June 17, 1924. 1,498,327

W. T. ROWELL

DISHWASHER

Filed April 5, 1922 2 Sheets-Sheet 1

Fig. 1.

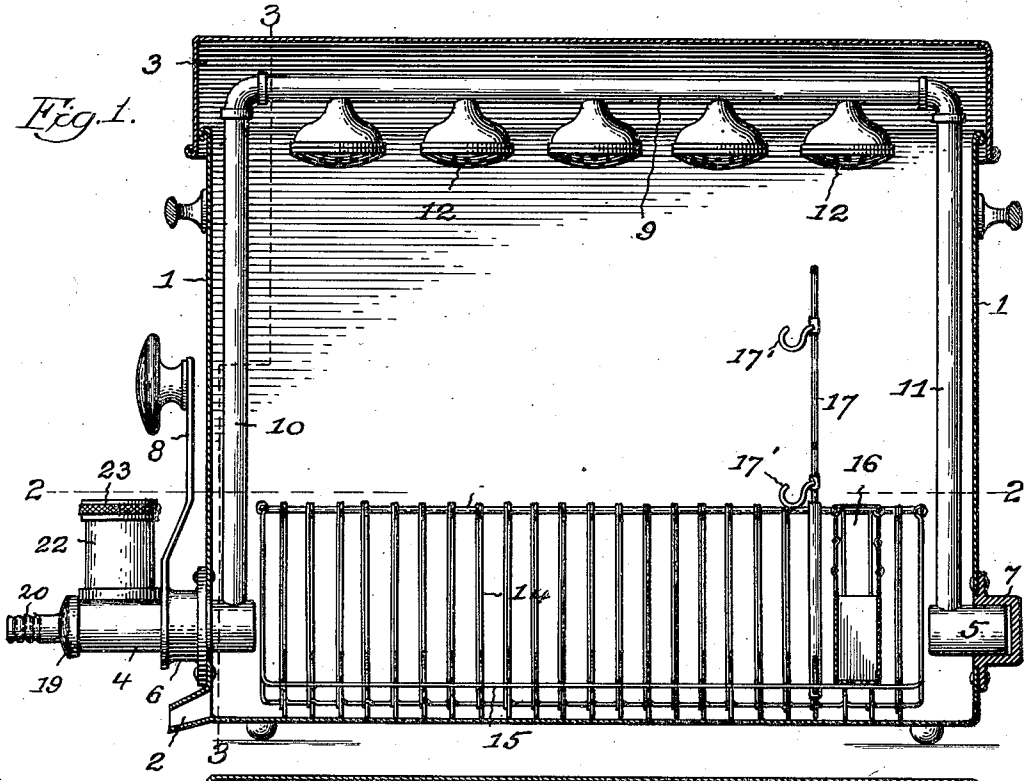
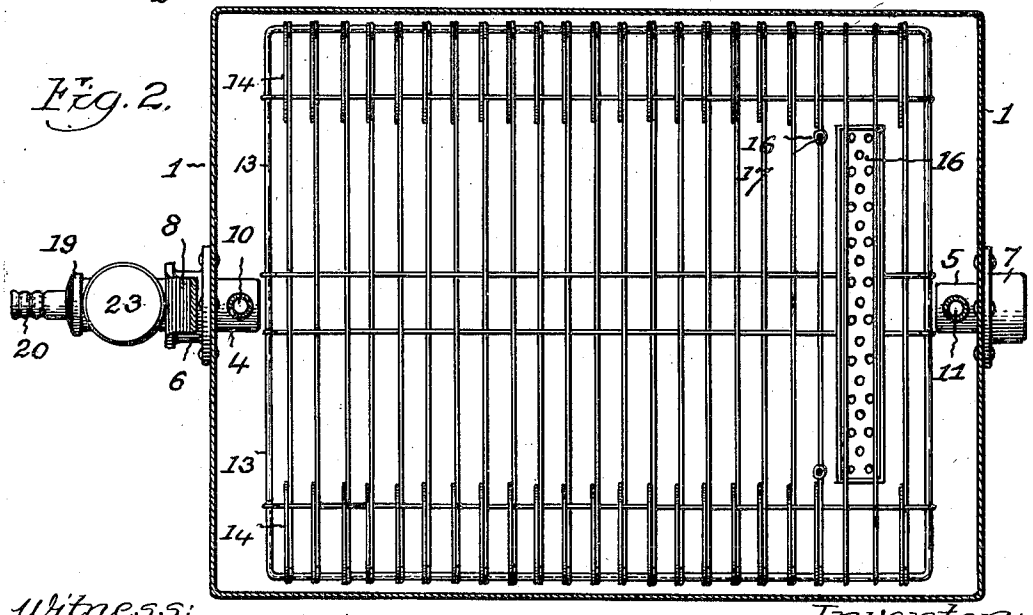


Fig. 2.



Witness:
John Enders

Inventor:
Walden T. Rowell,
by Robert Burns,
Atty.

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Fig. 3.

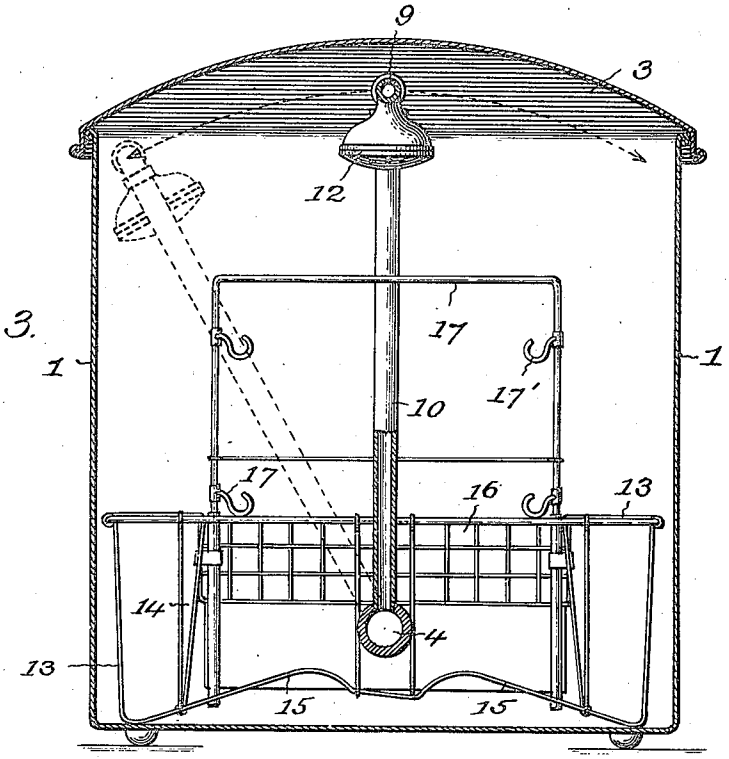
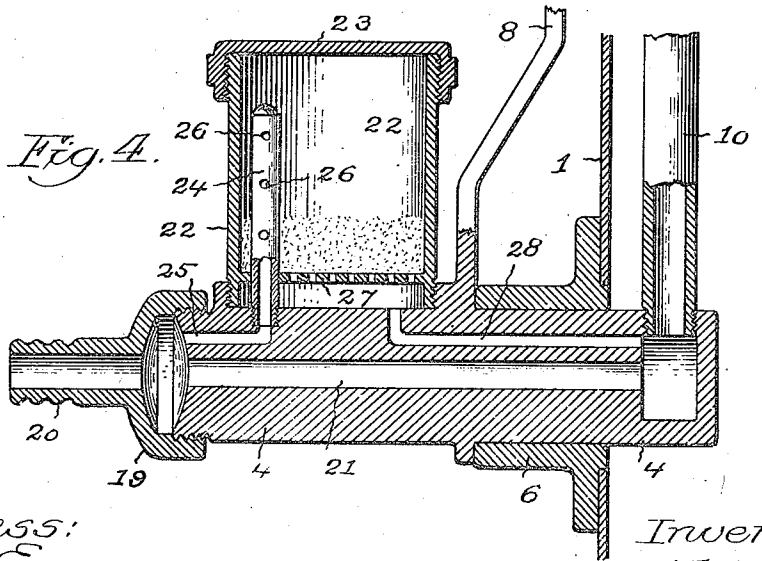


Fig. 4.



Witness:
John Enders

Inventor:
Walden T. Rowell,
by Robert H. Burns.
Hills

Patented June 17, 1924. 1,498,327

UNITED STATES PATENT OFFICE.

WALDEN T. ROWELL, OF CHICAGO, ILLINOIS.

DISHWASHER.

Application filed April 5, 1922. Serial No. 549,862.

To all whom it may concern:

Be it known that I, WALDEN T. ROWELL, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Dishwashers, of which the following is a specification.

This invention relates to that type of dish washers in which hot water is sprayed upon the dishes, etc., stacked within a containing casing to effect a gradual cleaning of the same, the waste water flowing away after it reaches the bottom of the casing. The object of the present improvement is:—

To provide a structural formation and combination of parts in a household dish washing apparatus, by means of which an initial flow or spray of clear hot water is attained to effect a preheating of the dishes and softening of the impurities thereon, with a succeeding flow or spray of mixed hot water and cleaning compound to effect a cutting up or removal of said impurities, and with a final flow of clear hot water to complete the removal of the impurities. Such operations succeeding each other automatically and without any attention on the part of the housewife, all as will hereinafter more fully appear.

In the accompanying drawings:—

Fig. 1, is a longitudinal sectional elevation of the apparatus.

Fig. 2, is a horizontal section on line 2,—2, Fig. 1.

Fig. 3, is a transverse sectional elevation on line 3,—3, Fig. 1.

Fig. 4, is an enlarged detail longitudinal section of the automatic feeding attachment for the cleaning compound.

Like reference numerals indicate like parts in the different views.

Referring to the drawings, 1 designates the containing casing of a rectangular shell form, open at top and having a closed bottom with a drain nozzle 2 near said bottom.

3 designates a removable cover fitting the top of the casing 1, and preferably of the transversely arched form shown in Fig. 3.

4 designates a tubular head or trunnion, and 5 a companion solid head or trunnion arranged in longitudinally aligned relation and revolubly mounted in bearing bushings 6 and 7 attached to the central portions of the end walls of the casing 1 adjacent to the bottom of the same as shown. In the present construction the tubular trunnion 4 extends a distance outside the casing 1 and is provided with an operating lever or handle 8, by which oscillatory movement can be imparted to said trunnion and its associated parts by hand and as required.

9 designates a tubular member or manifold arranged longitudinally in the upper portion of the casing 1, and adapted to have movement in a transverse direction by connections with the trunnions 4 and 5 as follows:

10 designates a tubular member or pipe section connecting the tubular trunnion 4 with one end of the manifold 9.

11 designates a companion member, which may have a solid formation, connecting the other end of the manifold 9 with the other trunnion 5.

12 designates a series of jet members, preferably of the rose head type shown, connected to the manifold 9 in longitudinal spaced relation, and adapted to effect a downward discharge of the hot water in different directions, so that in actual use all sides of the dishes will be reached and effectively cleaned.

13 designates a dish containing tray or holder, of a rectangular shape and arranged in a removable manner in the bottom portion of the container 1. The tray 13 is of a skeleton wire formation and has a plurality of L shaped wire partitions 14 arranged in longitudinally spaced relation to each other at the respective sides of the tray, and which in connection with the upwardly dished wire bottom 15 of the tray, provide an effective support for plates, dishes, etc., in vertical separated relation during the washing operation.

16 designates an open top holder of orificed material arranged transversely at one end of the tray 13, and adapted to receive forks, knives, etc., to be washed.

17 designates a vertical rack of a rectangular yoke shape as shown, the vertical posts of which removably fit in socket members 18 fixedly attached to the tray 13 as shown and having holding hooks 17′ for cups and the like. The construction is intended to permit of a convenient removal of the filled tray 13, past the above described manifold and its connections, by a preliminary removal of the rack 17 just described.

The material part of this invention in-

volves means for introducing a cleaning compound of soap or the like into the supply of washing water in the commencement of the operation, and comprises a construction as follows:—

19 designates a chambered cap secured to the outer end of the tubular trunnion 4, and provided with a tubular and externally ridged neck 20 adapted to receive an end of the flexible hose by which connection is had with the hot water supply of the building. The passage of the neck 20, is preferably in line with the main passage 21 of said tubular trunnion 4, so that the hot water may flow in a direct manner through said trunnion, thence through the tubular member or pipe 10 into the manifold 9 to be discharged through the jet heads 12 upon the dishes operated on.

22 designates a container having an entry at top closed by a cap or cover 23 to admit of convenient introduction of a charge of cleaning compound, such as granulated soap, for use in the dish washing operation. The container 22 is fixedly secured to a side of the tubular trunnion 4 and has connections therewith as follows:—

24 designates a hollow stem arranged vertically inside the container 22, with its passage connected by an L shaped branch passage 25 with the water chamber of the cap member 19 aforesaid, while said hollow stem 24, is formed with a series of lateral orifices 26 along its height for discharging jets of the hot water into the above mentioned charge of cleaning compound.

27 designates a perforate partition or grating arranged above the bottom of the container 22 for the support of said charge of cleaning compound.

28 designates an L shaped passage connecting the bottom of the container 22 with an expanded chamber at the inner end of the trunnion 4 with which the tubular member or pipe 10 has connection.

With the above described arrangement of parts, a predetermined charge of the cleaning compound is placed in the container 22 previous to turning on the hot water supply, after which the hot water is turned on and in the initial portion of the operation, the hot water passing through the above described passages of the container 22, takes up the cleaning compound, carries it to and mixes it with the main flow of hot water through the other part of the apparatus. With the exhaustion of the charge of cleaning compound, hot water alone is discharged upon the dishes to effect the final cleaning of the same.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. In a dish washing apparatus of the type herein described, the combination of a water inlet head comprising a closed container adapted to hold a limited charge of cleaning compound and having a depending bottom wall formed with a straight way passage for the hot water used and unimpeded branch passages between said straight way passage and the container adapted to afford an inflow of water into the upper portion of said container and an outflow from the bottom of the same into the straight way passage, a bushing adapted for fixed attachment to the casing of a dish washer and forming a support for the aforesaid inlet head, a handle on said head for imparting turning movement thereto, and a sprayer head fixedly connected to said head so as to move therewith.

2. In a dish washing apparatus of the type herein described, the combination of a water inlet head comprising a closed container adapted to hold a limited charge of cleaning compound and having a depending bottom wall formed with a straight way passage for the hot water used and unimpeded branch passages between said straight way passage and the container adapted to afford an inflow of water into the upper portion of said container and an outflow from the bottom of the same into the straight way passage, a perforated partition arranged adjacent to the bottom of said container, a bushing adapted for fixed attachment to the casing of a dish washer and forming a support for the aforesaid inlet head, a handle on said head for imparting turning movement thereto, and a sprayer head fixedly connected to said head so as to move therewith.

Signed at Chicago, Illinois, this 3rd day of April A. D. 1922.

WALDEN T. ROWELL.