

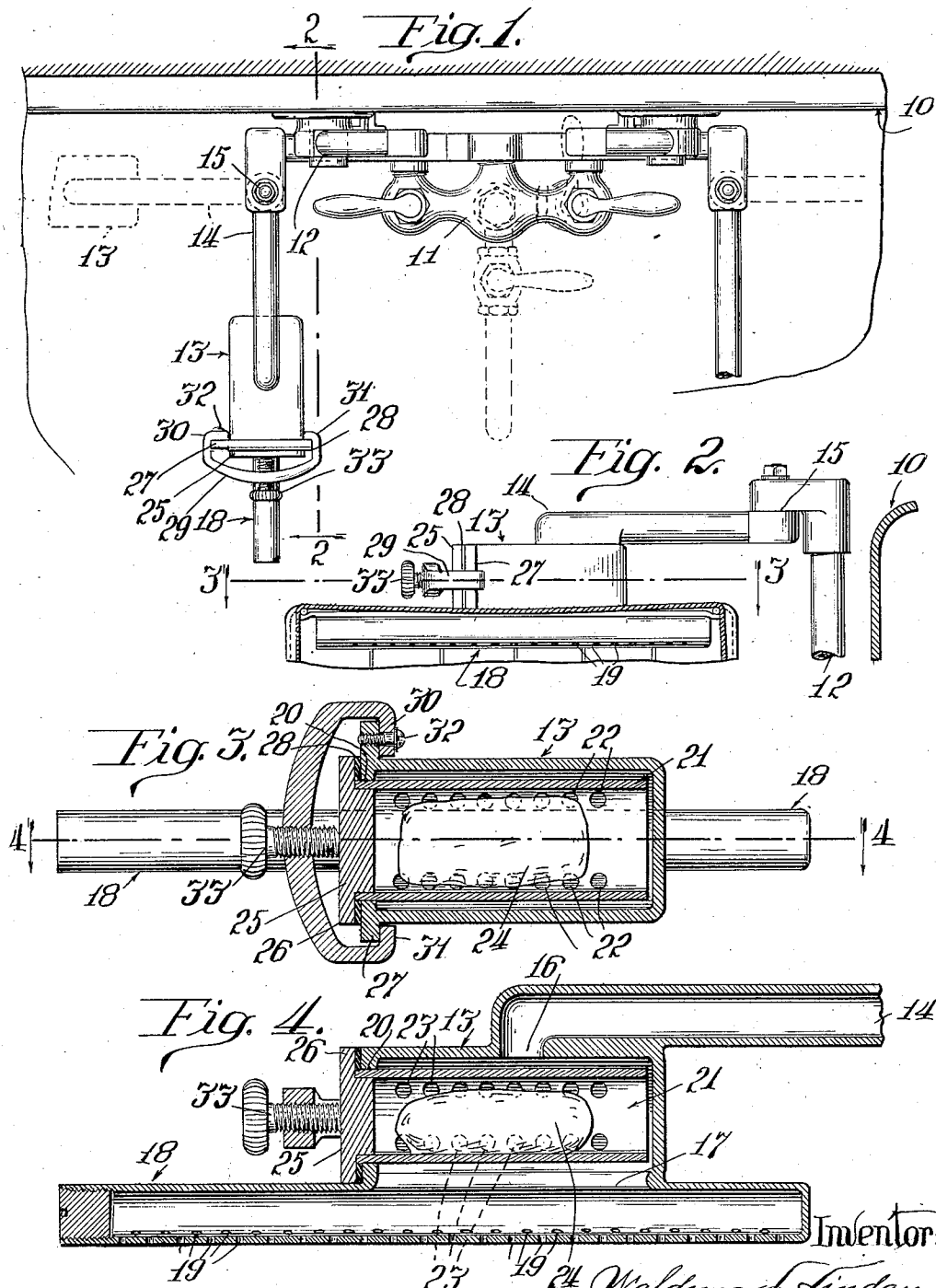
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SOAP HOLDER FOR DISHWASHING MACHINES

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## UNITED STATES PATENT OFFICE

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## SOAP HOLDER FOR DISHWASHING MACHINES

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My invention is concerned with soap holders for dish washing machines, etc., and is designed to produce a holder in which a cake of hard soap can be placed and hot water run therethrough as it passes to the spraying mechanism, so that hot soap-suds will be sprayed upon the dishes or other articles to be washed.

To illustrate my invention, I annex hereto a sheet of drawings in which the same reference characters are used to designate identical parts in all the figures, of which,—

Fig. 1 is a top plan view of a portion of a dish-washing machine embodying my invention;

Fig. 2 is a side elevation of the same on the line 2—2 of Fig. 1;

Fig. 3 is a horizontal section on the line 3—3 of Fig. 2, but on a larger scale; and

Fig. 4 is a section on the line 4—4 of Fig. 3.

The soap holder herein shown and described is employed in connection with dish-washing machines of the type shown in my prior applications Nos. 299,486, filed August 14, 1928; 317,176, filed November 5, 1928, and 323,876, filed December 5, 1928, now Patents Nos. 1,798,425, 1,798,426 and 1,798,428, dated March 31, 1931 of which applications the present application may be considered as a quasi-division, since the specific soap holder herein shown and described is not claimed specifically in the foregoing applications, but only in combination with the dish-washing mechanism therein shown.

In Figs. 1 and 2, 10 represents the back portion of a kitchen sink with which my dish-washing mechanisms are ordinarily employed, and 11 represents the customary hot and cold water mixer, which is provided with piping 12 leading to the soap holder 13 which is the subject matter of the present application. As in some forms of my dish washers it is desirable to lift the dish-washing mechanism bodily out of the sink, I have shown the soap holder as having the supply pipe 14 connected by the swivel joint 15 with the piping 12 heretofore referred to. The principal portion of the soap-holder mechanism proper consists of the generally-rectangular casing

13, which may take the form of a casting with which the pipe 14 is integral, and which opens into the top of the casing 13 through the aperture 16. The generally-rectangular casing 13 is provided on its under side with the elongated outlet aperture 17 which opens into the tubular spraying member 18, which is provided on its under surface with the perforations 19 through which the water is sprayed upon the dishes or other articles to be washed passing beneath or above the member, as the case may be. One end of the casing 13 is provided with the rectangular opening 20 into which fits the end of the soap holder proper, which is preferably formed of sheet metal and is rectangular in cross section and of a size to substantially fill the rectangular hollow in the casing 13. This holder 21 is provided with perforations 22 extending along the angle in the top and bottom portions, and with similar perforations 23 extending along the edges of the side portions, so that water entering the inlet port 16 will be compelled to spread out over substantially the entire surface of the cake of soap 24 which will be placed therein. This holder 21 is secured to the cover or cap 25, which has the overhanging flanges 26 between which and the flange 27 formed on the adjacent end of the holder 13 is interposed the rubber gasket 28 by which the closure is made water-tight. As a convenient means of clamping this end or cap piece 25 in place, I employ the yoke piece 29, which has the inwardly-projecting flanges 30 and 31 at its ends co-operating with the adjacent surfaces of the flange 27. The flange 30 is preferably pivotally connected to the flange 27 by the screw 32, and the set screw 33 is threaded through the center of the yoke 29, so that when the holder with the cake of soap is put in place and the yoke is swung around to the position shown, the parts can be securely clamped together by turning the set screw 33. The operation of the apparatus will be apparent, as the hot water flowing from the mixer will perforce be compelled to flow all around the cake of soap 24 in reaching the outlet 17 and the sprayer 18, so that the water sprayed on the

dishes will be adequately provided with soap to form a suds.

At the same time, it will be noted that the stream of water flowing from the pipe 14 through the opening 16 does not strike the cake 24 of soap directly, but is deflected and spread out by the adjacent imperforate part of the holder 21, so that when it finally reaches the soap through the perforations 22 and 23, it has no material velocity, and does not tend to wash the soap away, but merely to dissolve it, so that while sufficient soap is dissolved to make the desired suds, it is not wasted, as I have found it will be if the water from the opening 16 is projected directly on the cake of soap.

While I have herein shown and described my invention as embodied in the form which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of modifications and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States, is:

1. In a device of the class described, the combination with a casting having a hollow rectangular central portion with one end open and a supply-pipe portion opening into the center of one side and a spray-pipe portion opening into and extending beyond the ends of the opposite side, of a removable cover for said open end having a generally-rectangular soap-holder secured thereto substantially filling said hollow portion and having perforations in its sides only adjacent the angles formed thereby and not in the portion facing the supply pipe, and means for detachably clamping said cover in place.

2. In a device of the class described, a soap distributing mechanism consisting of a flattened rectangular casing having a water supply tube opening in the center of one of its larger sides and a perforated spray tube connected with the opposite side thereof, said casing having an opening in one end, a closure for said opening, a rectangular perforated soap holder substantially co-extensive in length with the interior of said casing open at one end and attached at its other end to said closure and removable therewith, said soap holder being so constructed that one of its sides has an imperforate area of substantial extent, said soap holder being arranged within said casing in spaced relation to the walls of said casing with its open end adjacent the end of said casing which is remote from said opening and with said imperforate area adjacent said water supply opening, said closure being provided with a flange engaging the casing around said opening, means for holding said flange in water-tight engagement with said casing, comprising a yoke pivoted at one end to said casing, and a screw

threaded through the yoke and engaging said closure to clamp said flange against said casing.

3. In a device of the class described, a soap distributing mechanism consisting of a rectangular casing having a water supply tube opening in the center of one of its sides and a perforated spray tube connected with the opposite side thereof, said casing having an opening in one end, a closure for said opening, a rectangular perforated soap holder substantially co-extensive in length with the interior of said casing open at one end and attached at its other end to said closure and removable therewith, said soap holder being so constructed that one of its sides has an imperforate area of substantial extent, said soap holder being arranged within said casing in spaced relation to the walls thereof with its open end adjacent the end thereof which is remote from said opening and with said imperforate area adjacent said water supply opening, said closure being adapted to make a water-tight engagement with said opening, and readily detachable means for holding said closure in water-tight engagement with said casing.

4. In a device of the class described, a soap distributing mechanism consisting of a casing rectangular in cross section having a water supply tube opening in the center of one of its sides and a perforated spray member connected with the opposite side thereof, said casing having an opening in one end, a closure for said opening, a perforated soap holder rectangular in cross section substantially co-extensive in area with the interior of said casing open at one end and attached at its other end to said closure and removable therewith, said soap holder being so constructed that one of its sides has an imperforate area of substantial extent, said soap holder being arranged within said casing in spaced relation to the walls thereof with its open end adjacent the end thereof which is remote from said opening and with said imperforate area adjacent said water supply opening, said closure being adapted to make a water-tight engagement with said opening, and readily detachable means for holding said closure in water-tight engagement with said casing.

In witness whereof, I have hereunto set my hand this 1st day of October, 1929.

WALDEMAR L. LINDGREN.