D. J. SHEA.

WASHING MACHINE.

APPLICATION FILED MAR. 29, 1911.

1,033,832. Patented July 30, 1912.

Fig. 1.

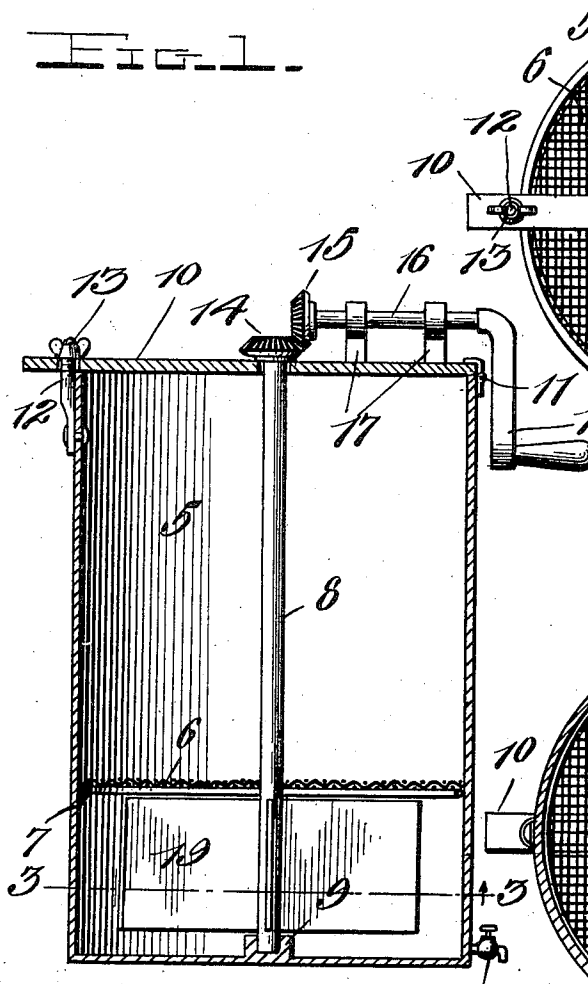


Fig. 2.

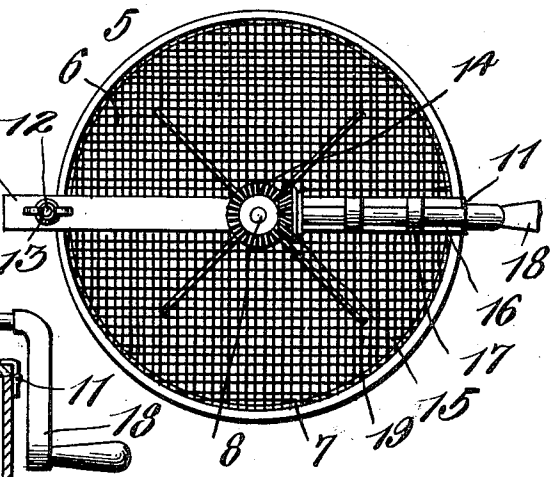
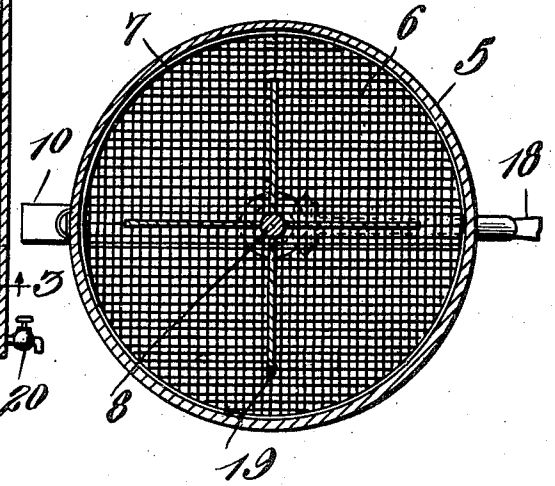


Fig. 3.



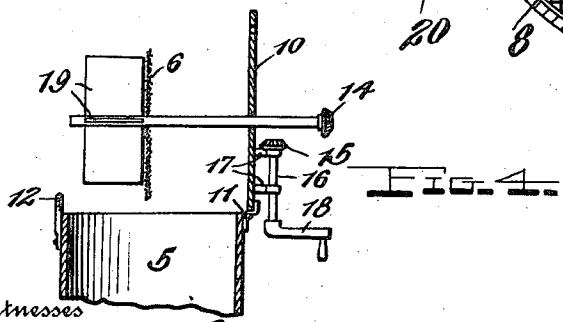


Fig. 4.

Witnesses

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WASHING-MACHINE.

1,033,832. Specification of Letters Patent. Patented July 30, 1912.

Application filed March 29, 1911. Serial No. 617,573.

To all whom it may concern:

Be it known that I, DENNIS J. SHEA, a citizen of the United States, residing at Belchertown, in the county of Hampshire and State of Massachusetts, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in washing machines and has for its object to provide a very simple device of this character whereby dishes may be quickly and thoroughly washed with a minimum expenditure of manual labor.

A further object of the invention is to provide a machine for the above purpose consisting of a dish receiving vessel or tank having a reticulated false bottom therein on which the plates are adapted to be placed, and paddles mounted in said vessel below the reticulated bottom to thoroughly agitate water contained in the vessel and cause the same to move swiftly between and upon the articles being washed.

With the above and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of a dish washing machine embodying my improvements; Fig. 2 is a top plan view thereof; and Fig. 3 is a section taken on the line 3—3 of Fig. 1. Fig. 4 is a detail sectional view of the upper portion of the dish washing machine, showing the cleaning mechanism removed from the tank.

Referring in detail to the drawing 5 designates a dish receiving vessel which is preferably cylindrical in form though not necessarily so, as it will be obvious that the same may be of any other desired form and constructed from any suitable material. A false bottom 6 is arranged within the vessel 5 and is formed of reticulated material of suitable mesh. This false bottom is removably positioned upon an annular wire supporting ring 7 which is soldered or otherwise secured to the inner surface of the vessel 5. Upon this reticulated bottom 6 the dishes or other ar cles to be washed are placed.

A vertical shaft 8 is rotatably mounted at its lower end in a bearing 9 secured to the bottom of the vessel 5 and at its upper end extends centrally through a supporting bar 10 which is hingedly mounted at one end as shown at 11 to the upper end of the wall of the vessel 5. The other end of this bar is provided with an opening for engagement over a threaded stud 12 which is secured to the vessel 5 opposite to the hinge 11. A wing nut 13 is threaded upon this stud and is adapted to clamp the free end of the bar 10 upon the upper edge of the vessel to maintain the shaft 8 in its proper position. A beveled gear 14 is secured to the upper end of the shaft 8 and a similar gear 15 fixed upon one end of an arbor 16 meshes with the gear 14 to transmit rotary movement to the shaft 8. The arbor 16 is mounted in suitable bearings 17 which are arranged upon the bar 10 and to the other end of said arbor a crank 18 is connected. To the lower end of the shaft 8 between the bottom of the vessel 5 and the false bottom 6, the paddles 19 are secured. Any desired number of these paddles may be provided so as to thoroughly churn the water in the vessel and cause the same to surge through the reticulated bottom member 6 and contact with the surfaces of the plates or other articles arranged thereon. A suitable drain cock 20 is provided in the wall of the vessel 5 at its lower end so that the water may be drained from said vessel after the completion of the washing operation.

From the foregoing description it is thought that the construction and operation of the device will be obvious.

The vessel 5 is first filled with water, particles of soap or other washing material being placed therein. The dishes or other articles to be washed are then placed within the vessel upon the reticulated bottom 6. The operator then turns the crank 18 to rotate the shaft 8, thereby churning the water in the vessel as above described. After continuing this operation for a desired length of time until the dishes have been thoroughly washed, the dishes are removed from the vessel and replaced by others. The bottom member 6, shaft 8 and paddles carried thereby may be readily removed from the vessel 5 by releasing the free end of the bar 10 and lifting said bar. In this manner the various parts may be easily and quickly cleaned and the vessel thoroughly scoured to maintain the device in a sanitary condition. The machine is also very dura-

ble in construction, consists of but few parts and may be manufactured at small cost.

It will of course be understood that the device may be made in various sizes and that instead of using a hand crank 18, a belt wheel may be arranged on the arbor 16 and connected to a suitable source of power to drive the shaft 8.

It will be observed upon reference to Fig. 1 of the drawings that the crank shaft 16 is adapted to slide longitudinally in the bearings 17 so that the gear 15 may be engaged and disengaged at will with the gear 14. When the machine is in use the operator who turns the handle or crank 18 can readily keep the gear 15 engaged with the gear 14. When it is desired to remove the interior parts from the vessel 5 to enable the machine to be cleansed this can be accomplished by first moving the shaft 16 outwardly so as to disengage the gear 15 from the gear 14, then raising the shaft 8, with the paddles and also with the false bottom 6, so as to cause the latter to bear against the under side of the bar 10, and the latter being then released by the parts 13 and 12, can be turned on its hinge 11 to one side of the vessel so as to remove all the operating parts of the machine from the vessel, as will be understood.

While I have shown and described the preferred construction of my improved washing machine, it will be understood that the device is susceptible of considerable modification without departing from the essential feature or sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:—

The herein described dish washing machine comprising a cylindrical vessel open at its upper side and provided in its bottom with a step bearing, an annular supporting ring in the vessel and spaced above the bottom thereof, a movable reticulated member forming a false bottom and adapted to be seated on said ring and also provided with a central opening, a bar arranged at the upper end of the vessel, across the same, hinged at one end to one side of the vessel, means to detachably secure the other end of the bar to the vessel, bearings on the upper side of the bar, a crank shaft mounted for rotation and also for longitudinal movement in said bearings and having a gear wheel at its inner end, a shaft having paddles near its lower end, adapted to be stepped in the bearing at the bottom of the vessel and also passing through a bearing opening in the bar and provided at its upper end with a gear for engagement and disengagement by the first mentioned gear, for the purposes set forth.

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

DENNIS J. SHEA.

Witnesses:

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LEWIS S. RECORD.