

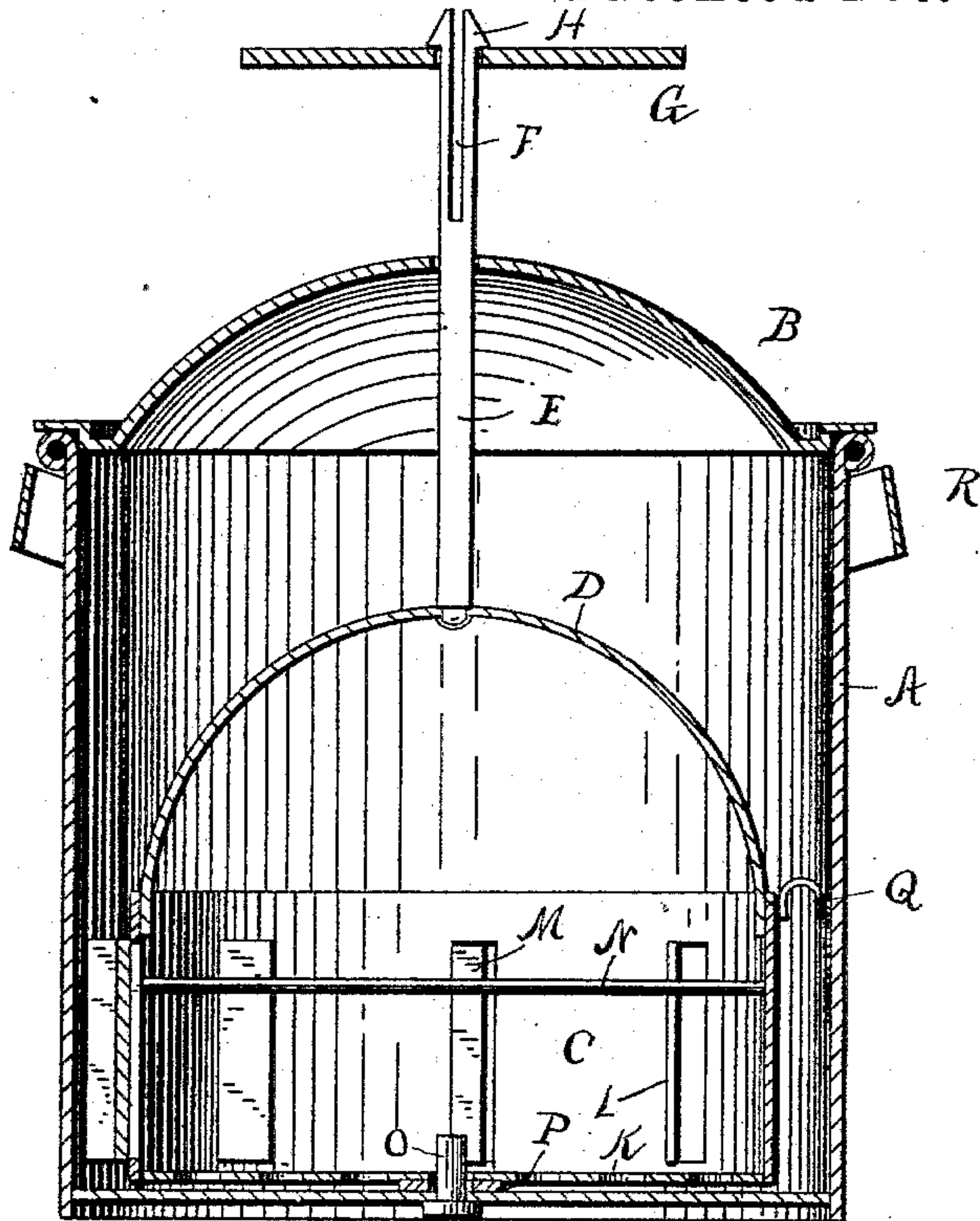
(No Model.)

H. D. HAGGARD.  
DISH CLEANER.

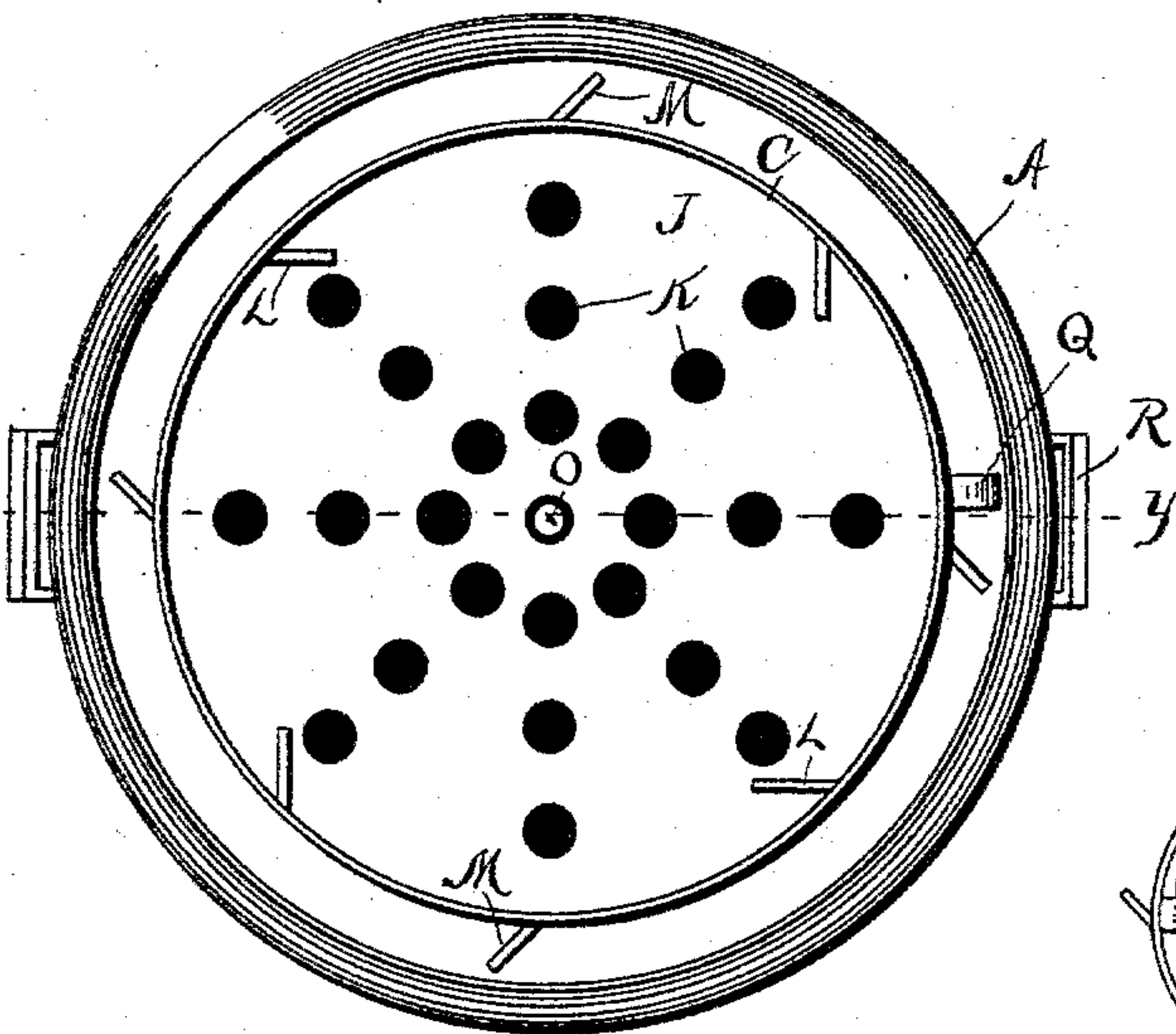
No. 551,377.

Patented Dec. 17, 1895.

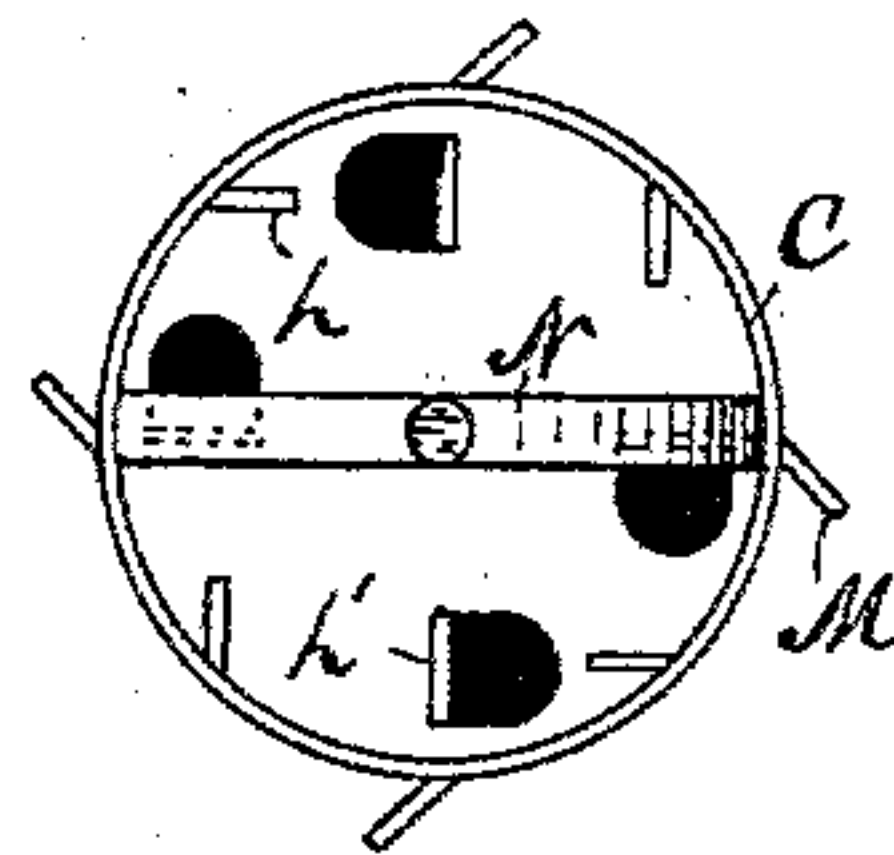
**Fig I**



**Fig II**



**Fig V**



Inventor.

**Fig IV**

Witnesses

C. J. Bloom,  
J. St. Francis

**Fig III**



**HENRY D. Haggard.**

**By** House & Hadley, His Attorneys.



# UNITED STATES PATENT OFFICE.

HENRY D. HAGGARD, OF GARNETT, ASSIGNOR TO BENJAMIN HOWARTH,  
OF COLDWATER, KANSAS.

## DISH-CLEANER.

SPECIFICATION forming part of Letters Patent No. 551,377, dated December 17, 1895.

Application filed May 16, 1895. Serial No. 549,512. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY D. HAGGARD, a citizen of the United States, residing at Garnett, in the county of Anderson and State of Kansas, have invented certain new and useful Improvements in Dish-Washing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in dish-washing machines.

The object of my invention is to provide a dish-washer with a cylindrical water-holder, a rotatable dish-holder pivoted therein and provided with a perforated bottom and sides, and flanges on the inner and outer walls of the dish-holder and adjacent to the perforations whereby the water is forced in and out of the dish-holder through the perforations when the dish-holder is rotated.

My invention further provides a central axle or shaft secured to the dish-holder, and provided with a compressible bifurcated upper end adapted to a removable arm.

In the accompanying drawings, illustrative of my invention, Figure 1 represents a vertical sectional view taken on the dotted line *x y* of Fig. 2. Fig. 2 represents a top view of the invention with the cover, rod N, axle, and bail removed. Fig. 3 represents a perspective view of the arm. Fig. 4 represents a vertical sectional view of a modified form of dish-holder in which the bottom of the dish-holder is provided with vertical flanges L' adjacent to the perforations in the bottom of the dish-holder. Fig. 5 represents a plan view of the form of holder shown in Fig. 4. In this view and in Fig. 4 the upper end of the axle E is broken off.

A indicates a cylindrical water holder or can which is provided with a cover for the top (indicated by B). Within the can or water-holder A is a rotatable cylindrical dish-holder C, the bottom of which is provided with perforations K and the sides with vertical perforations for the passage of the water from and to the interior of the dish-holder C. Near alternate perforations in the sides of the dish-holder are vertical flanges extend-

ing obliquely inward from the sides of the dish-holder, and the other alternate perforations are contiguous to flanges extending outwardly obliquely from the dish-holder. The said inner and outer flanges are indicated, respectively, by the letters L and M. Secured to the bottom of the water-holder A at its center and projecting upwardly is a rivet or pin O that enters a central opening in the bottom of the dish-holder C. Between the bottom of the dish-holder and the bottom of the water-holder and encircling the pin O is a washer P that serves to hold the dish-holder out of contact from the water-holder, so that the dish-holder may be freely rotated. To the top of the dish-holder is secured an arched bail D, to the center of which is secured a vertical shaft or axle E, which passes through a central opening in the cover B. The upper end of the shaft E is provided with a longitudinal slot F and a beveled head H. An arm G consisting of a rectangular plate is provided with a central rectangular opening S, adapted to pass over the head of the axle or shaft when the upper end is compressed. Secured to one side of the dish-holder at its upper edge is a curved downwardly-projecting hook Q, adapted to hook over the upper edge of the water-holder. A transverse rod N extends across the dish-holder and is secured at its ends thereto a short distance below the upper edge of the dish-holder, and serves as a brace to prevent the sides of the dish-holder from drawing in when the holder is filled with dishes and is moved up and down in the water-holder. The rod N also serves as a support against which the dishes may rest. Secured diametrically opposite to the upper end of the water-holder on its outside are two ears or handles R.

The operation of my invention is as follows: The water-holder A is partially filled with water. The dishes are then placed in the dish-holder in such a manner that the water may freely circulate between them. The dish-holder with the dishes is then placed in the water-holder, with the pin O in the central opening in the bottom of the dish-holder. The cover B is then placed on the top of the water-holder with the shaft E inserted in the opening in the center of the top.



The upper end of the shaft E is then compressed so that the head H will pass through the central opening S of the arm G, and the arm is slipped onto the square axle or shaft E. 5 The compression of the upper end of the shaft is then removed and the tension of the metal causes the bifurcated end of the shaft to enlarge so that the arm will not pull off from the shaft when the dish-holder is raised by seizing 10 and drawing up the arm during the washing of the dishes. The dish-holder is now rotated or reciprocated forward and backward, the flanges L and M causing the water to pass through the openings in the sides of the dish- 15 holder, the inclination of the flanges being such as to cause the water to pass through the said openings with considerable force, and to thoroughly circulate among the dishes. After the dishes have been washed as much 20 as desired the dish-holder is lifted so that the hook Q may be caused to engage the upper edge of the water-holder. Hot water is then poured over the dishes and they are allowed to stand until dry. Another way of 25 rinsing and drying the dishes is to remove the arm from the shaft E by compressing the upper end of the shaft until the head of the shaft is smaller than the opening in the arm, then removing the cover from the shaft and 30 taking the dish-holder out of the water-holder. The cover is then placed on top of the water-holder, the sides of the cover being reversed.

The dish-holder is then set on the cover and hot water is poured over the dishes and allowed to drain off the dishes and run through 35 the opening in the cover into the water-holder.

In the form shown in Figs. 4 and 5 the bottom of the dish-holder is provided with vertical flanges located adjacent to the perforations in the bottom of the dish-holder, and 40 which tend to agitate the water during the rotation of the holder. The said flanges further serve as rests for the dishes, and prevent them from being moved about in the holder when the holder is operated. 45

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

In a dish washer, the combination with a water holder, of a cylindrical dish holder, a 50 bail secured to the dish holder, a vertical shaft secured at its lower end to the bail at its center and provided with a bifurcated upper end square in section, the extreme upper end of the shaft being provided with beveled 55 lugs on two sides, and an arm having a rectangular opening adapted to fit the square shaft, substantially as described.

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

HENRY D. HAGGARD.

Witnesses:

W. D. HOUSE,

J. F. HADLEY.