

Dec. 2, 1941.

J. H. REIFENBERG

2,264,713

APPARATUS FOR WASHING TABLEWARE OR THE LIKE

Filed Nov. 22, 1938

FIG. 1.

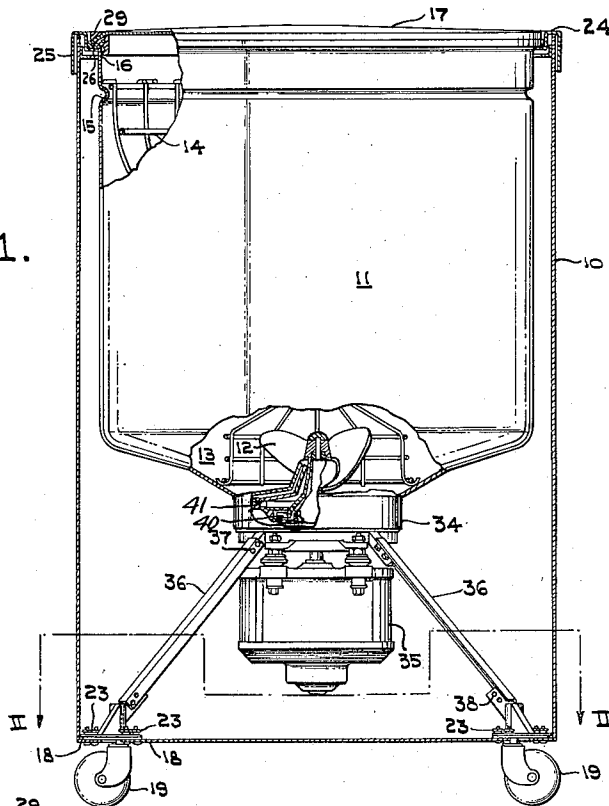


FIG. 2.

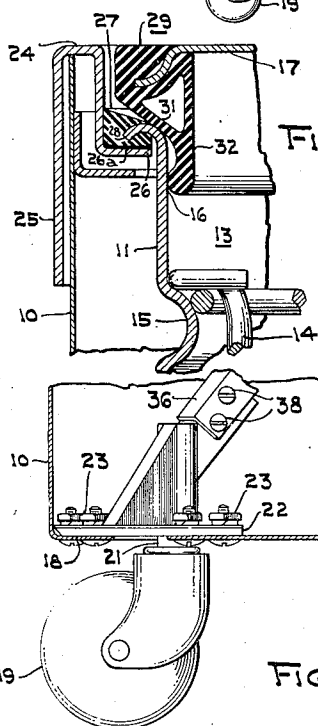
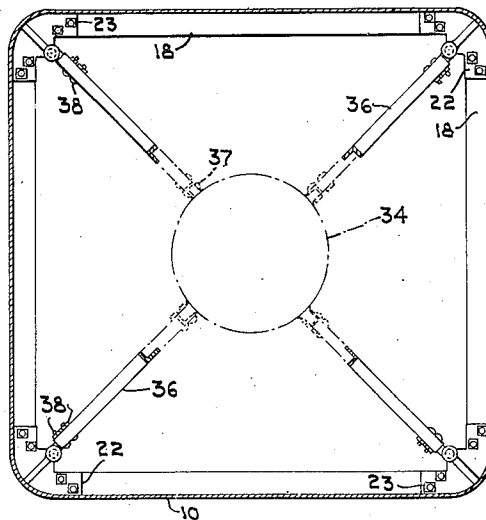


FIG. 3.



INVENTOR
JOSEPH H. REIFENBERG.

BY

W. R. Coley
ATTORNEY

FIG. 4.

UNITED STATES PATENT OFFICE

2,264,713

APPARATUS FOR WASHING TABLEWARE OR THE LIKE

Joseph H. Reiffenberg, Mansfield, Ohio, assignor to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a corporation of Pennsylvania

Application November 22, 1938, Serial No. 241,807

4 Claims. (Cl. 141—9)

This invention relates to apparatus for washing tableware and the like and it has for an object to provide improved apparatus of the kind.

A further object of the invention is to provide an improved dishwasher that may be economically produced.

It is a further object of the invention to provide improved means for supporting the washing unit of a dishwasher within an enclosing casing.

A still further object of the invention is to provide improved sealing means for preventing escape of water from the washing chamber of apparatus of the character set forth.

These and other objects are effected by my invention as will be apparent from the following description and claims taken in connection with the accompanying drawing, forming a part of this application, in which:

Fig. 1 is a vertical sectional view of a portable dishwasher constructed and arranged in accordance with my invention;

Fig. 2 is a sectional view taken along the line II—II of Fig. 1; and,

Figs. 3 and 4 are enlarged views of the respective gasket and caster structures shown in Fig. 1.

Reference will now be had to the drawing wherein I have disclosed a portable dishwasher constructed in accordance with the invention and including an outer casing 10, a cylindrical washing vessel or tank 11 disposed therein and motor driven impeller 12 for projecting washing fluid upwardly within a chamber 13 defined by the vessel 11. A rack 14 for supporting the tableware to be washed is disposed in the chamber 13 and, in accordance with the invention, is carried by a bead 15 formed in the side wall of the vessel 11 below the top end thereof. The top of the vessel 11 is open as shown at 16 and is provided with a removable closure or lid 17.

The construction of the casing 10 and the support of the vessel 11 therein will now be described. The casing 10 is preferably formed of a sheet metal that is self-supporting so that a rigid frame is not employed. The side walls of the casing 10 are bent at the bottoms thereof for defining an inwardly extending lower flange 18 that extends peripherally of the casing. A plurality of supports, such as, for example, casters 19 are employed for supporting the casing 10 at respective corners thereof so that the dishwasher may be rolled conveniently from one location to another. Each caster 19 includes a stem 21 that swivels in a bracket 22 which is secured by bolts 23 to the flange 18.

The upper end of the casing 10 supports a top

pan 24 including a downwardly extending skirt 25 that encompasses the top margin of the casing 10 and an inwardly extending flange 26. An annular resilient pad 27 is seated on the flange 26 and carries an annular outwardly extending rim 28 formed on the vessel 11. The pad 27 defines a resilient support for the upper end of the vessel 11 and prevents passage of water to the space intermediate the casing 10 and vessel 11. Preferably, rubber putty is applied to the flange 26, as shown at 26a, for providing a watertight joint between the flange 26 and the pad 27. An annular resilient gasket 29 is secured in any suitable manner to the periphery of the lid 17 and includes a portion 31 that seats upon the rim 28. A downwardly extending portion 32 of the gasket 29 is annular in configuration and is so formed that it is biased outwardly whereby it tightly engages the inner surface of the vessel 11 in the closed position of the lid 17. The portions 31 and 32 of the resilient gasket 29 define a double seal with the vessel 11 for preventing escape of water during operation of the washer.

In accordance with my invention, the bead 15 is so disposed with respect to the portion 32 of the gasket 29, that water projected upwardly along the inner surfaces of the vessel 11 during operation is deflected inwardly and away from the seal defined by the gasket portion 32 for further reducing the possibility of water leakage past the gasket 29. Accordingly, the bead 15 also functions as a water baffle.

The bottom of the vessel 11 is formed to support a housing 34 for a pump or impeller 40 and valve mechanism 41 which respectively effect and control the discharge of fluid from the chamber 13. As the admission of washing water to the chamber 13 and the discharge of vitiated water therefrom form no part of the present invention, the devices for effecting these operations are not shown. A motor 35 is carried by the housing 34 for driving the pump, not shown, and the impeller 12. The suspended unit including the vessel 11, the pump housing 34 and the motor 35, is subject to vibration due to any unbalance of the rotating parts or to reaction on the propeller 12 when projecting the washing water. Accordingly, the suspended parts recited are subject to lateral vibration.

In accordance with my invention, lateral movement of the motor 35 and housing 34 is restrained by a plurality of stays 36 having their inner ends fixed, for example, to the housing 34 by bolts 37 and their outer ends, respectively, connected to the caster brackets 22 by

bolts 38. The stays 36 support, in part, the weight of the vessel 11, housing 34 and motor 35 and restrain lateral movement thereof. Lateral forces imparted to the stays 36 are transmitted directly to the caster brackets 22 and not to the casing side walls 10 so that the latter are relieved of such forces. Accordingly, the casing 10 may be of relatively light construction and formed without the use of a rigid frame work. A feature of this construction in which the stays 36 extend from the suspended structure to the caster brackets 22, is the rigidity that is given to an otherwise flexible structure. Accordingly, the portability of the machine over rough or uneven floors is improved as it is understood that without the stays 36, the casing would tend to flex or distort as the casters meet an obstruction on the floor. The connection of the stays 36 to the suspended structure and casters prevents flexing or distortion in the casing. Furthermore, the casing 10 may be safely provided with a vitreous enameled finish which, as is well known, may crack or splinter when subjected to vibration or bending forces, as my improved construction precludes such damage to the finish to the casing 10.

From the foregoing description, it will be apparent that I have provided improved apparatus for washing tableware having a casing structure of relatively light construction which may be economically manufactured and which is not subject to vibration or other forces that may prevail during operation. Furthermore, the leakage of water from the chamber 13 is prevented by my improved double sealing means and the water deflecting means formed within the chamber.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various other changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claims.

What I claim is:

1. In apparatus for washing tableware or the like, the combination of a container including an impeller and a motor for driving the same, a casing having side walls for enclosing the container, resilient means carried by the casing and supporting the container adjacent the top thereof, a plurality of supports for portably sup-

porting said casing, and a plurality of stays connected at their inner ends to the container and at their outer ends to the respective supports, said latter connections being independent of the side walls of the casing.

2. In apparatus for washing tableware or the like, the combination of a container including an impeller and a motor for driving the same, a casing having side walls for enclosing the container and carrying an inwardly turned flange adjacent the bottom of the side walls, resilient means carried by the casing structure and supporting the container adjacent the top thereof, a plurality of supports for portably supporting said casing attached to the inwardly-extending flange and extending beneath said flange, and a plurality of stays connecting the bottom portion of the container and the said supports.

3. In apparatus for washing tableware or the like, the combination of a container structure for receiving the articles to be washed, said structure including a fluid translating mechanism, a housing therefor and a motor for driving said mechanism, a casing having side walls for enclosing the container structure, resilient means carried by the casing and supporting the container structure adjacent the top thereof, a plurality of supports for portably supporting the casing and a plurality of stays connected at their inner ends to said fluid translating mechanism housing and at their outer ends to the respective supports, said latter connections being independent of the casing side walls.

4. In apparatus for washing tableware and the like, the combination of a casing having side walls, a flange extending inwardly from adjacent the bottom of the side walls, a container structure enclosed by the casing for receiving articles to be washed, said container structure including a fluid translating mechanism, a housing therefor and a motor for driving said mechanism, resilient means carried by the casing and supporting the container structure adjacent the top thereof, a plurality of casters for portably supporting the casing structure and secured to said inwardly-extending flange, and a plurality of stays connected at their inner ends to said fluid translating mechanism housing and at their outer ends to the respective casters, said latter connection being independent of the casing side walls.

JOS. H. REIFENBERG.