

Sept. 8, 1925.

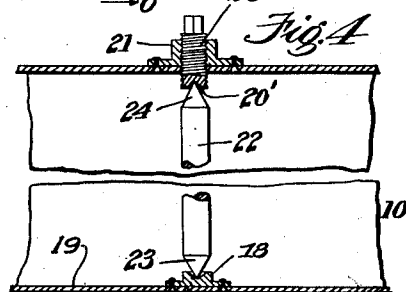
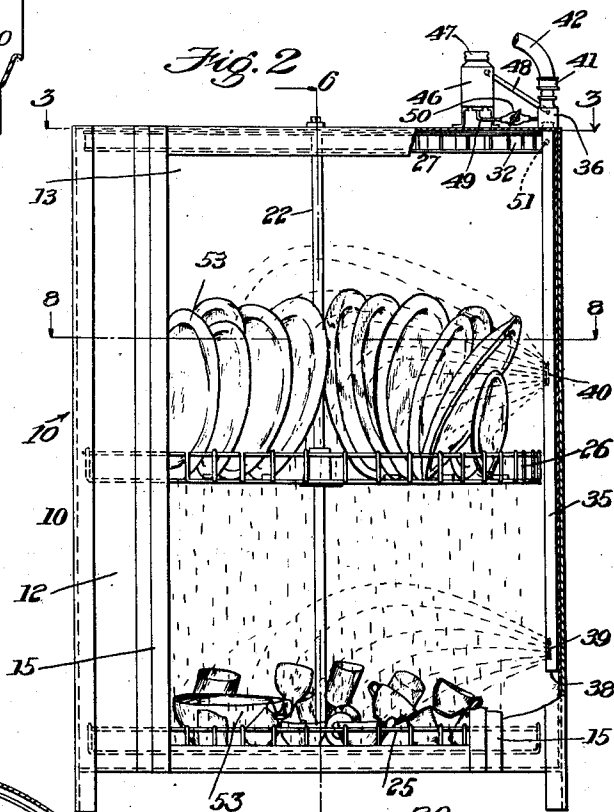
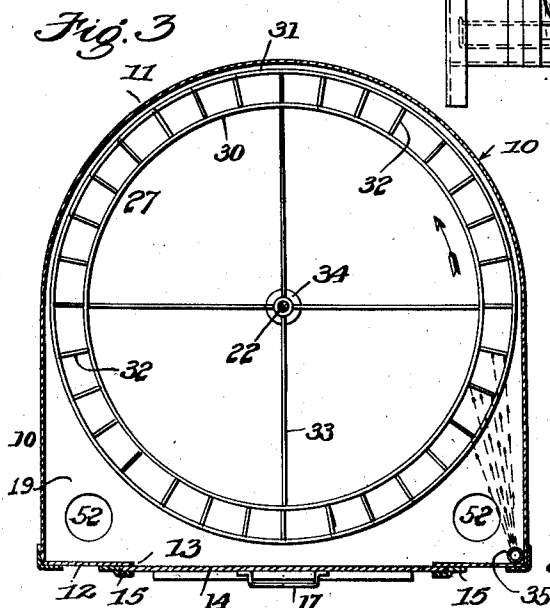
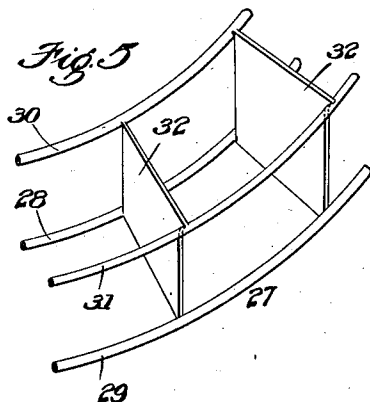
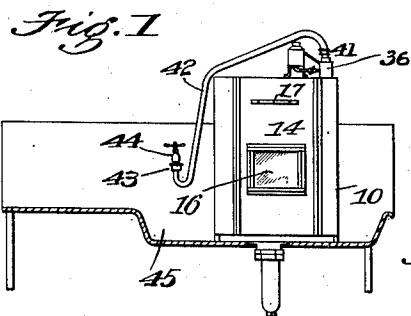
1,553,013

J. B. TURMAN

DISHWASHING MACHINE

Filed Feb. 26, 1924

2 Sheets-Sheet 1



INVENTOR.

Joe B. Turman.

BY

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ATTORNEY.

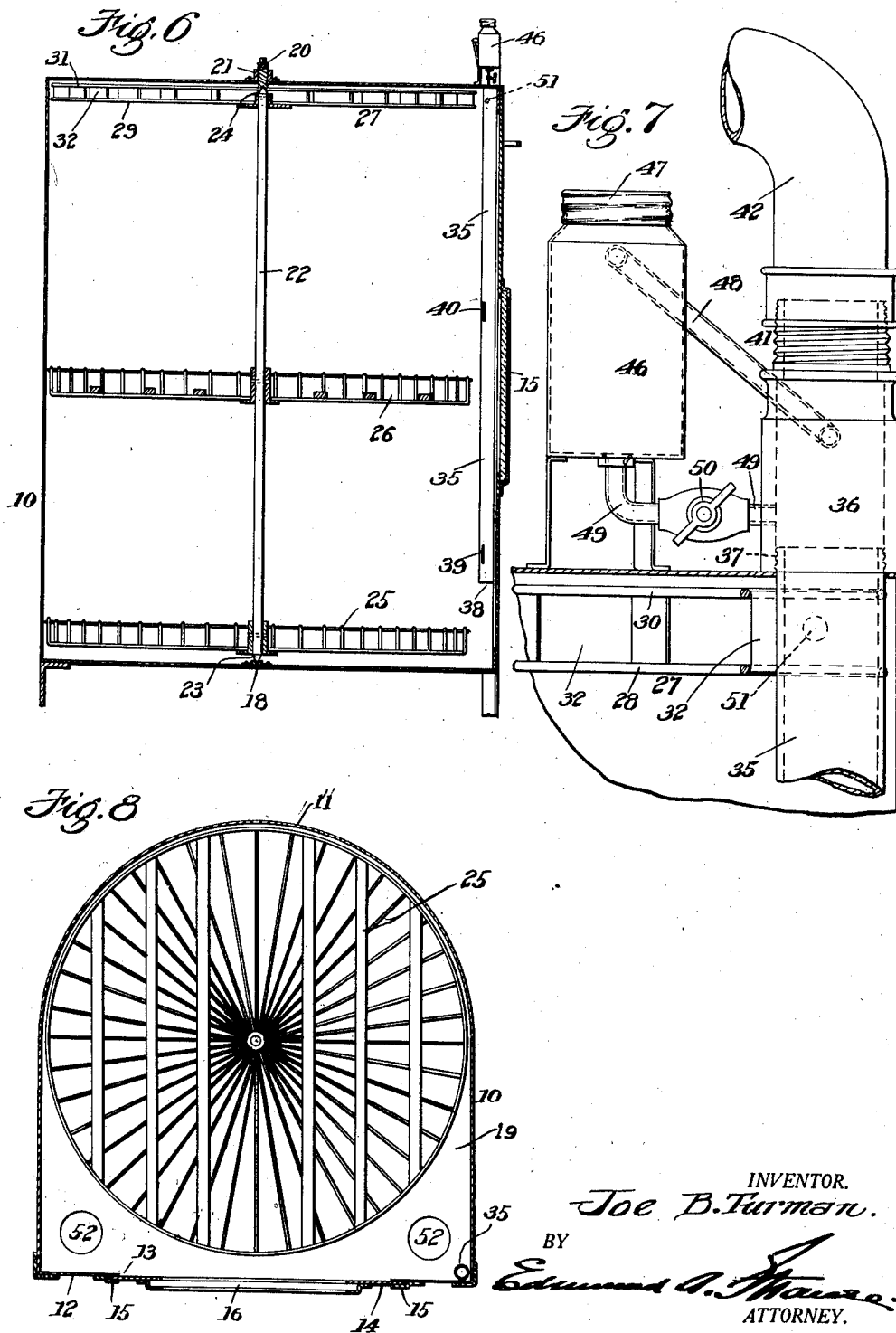
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J. B. TURMAN
DISHWASHING MACHINE

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2 Sheets-Sheet 2



INVENTOR.
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UNITED STATES PATENT OFFICE.

JOE B. TURMAN, OF LOS ANGELES, CALIFORNIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO RUPERT HUNTSMAN, OF SOUTH PASADENA, CALIFORNIA.

DISHWASHING MACHINE.

Application filed February 26, 1924. Serial No. 695,224.

To all whom it may concern:

Be it known that I, JOE BENTON TURMAN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Dishwashing Machine, of which the following is a specification.

My invention relates to dish washing machines of the portable type, which may be removably mounted in a kitchen sink and connected to one of the water faucets, or which may be advantageously "built in" one of the walls of the kitchen.

A main object of my invention is to provide a dish washing machine construction having a rotatable dish carrier and an impeller wheel, in which the fluid force employed for cleansing the dishes is utilized to actuate the impeller wheel to rotate the carrier.

A further object is to provide a construction in which a liquid detergent may be conveniently introduced into the cleansing fluid during its passage through the supply directing pipes.

A still further object is to provide a portable dish washing machine that may be conveniently mounted in a kitchen sink and which may be quickly attached to the water supply faucets.

In the accompanying drawings I have illustrated a preferred embodiment of my invention, it being understood however, that no limitation is necessarily made to the precise structural details therein exhibited, but various changes, alterations, and modifications may be resorted to within the scope of my invention when desired.

Fig. 1 is a front elevation of my dish washing machine disposed in a kitchen sink.

Fig. 2 is an enlarged elevation partly broken away of my construction with the front door removed and showing the dishes being washed therein.

Fig. 3 is a horizontal section of my dish washing machine taken on line 3—3 of Fig. 2.

Fig. 4 is a fragmentary vertical section of my device showing the adjustable spindle bearings.

Fig. 5 is a fragmentary perspective view of the impeller.

Fig. 6 is a vertical longitudinal section of the dish washing machine taken on line 6—6 of Fig. 2.

Fig. 7 is an enlarged front elevation of the water inlet and soap dispenser.

Fig. 8 is a horizontal section of the machine taken on line 8—8 of Fig. 2.

Referring in detail to the drawings, 10 indicates a casing, the front and side walls of which are straight while its back wall 11 is semi-cylindrical. The front wall 12 of the casing is provided with an opening 13 extending from the bottom to the top of the casing, which opening is normally closed by a vertically slidable door 14 mounted in slideways 15, secured to the front wall at the edges of the opening. A glass window 16 is provided in the door 14 through which the operation of the mechanism within the casing may be observed. A handle 17 is secured to the upper portion of the door 14 for operating the door.

A step bearing 18 of usual form is secured to the bottom wall of the casing 10 at the center of the back wall 11, and an adjustable step bearing 20 is mounted in a threaded sleeve 21 secured to the upper side of the top wall of the casing 10 at the center of the back wall 11, and in vertical alignment with bearing 18, the bearing 20 extending downwardly through the top wall of the casing and has a conical bearing surface 20' in its lower end. A vertically disposed spindle 22 is formed with a conical lower end 23 and an upper conical end 24, the end 23 resting centrally in the bearing 18, and the end 24 fitting centrally in the lower bearing end 20' of the adjustable bearing 20. A circular wire dish carrier 25 is rigidly secured on the lower end of the spindle 22, and a similar wire carrier 26 is secured on the spindle above the basket 25 and opposite the glass window 16. Secured on the upper end of the spindle 22, is an impeller 27, comprising a pair of concentric rings 28 and 29, a pair of similar rings 30 and 31 being disposed above the rings 28 and 29, and spaced radial blades 32 are secured at their corners to both pair of rings and between the same. Spokes 33 are secured at their outer ends to ring 28, and a hub 34 to which the inner ends of said spokes are secured.

A fluid supply pipe 35 extends downwardly through the top of the casing in one corner of the casing, terminating a short distance above the lower basket 25, the upper end of the pipe being connected to the

lower end of an inlet union 36 by a threaded connection 37. The lower end 38 of pipe 35 is closed and the pipe is provided with fluid outlet slots 39 and 40 disposed a short distance above the baskets 25, 26 respectively. The upper end of the union 36 is connected by a coupling 41 to one end of a hose 42, the other end of the hose being adapted to be connected by a coupling 43 to a faucet 44 of a sink 45, in which the machine is mounted.

A liquid detergent reservoir 46 is mounted on the top of the casing 10, the open end of the reservoir being closed by a screw threaded closure cap 47. Reservoir 46 is connected by a pipe line 48 with union 36 to supply pressure to the detergent reservoir. An outlet pipe 49 controlled by a valve 50 leads from the bottom of the reservoir to the union 36, and the fluid supply pipe 35 is provided with a fluid discharge outlet 51 disposed in tangential relation to the blades of the impeller. Bottom wall 19 of the casing is provided with water discharge outlets 52 in the corners for discharging the used water to the sink in which the machine is placed.

The operation of my device is as follows: The door 14 being raised, soiled dishes and similar articles 53 are placed in the carriers 25 and 26 respectively, and the door then is closed and sealed. Hot water faucet 44 is then opened permitting the water to flow through hose 42 and union 36 into supply pipe 35 and discharging the same through outlets 51, 40 and 39, onto the dishes, water also flowing upwardly through pipe 48 into the detergent reservoir to force the liquid detergent through pipe 49 into the supply pipe line 35. The water flowing out of outlet 51 impinges tangentially upon the impeller blades 32 to rotate the same together with the dish carriers 25 and 26, secured to the vertical spindle, the water

discharged through the outlets 39 and 40 spraying upon the dishes to thoroughly cleanse the same, the used water flowing through the discharge outlets in the bottom of the container into the kitchen sink, where it flows out through the sink drain. The amount of soap combined with the water sprayed through outlets 39 and 40 may be conveniently regulated by the valve 50, and when the cleansing operation is completed the valve is closed in order that clear water may be sprayed upon the dishes to rinse the same.

The outlets 51 enable the water to circulate through the casing in a continuous stream, whereby the dishes are always subjected to the action of clean water, thereby washing the same thoroughly and clean.

What I claim is:

A dish washing machine comprising a vertically disposed casing provided with a side opening and a closure therefor, said casing having a discharge outlet in its bottom wall, a vertically disposed shaft mounted in bearings on the top and bottom walls of said casing, an impeller wheel mounted adjacent the upper end of said shaft, a plurality of dish carriers spaced one above the other mounted on said shaft and disposed below said impeller wheel, and a single fluid supply pipe line vertically disposed in said casing having a plurality of inwardly directed fluid discharge outlets, one of said outlets discharging fluid tangentially against the impeller wheel to rotate the same while the other outlets discharge fluid against the dishes in said carriers to cleanse the same, the water directed against the impeller falling onto the dish carriers located therebelow.

In witness that I claim the foregoing I have hereunto subscribed my name this 21st day of February, 1924.

JOE B. TURMAN.