

(No Model.)

W. I. McCAUSLAND.  
DISH CLEANER.

No. 598,432.

Patented Feb. 1, 1898.

Fig. 1.

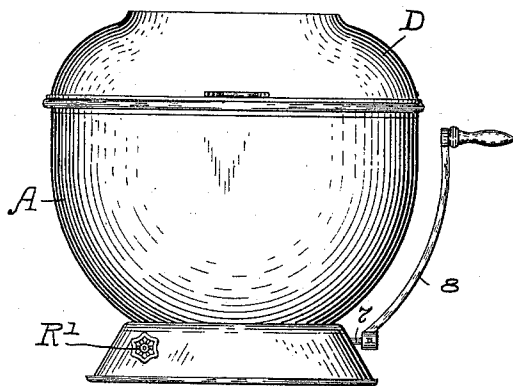


Fig. 2.

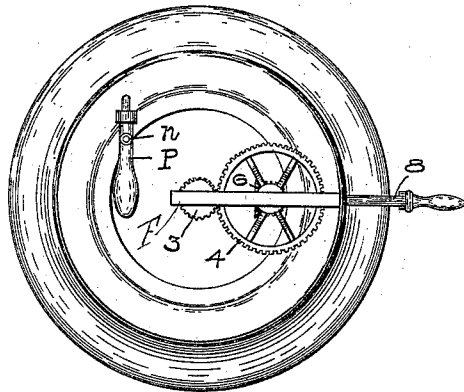


Fig. 3.

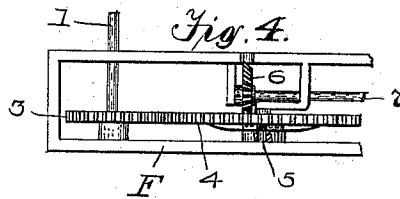
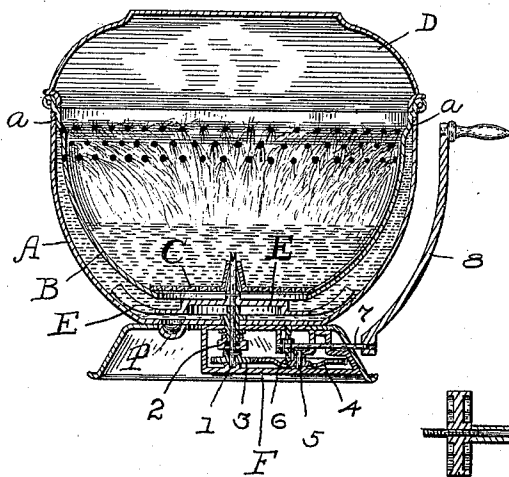
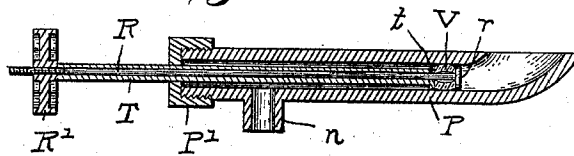


Fig. 5.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM I. McCAUSLAND, OF INDIANAPOLIS, INDIANA.

## DISH-CLEANER.

SPECIFICATION forming part of Letters Patent No. 598,432, dated February 1, 1898.

Application filed June 1, 1897. Serial No. 638,931. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM I. McCAUSLAND, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Dish-Washing Machines, of which the following is a specification.

My present invention consists of certain improvements upon Letters Patent Nos. 377,765, 427,601, and 516,103 heretofore granted me on machines of this same general character. A machine embodying said improvements will be first fully described, and said improvements then particularly pointed out in the claim.

Referring to the accompanying drawings, which are made a part hereof and on which similar letters and numerals of reference indicate similar parts, Figure 1 is a side elevation of a machine embodying my present invention; Fig. 2, an under side plan thereof; Fig. 3, a central sectional view of the same; Fig. 4, a detail elevation of the driving mechanism; and Fig. 5 a detail view, on an enlarged scale, of the valve to the discharge-pipe.

In said drawings the portions marked A represent the outer case; B, the inner case or pan; C, the perforated removable bottom to said inner case or pan; D, a cover to the machine, and E the water-wheel. These parts, generally speaking, correspond in their general features to those shown in my previously-obtained Letters Patent above referred to, but are improved in form and construction. The parts A and B, however, are closely united at *a* by a water-tight joint without the use of the various means which were described in said former patents. I prefer to screw-thread the adjacent portions of these parts where they come together at this point and unite them by that means; but I have discovered by practical operation of the machines that said parts never need to be separated in use, and therefore they may be soldered tightly together, if desired.

The water-wheel E has a shaft 1, which is mounted in suitable bearings in the frame F and in the base of the outer shell A, passing up to within the machine through said last-named bearing, which has a stuffing-box 2 for

the purpose of making it water-tight. Upon the lower end of this shaft is a spur-pinion 3, and a spur gear-wheel 4 is mounted on a counter-shaft 5 and engages therewith. This spur gear-wheel 4 has a bevel-pinion on its hub, with which a bevel gear-wheel 6 on the crank-shaft 7 engages, said crank-shaft being driven by the usual crank 8. By this means a very simple and effective multiplying-gear is produced, arranged in proper relation to the machine, and the water-wheel is driven therefrom without any part of said gearing passing into the machine, where it would be in the way.

The discharge-pipe P is secured to the under side of the machine and is adapted to discharge the water therefrom through its nozzle *n*. I have provided a peculiar valve, which is adapted to be moved extremely promptly and at the same time can be quickly regulated in tension. The rod R, having a head *r*, passes through a tube or sleeve T and has a combined pull and nut R' upon the outer end. Interposed between the head *r* and the end of the tube T (or a washer *t*) is a section of rubber tubing V, constituting the valve proper.

The perforation in the pipe P is of uniform diameter and extends on both sides of the nozzle *n*. Ordinarily the discharge is controlled by pulling or pushing on the pull R', bringing the valve proper, V, to one side or the other of the nozzle, as may be desired, thus either shutting off the flow, as shown in Fig. 5, or permitting said flow when the valve is on the opposite side of the nozzle. In order to maintain this valve continuously in proper condition, (under all circumstances of hot and cold and soapy water,) it is necessary that it should be conveniently adjustable. This is done by simply turning the pull R', (which, as before stated, is also a nut,) when the rubber portion V of the valve will be compressed or loosened, as will be readily understood. I have therefore provided an extremely simple, cheap, and effective valve for this purpose. When the rubber portion V is worn out, by removing a cap P' the whole structure may be removed and a new piece of rubber inserted, which makes practically a new valve. While the valve thus described

and shown in Fig. 5 is considered of peculiar fitness for the purpose, yet, as will be understood, other forms may be used, if preferred, and I do not therefore make this a feature of this invention, but illustrate it in connection herewith in order that a most desirable form may be seen.

The operation of my machine may be briefly described as follows: Dishes to be cleansed are placed within the inner receptacle or pan B, resting upon the perforated bottom C. Water in suitable quantity and condition is placed within the machine, the cover D placed on, and the crank or handle 8 turned. This through the gearing described operates the water-wheel E, which, by centrifugal force, drives the water strongly and copiously through the perforations in the inner casing B onto the dishes being treated. It descends through the perforations in the false bottom C into the space where the water-wheel is and is thus continuously reused as long as desired. Water is discharged by the manipulation of the valve V, heretofore described. As will be observed, there is no machinery within the washer to interfere with the proper handling of the dishes. The false bottom C is removable and is normally retained in place by the upper end of the shaft 1, which projects high enough to serve that purpose. The gearing, as I have found by practical ex-

perience, is a great improvement on those formerly used by me.

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

The combination, in a dish-washing machine having a double casing the inner one containing perforations through which the water may be forced from the chamber between the two walls, of a water-wheel mounted between said two walls, a shaft thereto extending through a stuffing-box to below the outer wall, a pinion on the lower end of said shaft, a spur gear-wheel mounted on a counter-shaft and engaging with said pinion and having a bevel-pinion on its hub, a driving-shaft mounted in suitable bearings and extending in horizontally across said counter-shaft and provided with a bevel-gear on its inner end which engages with said bevel-pinion on the hub of said spur gear-wheel, and a suitable crank on said driving-shaft for turning the same, all arranged and operating substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 26th day of May, A. D. 1897.

WILLIAM I. MCCAUSLAND. [L. s.]

Witnesses:

CHESTER BRADFORD,  
JAMES A. WALSH.