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SOAPER AND BRUSHER FOR WASHING MACHINE TUBS

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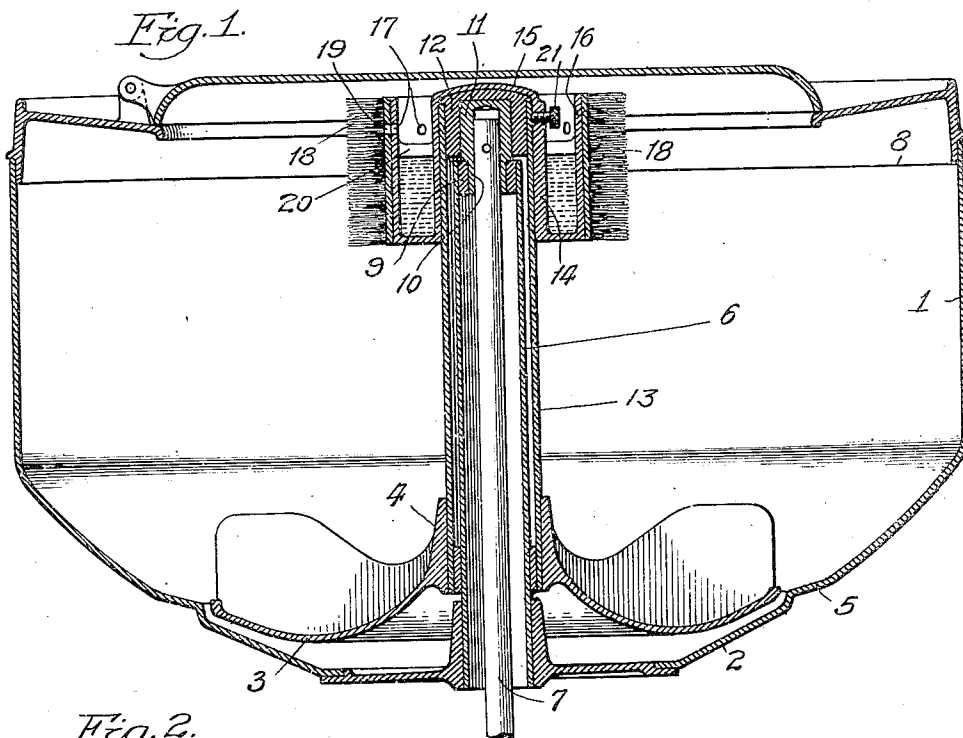
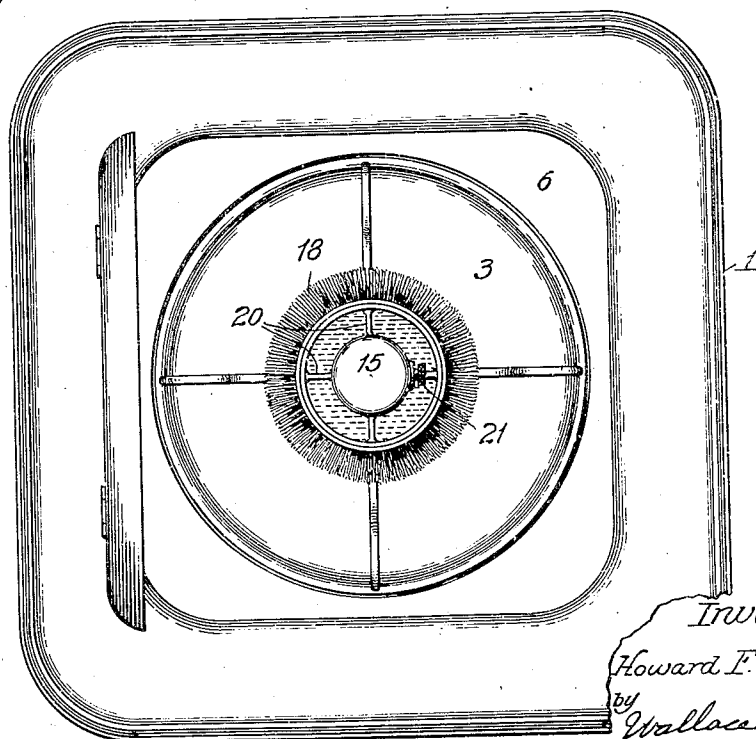


Fig. 2.



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SOAPER AND BRUSHER FOR WASHING MACHINE TUBS

Application filed October 5, 1925. Serial No. 60,479.

This invention relates to a soaper and brush adapted to operate in a washing machine tub for quickly and effectively soaping and brushing fabrics which have been excessively soiled so that they may be washed in approximately the same time as the other materials being washed in the tub.

One of the objects of my invention is to provide a washing machine tub with a combined soaper and brusher which is actuated from the same source of power as is the liquid impeller.

Another object of this invention resides in providing the liquid impeller in the washing machine tub with a brush which is constructed and arranged to be operated by the liquid impeller and is located so that excessively soiled fabrics may be quickly and easily cleansed during the washing operation.

Yet another feature of this invention resides in providing an attachment for the liquid impeller of the washing machine tub comprising a combined soaper and brush for cleaning the excessively soiled fabrics.

A further feature of my invention resides in providing a combined brusher and soaper attachment which is constructed and arranged to detachably fit over the upper portion of the high center driving stem of my improved type of washing machine agitator the construction of which is shown in my pending application Serial No. 16,949, filed March 20, 1925.

Still another object of my invention resides in providing the combined liquid soap distributor and brusher in the form of an attachment adapted to be connected to the liquid impeller and rotatable or oscillatable thereby and in providing the container of the liquid soap with suitable outlets so that the centrifugal force will effectively distribute cleansing liquid or soap during the brushing operation.

These and other objects of my invention will be apparent from a perusal of the following specification when taken in connection with the accompanying drawings, wherein:—

Fig. 1 is a sectional view of one form of my invention.

And, Fig. 2 is a top plan view thereof with the cover open.

Referring now to the drawings in detail, an embodiment of my invention is exemplified as applied to the high center drive type of agitator oscillatably mounted in a washing machine tub, as illustrated in my pending application, Serial No. 16,949 filed March 20, 1925. In this construction the tub 1 is provided with downwardly inclined basal walls 2 so that the trough portion 3 of the agitator 4 lies substantially in the same plane as that portion 5 of the bottom wall of the tub whereby to facilitate the peculiar tortuous flow of the cleansing liquid in the tub, all of which is covered in my pending application herein-after referred to.

In order operatively to mount the agitator 4 in the tub so that no leakage of water will occur through the base of the tub, I provide the base with an upstanding stationary hollow post 6 through which the drive shaft 7 projects substantially to the top of the tub and above the normal liquid level 8 therein. The upper end of this drive shaft 7 has a bearing 9 in the upper end of the post which bearing 9 includes the wear block 10. In addition the upper end of the shaft 7 has pinned thereto an angular torque block 11 which detachably fits in a correspondingly shaped dome 12 fitting in a water tight manner to a hollow stem 13 entirely smooth on its exterior. This stem is provided at its basal portion with an agitator hub 4. This agitator as before stated is formed with a trough-like depression 3 and a plurality of upstanding blades which are of greater depth at their peripheral portion so that as the agitator oscillates the cleansing liquid is caused to travel around the tub in one direction outwardly and up along the inclined basal portions of the tub, then backwardly and across the top of the tub and in a general direction downwardly toward the blade again, and then in the same general path but in the reverse direction around the tub, as described in my pending application 568,158, filed June 14, 1922. Inasmuch as the details of construction of the high center drive mechanism for the agitator are described in my pending ap- 100

plication 16,949, of March 20, 1925, no further mention thereof will be made.

I have preferably used this high center drive construction as an exemplification of the principles of my present invention relating to my combined soaper and brusher. In the present instance I form my combined soaper and brusher in the form of an attachment adapted to be preferably detachably connected with the upper end of the stem 13 of the liquid impeller or agitator 4 so that when the agitator is actuated and oscillated first in one direction and then in the other, the same motion will be imparted to the combined soaper and brusher, and since the attachment is mounted at the upper end of the tub and extending above and below the normal liquid level, it is then in ideal position for use in facilitating the cleansing or preliminary cleansing of excessively soiled fabrics.

In one form of my invention the combined soaper and brusher comprises a hub-like portion 14 having an inner bore corresponding to the diameter of the upper end of the stem 13 so as to fit snugly thereover. This hub is provided with an integral rounded cap 15 which fits over the dome 12 of the stem, and in addition the hub is provided with a laterally extending flange which likewise extends upwardly at 16 to form an annular chamber or container for receiving the detergent or washing fluid such as liquid soap, said chamber or container being concentric with said hub. This flange 16 is provided with a plurality of perforations 17 through which the soap may be distributed to the outer surface of this flange. The outer surface of the flange is provided with and formed in the shape of a cylindrical brush, the bristles 18 of which are secured in any desired manner to the flange 16. As shown in the drawings, said brush is constructed of a cylindrical sleeve which encloses the flange 16 and carries the bristles 18. These bristles extend radially outwardly as shown. The brush has perforations 19 which register with the perforations 17 so that the liquid soap may be carried to the surface of the brush bristles. In addition the annular pocket is provided with a series of splash ribs 20 which interconnect the flange 16 and the hub 14. These splash ribs suitably agitate the washing fluids during the oscillation of the agitator and cause the fluid to splash outwardly through the perforations, thereby adequately to distribute the cleansing fluid to the surface of the brush.

Means is provided for detachably mounting this brushing attachment on the upper end of the stem. A simple means resides in providing the flange 14 with a perforation in which there is a thumb screw 21 adapted to engage the upper portion of the stem 13 whereby to rigidly but detachably connect

the attachment to the stem so that when the agitator is actuated the attachment is also actuated. This means permits the ready detachment of the combined brusher and soaper when its use is not desired.

In the operation of my invention when the washing machine is in operation and the attachment is in place, a collar or other fabric which is especially soiled may be held in position against the bristles of the brush which will immediately cause the liquid soap to be imparted to the fabric and the bristles of the brush will then thoroughly cleanse the fabric so that it will be washed at the same time that the other fabrics in the tub are being washed. When the attachment is not needed it can be quickly removed by unscrewing the thumb screw.

It must be apparent that the invention is not restricted to the details of construction illustrated in the accompanying drawings and described in the specification, as other modifications may be used within the limits of the following claims.

I claim:

1. In a washing machine, a tub, a rotatable support therein, a container for fluid provided with an external wall enclosed by a brush constructed with outwardly extended bristles, said wall and said brush having perforations so that the contents of the container may be fed to said brush, said container having a central hub engageable with said rotatable support.

2. In a washing machine, a tub, a rotatable support therein, a container for fluid provided with a hub engageable with said support and also provided with a chamber concentric with said hub, a brush consisting of a sleeve enclosing the peripheral wall of said chamber and provided with outwardly extended bristles, said peripheral wall and said sleeve having coinciding openings so that the contents of the chamber may be fed to said brush.

3. In a washing machine, a tub, an oscillatable support therein, a container for fluid mounted on said oscillatable support and provided with an external wall enclosed by a brush constructed with outwardly extended bristles, said wall and brush being perforated so that the contents of the container may be fed to said brush, means for oscillating said support and splash ribs located within said container so as to agitate the contents of the container during oscillation thereof.

4. In a washing machine, a tub, a stem mounted to oscillate on a vertical axis within said tub, a brush member provided with a hub portion engaging the upper part of said stem so as to oscillate therewith, and having outwardly extended peripheral bristles, said brush member also having means for feeding detergent material from the interior thereof to said bristles, said hub-like portion being

closed at one end to provide a cap for the top of said stem.

5. In a washing machine, a tub, a shaft mounted to oscillate in said tub on a vertical axis, a stem connected with said shaft so as to oscillate therewith, a brush mounted on the upper end of said stem and movable therewith, and a perforated soap reservoir within said brush concentric with and surrounding said stem, so as to be subjected to the centrifugal force created by the oscillation of the shaft.

6. In a washing machine, a tub, a shaft mounted in the tub so as to oscillate on a vertical axis, a stem having its upper end secured to said shaft so as to oscillate therewith, and a brush mounted on the upper end of said stem and movable therewith, said brush having an internal reservoir for detergent fluid, said reservoir having means for delivering said fluid to the brush by the centrifugal force created by oscillation of the shaft.

In witness whereof, I hereunto subscribe my name to this specification.

HOWARD F. SNYDER..