

No. 865,181.

PATENTED SEPT. 3, 1907

A. INSINGER.
DISH WASHING MACHINE.
APPLICATION FILED JULY 13, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

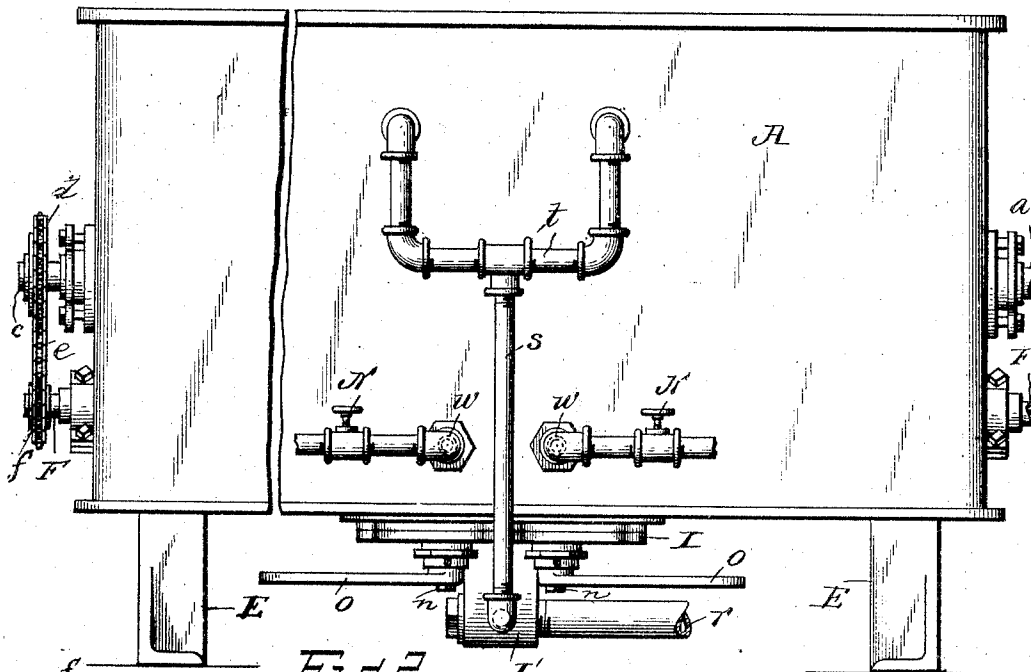
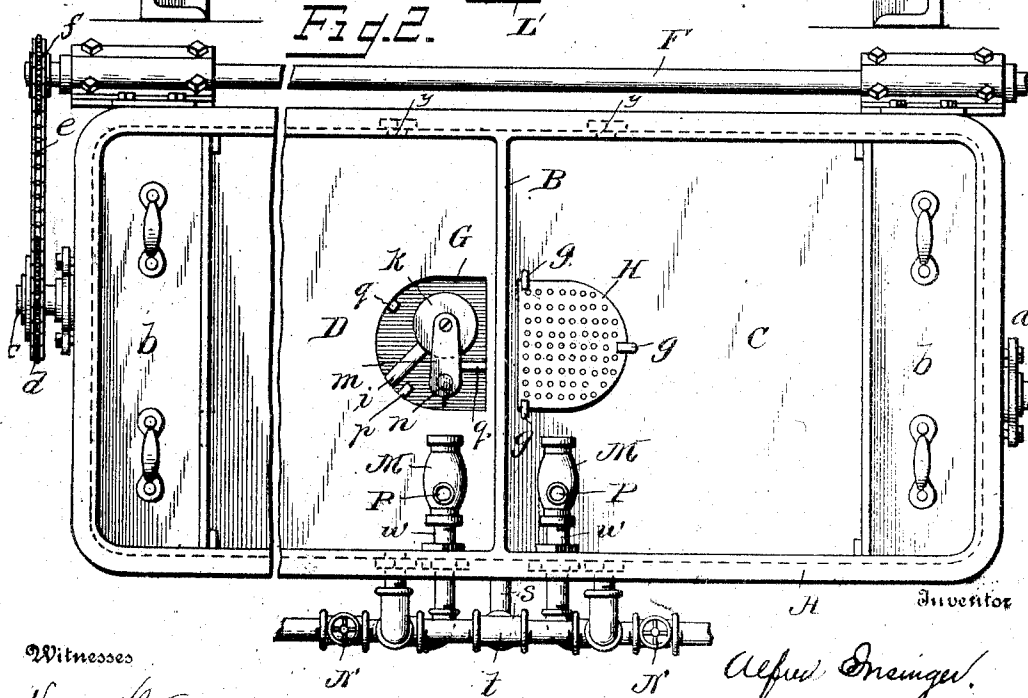


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

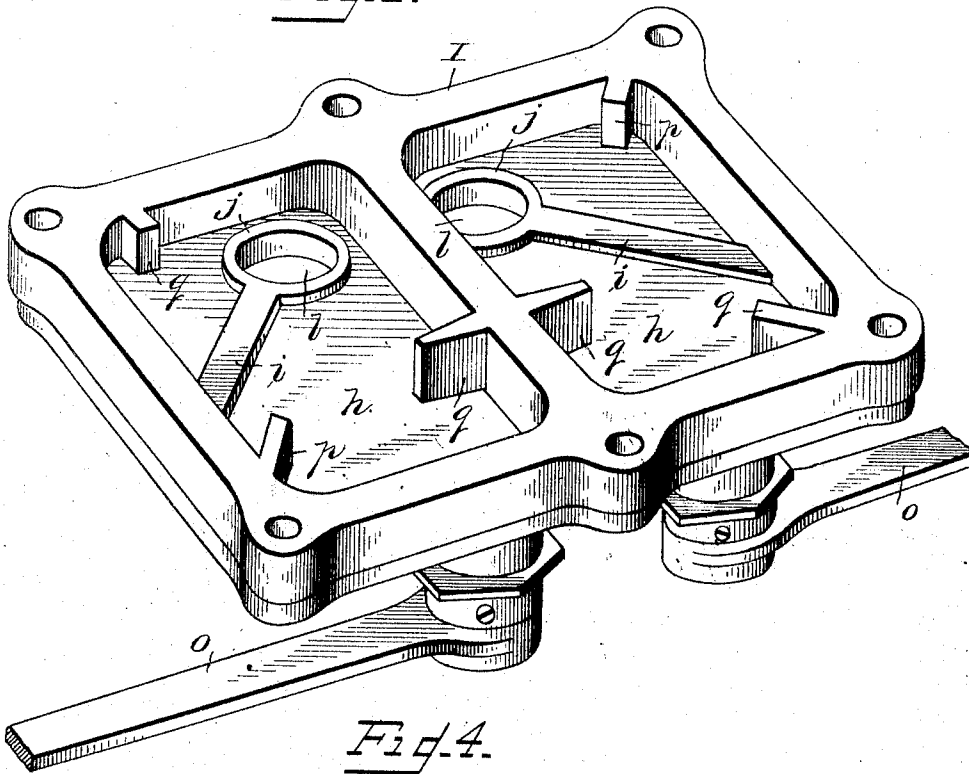
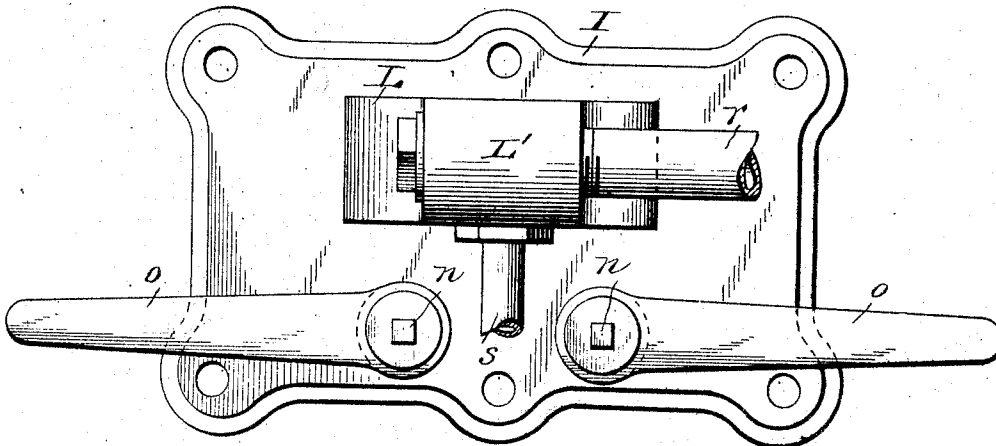


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

ALFRED INSINGER, OF PHILADELPHIA, PENNSYLVANIA.

DISH-WASHING MACHINE.

No. 865,181.

Specification of Letters Patent.

Patented Sept. 3, 1907.

Application filed July 13, 1905. Serial No. 289,605.

To all whom it may concern:

Be it known that I, ALFRED INSINGER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Dish-Washing Machines; and I do 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.

This invention relates to dish-washing machines; and it has for its object to provide a more simple, durable and less expensive machine of few parts, as compared with the machines now on the market, and with that object in view the invention consists in various improvements in the details of construction and arrangement of the parts as will be fully hereinafter described and pointed out in the claims.

In the accompanying drawings forming a part of this specification, Figure 1, is a side elevation of a dish washing machine embodying my invention; Fig. 2, a plan view of the same; Fig. 3, an enlarged perspective view of the casting which forms the casing for the discharge valves; and Fig. 4, a plan view of the bottom of said casting.

Similar letters refer to similar parts through out all the views.

Referring to the drawings A represents the tank of the machine which is cast in one piece and with a central transverse partition B, which divides the tank into a washing chamber C and a rinsing chamber D. The tank is supported by legs E at a suitable distance above the flooring to accommodate the piping etc. arranged on the bottom of the tank.

A shaft F, extends lengthwise along one side of the tank and is supported in bearings attached to said tank. The shaft F, carries the necessary gearing or a pulley wheel (not shown) at one end for connection with the driving power, as well as a sprocket or pulley wheel (not shown), for connection with a similar wheel (not shown) secured on the shaft a, which carries, within the washing chamber C, the propeller blades or wheel (not shown), employed in this type of machine for agitating the water and causing a circulation thereof within the tank. The propellers are arranged at the ends of the chambers C and D and are covered by the lids b, which prevent the water being thrown upwardly out of the tank. At the opposite end of the tank a shaft c is journaled which carries propeller blades or wheel for the rinsing chamber D, and a sprocket wheel d, which is connected by a chain e, to a similar wheel f on the shaft F, whereby both propellers may be operated by said shaft F.

In the bottom of each chamber, C and D, an opening G is formed closely adjacent the dividing partition B, through which the chambers may be quickly emptied of their contents. The openings G are covered by the

removable perforated plates H, only one of which is shown, through which the water drains, while the escape of tableware or other articles which may have fallen into the chambers is prevented. The plates H are adapted to fit within the openings G and are supported in place by the lugs g which rest on the edges of the openings.

Secured to the bottom of the tank from underneath so as to extend over and cover the openings G is the casting I, (see Figs. 3 and 4), which forms the casing or chest for the valves which control the discharge of the water from the chambers. Referring more particularly to Fig. 3, it will be seen that the casting I is formed with two chambers h, the bottoms of which are formed with the flat ribs i terminating in the circular flanges surrounding the outlets l which form bearings or seats j for the valves k. The arms m of the valves are secured to pins n, which extend through the bottoms of the chambers h, and are provided with handles or levers o, by which the valves may be swung on or off the seats j to close or open the outlets l. The valves are guided by and ride or slide on the ribs i in their movements and stops p are cast within the chambers h to limit the inward or closing throw of the valves so as to prevent them overlapping the openings or outlets l. The lugs q cast within the chambers h serve as additional supports for the plates H.

To the bottom of the casting I, a manifold or trap L is cast or secured so as to extend over or cover and connect the outlets l, whereby the discharge from both outlets l will be led into a central chamber L' to which is connected a pipe r through which the drainage water escapes to a sewer or to any other desired place of discharge. In the drawings the chamber L' is shown with a joint at each end, one of which is closed by a plug or cap, so that the pipe r may be connected at either end so that the water may be conveyed off in either direction, as found most convenient, without necessitating the use of elbows in connecting the pipe thereto. A pipe s leads to the side of the chamber L' and empties therein, said pipe being connected to a pipe t, by a T-coupling the branches of which lead to openings formed in the side walls of the tank, near its top, so as to provide overflow openings for the chambers C and D.

Near the bottoms of the chambers C and D openings are formed in the wall of the tank through which are inserted the pipes w, which terminate in the horizontally extending suctional discharge heads M. The pipes w lead from a boiler and are provided with valves N, whereby the admission of steam to the chambers C and D, for the purpose of maintaining the desired degree of heat in the water in the chambers, may be controlled. The suction heads M are formed with vertically extending perforations P at a point near their center of length whereby the water in the chambers will be

drawn into the heads, by the suction created by the steam in its passage through the same, and ejected therefrom at the ends of the heads with the steam. By the use of the heads I am enabled to do away with the coils of pipes heretofore employed in dish washing machines to keep the water to the desired degree of heat; and at the same time to more effectually and at considerable less expense keep the water as hot as is necessary or desirable and to more readily control the degree of heat.

The chambers are supplied with water through pipes leading from any desired or convenient source of supply to the openings, indicated in broken lines at *y*, in the wall of the tank.

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

1. A dish washing machine having a washing chamber and a rinsing chamber each of which is formed with a bottom discharge opening, a casting extending over said openings formed with outlets, valves for said outlets, and a chamber common to both of said outlets to receive the discharges therefrom.

2. A dish washing machine having a washing chamber and a rinsing chamber each of which is formed with a bottom discharge opening, a casting having recessed chambers having outlets extending over said discharge openings, valves for said outlets, a chamber to receive the discharge from both outlets, and handles for operating said valves.

30 3. A dish washing machine having a washing chamber and a rinsing chamber each of which is formed with a dis-

charge opening, perforated plates covering said openings, a casting having recessed chambers formed with outlets arranged to receive the discharge from both of said openings, valves arranged within said recessed chambers to control the discharge therefrom, handles or levers connected to said valves for operating the same, a chamber arranged to receive the discharge from both of said outlets, and a discharge pipe for said last named chamber.

4. A device for controlling the discharge from adjacent washing and rinsing chambers of a dish washing tank, comprising a casting having two recessed chambers each having an outlet, a flat rib terminating in a circular vertical flange formed in each of said chambers, valves adapted to slide on said ribs and to be seated on said flanges, a chamber to receive the discharge from both of said outlets, a pipe leading from said last named chamber, and handles or levers for operating said valves.

5. A dish washer comprising a tank having two adjacent chambers, a bottom discharge opening for each of said chambers, a casting having recessed chambers formed with outlets arranged to cover said discharge openings, a chamber to receive the discharge from said outlets, valves to control said outlets, a pipe for conveying off the discharge from said last named chamber, overflow openings formed in the walls of said washing and rinsing chambers, pipes leading therefrom to the last named chamber, and pipes for supplying said washing and rinsing chambers with water.

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

ALFRED INSINGER.

Witnesses:

GEO. MECKE,

JOHN R. BUTCHER.