cause an agitation adapted to cleanse the clothes, and also these wings agitate the water to cleanse the dishes when the machine is converted into a dish washer. All of the foregoing mechanism and operation of the parts are old and well understood in the art.

What is new is the attachment applicant has provided for converting the foregoing described clothes washing machine into a dish-washer.

The appliance comprises a center ring 25 that is adapted to be fitted over the stem 26, and normally rest on the shoulder 27 of the agitator. Integral with this ring are bearing lugs 28 to which the inner ends of radial arms 29 are pivotally connected by bearing bolts 30. The pivoted ends of the arms are cut away at 31 so that they can be turned to extend parallel with one another instead of radial, so that the spider formed by the ring, lugs and arms can be collapsed into position to be inserted into the tub 10 and removed therefrom.

When the arms are extended radially the

uncut portions 32 engage the periphery of the ring and prevent the arms from passing downward beyond the cross center of the ring.

When so arranged the arms 28 are adapted to support a wire mat 33 that is provided with an annular reinforcing flexible outer band 34. The mat has an inner band 35 that is adapted to fit over the stem 26 and rest on the ring 25 when in use; also the mat 33 has a center reinforcing ring 36 that preferably is arranged underneath the mat and is formed of wire that is connected to the mat by a finer wire laced through the mat and around the wire ring 36 so as to hold the ring firmly in place. The mat is of greater diameter than the opening at the top of the tub and is made flexible so that it can be bent sufficiently to be inserted into and removed from the tub; and when in use its marginal edge will lie close to the inner wall of the tub.

The arms 28 are provided with notches 37 on their upper edges to receive the reinforcing ring 36 so that the mat 33 will lie level on the arms.

The arms 28 and mat 33 are adequate to support a large number of dishes which, after being placed thereon, are washed by operating the apparatus as an ordinary clothes washer. That is the shaft 16 is actuated to oscillate the agitator 20 which drives the water in a multiplicity of directions between and around the dishes to thoroughly cleanse them.

A means is provided for raising or lowering the mat 33 and the spider supporting it out of or into the heated wash water so that an operator's hands need never touch the water.

The upper end of the agitator stem 26 is threaded for a cap nut 38 that has an internal thread 39 for a screw 40 that is adapted to be turned with a hand crank 41. The lower end of the screw 40 is pointed and normally rests on the upper end of the shaft 16 which is stationary relative to endwise movement so that when the screw is turned by the crank the cap 38 will be caused to move either up or down on the screw to raise or lower the agitator 20 and thereby raise or lower the mat 33.

In operation the tub is filled to the usual water level indicated in Fig. 4 by the line *a*—*a*. Then, it being assured that the mat 33 is in an elevated position, dishes are arranged thereon and the mat lowered by operation of the screw 40 until the agitator is in its lowest or operating position, or until the socket 19 is seated on the squared end 18 of the shaft 16. Then the drive for oscillating the rack 22 is placed in operation to rock the shaft 16 and actuate the agitator 20 to cleanse the dishes. After the dishes are cleansed the screw 40 is reversely operated to lift the mat 33 and dishes out of the water.

The dishes on the raised mat can be rinsed by spraying rinsing water over them or they can be again lowered into the tub after the wash-water is removed and replaced by rinse water.

It is understood that the depth of water used in the tub depends on the amount of dishes to be used, the line *a*—*a* in Fig. 4 being used only to indicate that the mat can be raised above the water.

I claim as my invention:

1. The combination of a washing machine including a tub, an agitator in said tub, means for actuating said agitator, a removable spider detachably connected to said agitator, and a flexible mat on said spider.

2. In a washing machine, the combination of a tub, a vertical shaft in said tub, an agitator having a stem surrounding said shaft and connected thereto, a ring detachably connected to the stem of said agitator, radial arms pivotally connected to said ring, a mat on said ring, and means for rocking said shaft.

3. The device set forth in claim 2, with means for moving said agitator lengthwise of said shaft to raise and lower said mat in said tub.

4. The device set forth in claim 2, with a cap screw on the stem of said agitator, a screw engaging the upper end of said shaft and extending through said cap screw and adapted to be actuated to move said agitator lengthwise of said shaft to raise and lower said mat for the purpose specified.

5. In a washing machine, the combination of a tub, a vertical shaft in said tub, an agitator having a stem surrounding said shaft and connected thereto, a ring detachably connected to the stem and resting on a shoulder of said agitator, lugs integral with said ring, radial arms pivotally connected to said lugs, a flexible mat supported by said arms, reinforcing bands at the center and marginal edge of said mat, and means for rocking said shaft.

In witness whereof, I have hereunto affixed my signature.

ALBERT M. WHEELER.