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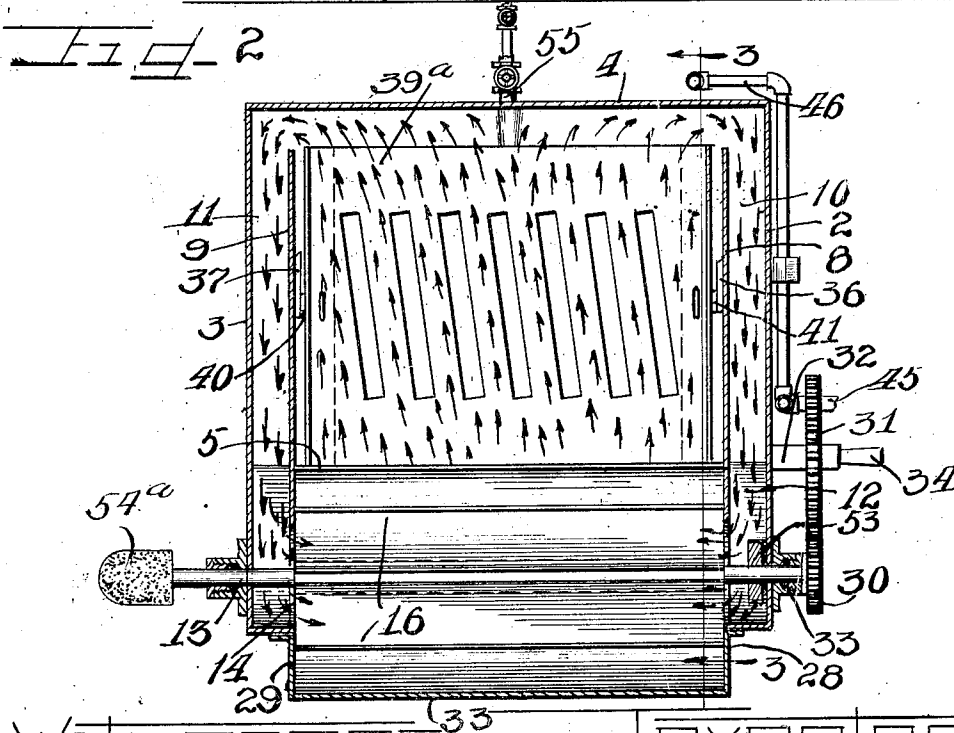
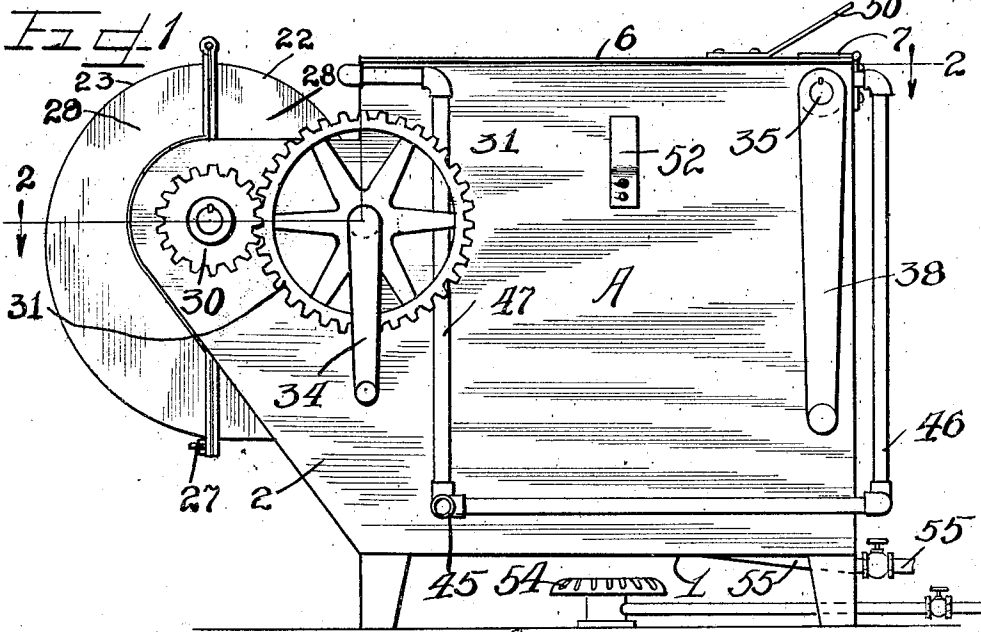
DISH WASHING MACHINE.

APPLICATION FILED DEC. 5, 1912.

Patented Dec. 23, 1913.

2 SHEETS-SHEET 1.

1,082,259.



WITNESSES

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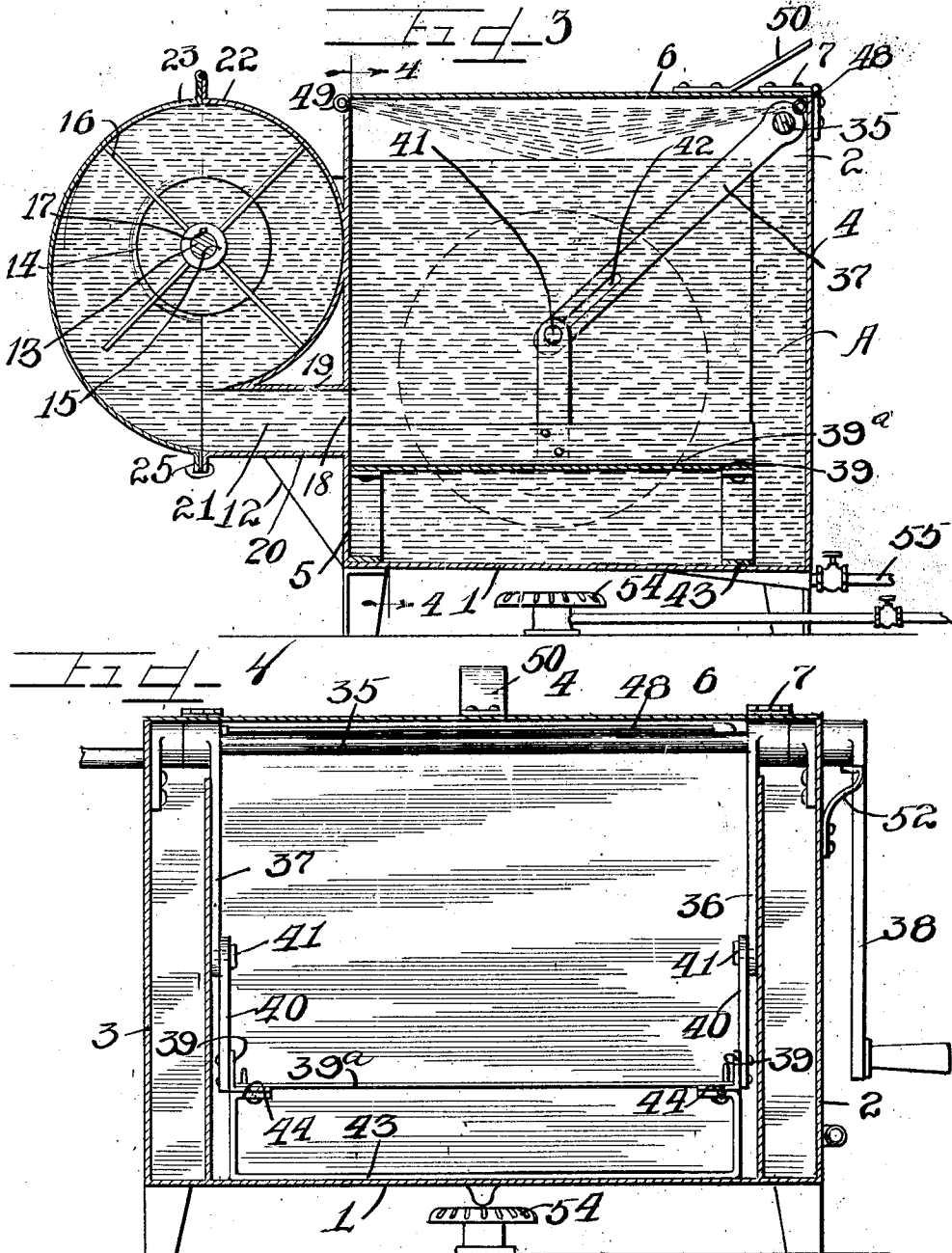
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# UNITED STATES PATENT OFFICE.

JOHN BAUMILLER AND ROBERT J. BARR, JR., OF CHICAGO, ILLINOIS.

## DISH-WASHING MACHINE.

1,082,259.

Specification of Letters Patent.

Patented Dec. 23, 1913.

Application filed December '5, 1912. Serial No. 735,021.

*To all whom it may concern:*

Be it known that we, JOHN BAUMILLER and ROBERT J. BARR, JR., citizens of the United States, and residents of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dish-Washing Machines; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numbers of reference marked thereon, which form a part of this specification.

This invention relates to improvements in washing machines, and more particularly to that class of washing machines adapted to be used in washing and cleaning dishes and similar articles.

It is an object of this invention to afford an exceedingly small and compact dish washing machine, that may be readily operated by one who has not had previous experience, and which may be stored in a relatively small space when not in use.

It is also an object of the invention to afford a device of the class described adapted to be constructed largely of stamped sheet metal, thus rendering the same comparatively light as well as adapting the same to occupy minimum space.

It is also an object of this invention to afford a device of the class described adapted to receive a number of dishes within the same and affording means for delivering a stream of water tangentially thereagainst.

It is an important object of this invention to provide a dish washing machine comprising bottom, side and end walls, relatively short intermediate walls secured to said bottom wall and positioned to afford a vertical passage at each side of the same, a casing connected to the receptacle afforded by said bottom, side and end walls and provided with openings which communicate with said vertical passages at the sides of the receptacle, means affording a horizontal passage between the intermediate walls which communicate with the receptacle and casing, and a pump in said casing adapted to draw a portion of the liquid content of the tank through the vertical side passages into the ends of the casing, and then force the same back into the receptacle through the horizontal passage between the intermediate walls.

It is a further object of the invention to afford a construction which may be readily cleaned without the necessity of the removal of parts.

It is finally an object of this invention to provide an exceedingly strong and durable dish washing machine, cheap to construct and maintain and which may be readily operated by one without previous experience with such devices.

The invention (in a preferred form) is illustrated in the drawings, and hereinafter described, and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 illustrates a side elevation of a device embodying our invention. Fig. 2 is a horizontal section taken on line 2—2 of Fig. 1. Fig. 3 is a vertical section taken on line 3—3 of Fig. 2. Fig. 4 is a vertical section taken on line 4—4 of Fig. 3.

As shown in the drawings: A, indicates a tank or receptacle comprising a suitable bottom wall 1, side walls 2 and 3, end walls 4 and 5, and a cover plate 6, which is connected to the upper edge of the end wall 4, by hinges 7, or in any other suitable manner. As shown in Figs. 1 to 3 inclusive, the side walls 2 and 3, of said receptacle, project outwardly beyond the end wall 5, and corresponding walls 8 and 9, are spaced away from the end wall 4, and the side walls 2 and 3, and rigidly secured to the bottom wall to afford passages 10 and 11, which extend from a point near the end wall 4, through the end wall 5, to the end of the projecting ends of the side walls 2 and 3. An inclined plate 12, is secured to the projecting ends of said side and intermediate walls and closes the outer ends of the passages 10 and 11. A shaft 13, is journaled in the projecting ends of the side walls, and extends through enlarged openings 14, in the intermediate walls, and a sleeve 15, having a plurality of blades 16, rigidly engaged thereon, of a length equal to the distance between the intermediate walls 8 and 9, is secured upon said shaft by a key 17, or in any other preferred manner. The end wall 5, is provided with a transverse opening 18, at a point slightly beneath the center of the same and plates 19 and 20 (which extend outwardly to a point beneath the shaft 13,) are rigidly secured to said end wall and the projecting ends of the intermediate walls to af-

ford a wide passage 21, between said intermediate walls, which communicates with the receptacle A.

As shown in Fig. 3, a casing is provided which is so formed that the blades 16, secured to the rotatable shaft 13, extend close to the inner wall of the same for approximately 270 degrees of their rotation from the end of the plate 19. Said casing comprises a fixed section 22, and a hinged or movable section 23, and incloses said shaft 13, and blades 16, between the intermediate walls 8 and 9, and the fixed section 22, of said casing, is connected with the outer end of the plate 19, and extends around the shaft to a point above the same, and is there provided with a flange 24, to which the upper edge of the casing section 23, is engaged in any suitable manner. The casing section 23, is slightly larger than the section 22, and extends downwardly around the shaft to a point beneath the same, and is there bent to afford a flange 25, adapted to be firmly secured to a corresponding flange 26, in the outer end of the plate 20, by wing nuts 27, or any other suitable means. The ends of said casing are closed by means of end walls 28 and 29, integral with the ends of the sections 22, and 23, respectively, and as shown, said end members 28 and 29, are so formed as to afford openings corresponding with the openings 14, in the intermediate walls adapted to permit the passage of water from the passages 10 and 11, into the ends of the casing inclosing the shaft 13, and blades 16. A pinion 30, adapted to be rotated by a gear 31, rotatably secured upon a stud shaft 32, is rigidly secured on the end of the shaft 13, adjacent the stuffing box 33, and acts when rotated by said gear to rotate the shaft 13, and the members connected therewith in the casing. Any suitable means may be provided for actuating the driving gear 31, and for convenience of illustration, a crank 34, is shown connected therewith. A transverse shaft 35, journaled in the side walls 2 and 3, at a point near the end wall 4, is provided with outwardly directed slotted arms 36 and 37, adapted to be lowered into and raised from the receptacle by means of a crank 38, which is also secured on said shaft. As shown in Figs. 3 and 4, a movable frame 39, adapted to receive a suitable tray 39<sup>a</sup>, is provided with upwardly directed members 40, on each side thereof, and is connected with the outer ends of the arms 36 and 37, by means of bolts 41, which extend through the members 40, and the slots 42, in said arms in such a manner that the same may be lowered and raised with said arms as the shaft 35, is actuated by the crank 38. Straps or bars of metal 43, are rigidly secured to the bottom wall 1, and are bent upwardly at their ends and then inwardly to afford relatively wide

supporting flanges 44, adapted to support the tray receiving frame in horizontal position at a point slightly beneath the passage 21, when the same is in its lowermost position.

As shown in Figs. 1 and 2, the pipe 45, is provided with branch pipes 46 and 47, adapted to deliver hot water therefrom to suitable oppositely directed spray pipes 48 and 49, which are secured on the inner side of the end walls 4 and 5, respectively in position to deliver a plurality of jets of water toward the center of the receptacle above the normal level of the water in the same.

As shown in Fig. 2, a suitable cage 53, for soap is secured on the shaft 13, in the passage 10, and a buffing wheel 54<sup>a</sup>, is secured to one of the ends of said shaft to assist in cleaning and polishing pans and kettles. A burner 54, is provided beneath the receptacle for heating the water within the same.

The operation is as follows: When it is desired to use the device, the cover plate 6, is swung back on its hinges until the projecting member 50, secured to the top thereof, engages the end wall 4. The receptacle A, and casing connected therewith are then filled with hot water, as indicated in Fig. 3, so that the normal water level will be approximately six or seven inches below the top of the receptacle. The crank 38, is then actuated to rotate the shaft 35, and raise the tray receiving frame, which is connected with the ends of the arms 36 and 37. After the tray receiving frame has been raised above the normal level of the water within the receptacle, the crank 38, is retained in its raised position by means of the yieldable catch 52, which is secured to the side wall 2. The tray 39<sup>a</sup>, upon which the dirty dishes have been suitably arranged, is then placed upon the frame 39, and the dishes, frame and tray are lowered into the hot water by the crank 38, and the cover closed over the receptacle to prevent spilling of the water. The gear 31, is then actuated by means of the crank 34, to drive the pinion 30, thereby effecting the rotation of the shaft 13, and members secured thereon. The rotation of the blades 16, in the direction indicated by the arrow, forces the water through the passage 21, and against the dishes X, which are so arranged on the tray 39<sup>a</sup>, that the water will strike them at a tangent and be deflected between the same and back to the rear of the receptacle, where it is again drawn through the passages 10 and 11, and through the opening 14, into the casing. The rotation of the crank 34, and the members driven thereby, is continued until the dishes are clean, whereupon the cover 6, is again swung back and the frame 39, and tray 39<sup>a</sup>, are again raised above the water

level and rinsed with hot water, which is sprayed from the pipes 48 and 49. The clean dishes may then be removed from the tray and other dishes substituted therefor, or the tray containing the clean dishes may be removed, and another tray used for the next dishes to be cleaned, while the dishes previously cleaned are drying. When it is desired to clean the device, the receptacle is filled with hot water, the drain pipe 55, opened, and the pump operated as is usual until the water is completely discharged, and the spray pipes 48 and 49, are then used to give the side, intermediate and bottom walls a final rinse.

It is obvious from the construction described that many important details of construction may be varied without departing from the principles of our invention. We therefore do not purpose limiting the patent granted on this application otherwise than necessitated by the prior art.

We claim as our invention:

1. In a device of the class described a receptacle comprising bottom, side and end walls, relatively short intermediate walls secured to said bottom wall and spaced away from said side walls to afford a passage at each side of the same, a casing connected to said receptacle and provided with openings which communicate with said passages at the sides of the receptacle, means affording a passage between the intermediate walls, which communicates with the receptacle and casing, and means within said casing for drawing a portion of a liquid content from the receptacle through the side passages and into the casing and then forcing the same back into the receptacle through the passage between said intermediate walls.

2. In a device of the class described a receptacle comprising bottom, side and end walls, and relatively short intermediate walls spaced away from said side walls affording a passage on each side of the re-

ceptacle, a casing connected with said receptacle comprising a rigid and a hinged section of constant radius for approximately 270 degrees of its circumference, means affording a passage between the lower portion of said casing and the receptacle, and a pump journaled in said casing, adapted to draw the liquid content of the receptacle through the passages afforded by the intermediate walls and return the same under pressure through the passage afforded between the casing and the receptacle.

3. In a device of the class described a receptacle, means affording a passage on each side of the same, a casing secured to one end of the receptacle provided with openings in its ends adapted to permit the inlet of a liquid content from said passages, means affording a passage between the casing and the receptacle at a point slightly below the center of the receptacle, and rotatable means within the casing adapted to draw the liquid into the casing from said side passages and force the same therefrom under pressure through the passage between the casing and the receptacle.

4. In a device of the class described a receptacle comprising bottom, side and end walls, relatively intermediate walls secured to said bottom walls and spaced from said side walls to afford a passage at each side of the receptacle, and a pump adapted to draw a portion of the liquid content from the receptacle through the side passages and then force the same back into the receptacle between said intermediate walls.

In testimony whereof we have hereunto subscribed our names in the presence of two subscribing witnesses.

JOHN BAUMILLER.  
ROBERT J. BARR, Jr.

Witnesses:

CHARLES W. HILLS, Jr.,  
LAWRENCE REIBSTEIN.