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FOUNTAIN SPONGE

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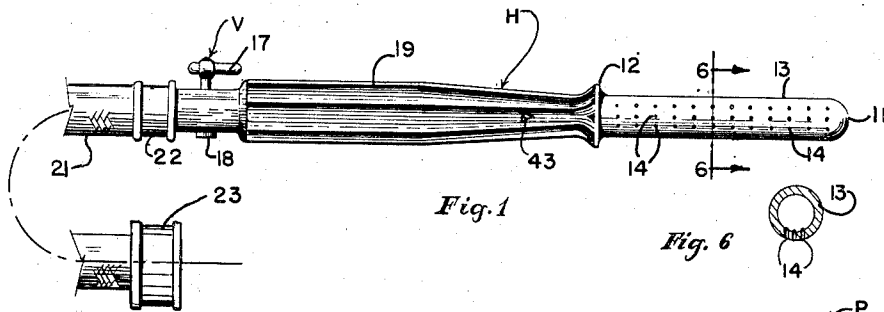


Fig. 1

Fig. 6

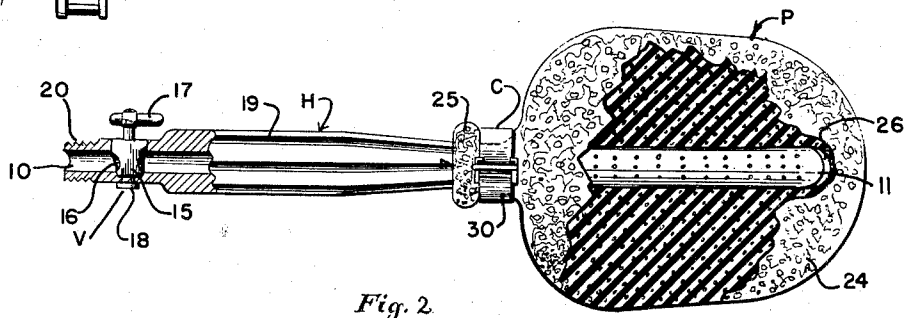


Fig. 2

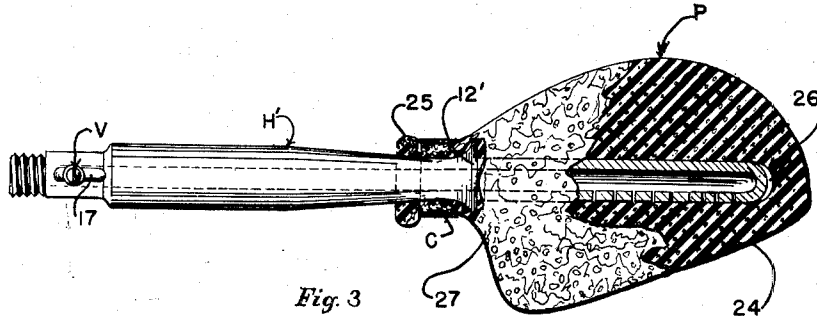


Fig. 3

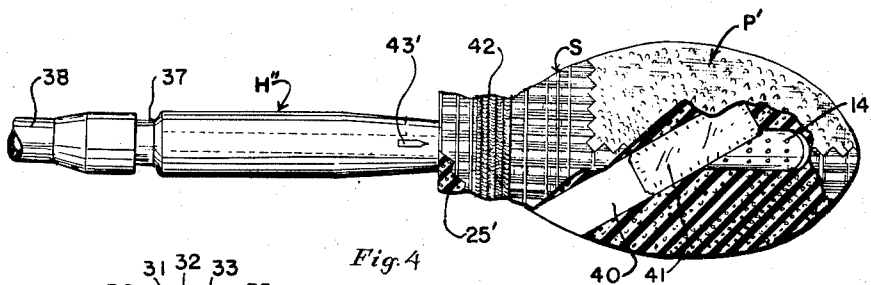


Fig. 4

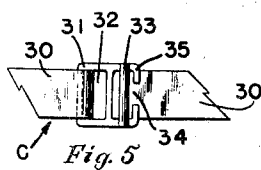


Fig. 5

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FOUNTAIN SPONGE

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3 Claims. (Cl. 15—130)

This invention relates to fountain sponges and more particularly to fountain sponges adapted to be connected directly to a supply of water, such as a hose, faucet, or the like.

In washing automobiles, dishes and other articles, it is customary to utilize a cloth, mop or a natural or synthetic sponge pad, so as to apply washing fluid to a particular area and simultaneously scrub the surface to be cleaned with the cloth or pad. When the cloth or pad is merely dipped into or saturated with the washing fluid, considerable time sometimes must be spent for effective cleaning, since loosened material does not always flow away in such instances. Also, the material to be removed often adheres to the cloth or pad, thereby requiring a thorough cleaning of the latter at frequent periods. Thus, it is often desirable to supply water or similar washing fluid continuously to the point at which dirt or other substances is to be removed, and washing is often facilitated by a continuous supply of soapy fluid to the area being cleaned. However, undue complications often ensue from attempts to spray or otherwise direct the washing fluid onto the surface to be cleaned, separately from the cloth or pad. Also, when a jet or spray of washing fluid is directed against the surface to be cleaned, the impact of the jet being relied upon for a scouring action, the latter is often insufficient unless continued for a long period of time. Thus, numerous advantages can be obtained if the washing fluid can be discharged onto the surface to be cleaned through the cloth or pad. Previous washing devices of this type have been either too complicated or have not produced a discharge of washing fluid at the most desirable places, and have tended to discharge toward and spray a portion of the washing fluid onto the person using the device.

Among the objects of the present invention is to provide a novel washing device or fountain sponge; to provide such a washing device in which a washing fluid, such as water, is supplied through a pad to the surface area to be cleaned; to provide such a washing device in which the pad is substantially self-cleaning; to provide such a washing device in which the user is subjected to a minimum of discomfort through unwarranted spraying or leakage of the washing fluid; to provide such a washing device which is readily assembled and also is readily taken apart for periodic cleaning; to provide a washing device in which a soap or similar composition, preferably a solid, may be placed in a position such that the water discharged onto the surface to be cleaned will carry soap; to provide such a washing device which is particularly adapted for washing operations on smaller articles, such as dishes and the like; to provide such a washing device which may be adequately controlled during use; and to provide such a washing device which is comparatively simple in construction yet effective in operation.

Additional objects and the novel features of this invention will become apparent from the following descrip-

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tion, taken in connection with the accompanying drawings, in which:

Fig. 1 is a bottom view of a tubular handle forming a part of one embodiment of a washing device;

Fig. 2 is a bottom view of one form of washing device which includes the handle of Fig. 1 and includes also a cellular pad, the latter being partly broken away to illustrate more clearly the interior construction;

Fig. 3 is a side view of the washing device of Fig. 2 with a slightly different handle, the pad thereof again being broken away to show the interior construction more clearly;

Fig. 4 is a side view of a washing device constituting the preferred embodiment of this invention, certain portions thereof being broken away to illustrate the construction more clearly;

Fig. 5 is a fragmentary view of a portion of one form of clamp, which may form a part of the washing device of this invention; and

Fig. 6 is a transverse section taken along line 6—6 of Fig. 1.

As illustrated in Figs. 1, 2 and 6, one embodiment of a washing device may include a handle H and a pad P, the handle H preferably being an elongated tube having a water inlet 10 at one end and closed at the opposite end 11, which is also preferably rounded, as shown. The pad P may be generally oval in longitudinal section and formed of resilient cellular material, such as sponge rubber or natural sponge, although sponge rubber is preferred, such as the type known as chemically blown milled sponge rubber or the foam latex type, although the rubber may be synthetic rather than natural. At a point spaced between the inlet 10 and the opposite end 11, preferably closer to the end 11, the handle H is provided with a generally annular flange 12, which may be flat on the side facing the end 11, and inclined on the side facing the inlet end 10. That portion of the handle between the flange 12 and the end 11 may be formed as a smooth tube 13, which is provided with a series of water discharge holes 14, which are limited to one side only of the tube 13. The holes 14, as in Fig. 6, are preferably substantially parallel to each other so that the direction of discharge of water through each of the holes 14 is the same, and also are preferably longitudinal and laterally spaced, as in a series of rows both laterally and longitudinally.

The handle H may also be provided adjacent the inlet with a valve V, such a plug valve having a tapered body 15 with a transverse hole 16 therethrough and a handle 17 for turning the body 15 between on, off and intermediate positions. The valve body 15 may be inserted in a tapered hole formed in the handle H, and maintained therein by a screw 18. Or, the valve V may be a separate part, attached to the inlet end of the handle in any suitable manner, or molded thereto. The handle H may be made of metal, such as aluminum, or of vulcanized or hard rubber or any other suitable material, while the valve body B may be made of metal or plastic, and when the valve V is separate, it may be made of metal. For low cost of manufacture, the handle is preferably cast or molded.

Between the valve V and the flange 12, the handle H may be provided with a series of longitudinally extending ribs 19, which may also extend onto flange 12. The ribs permit a better grip on the handle by a user and also assist in preventing the pad P from turning on the handle. However, the handle may be smooth, as in the case of the handle H' of Fig. 3. At the inlet end, threads 20 may be provided to permit attachment of a light rubber tube 21, having a conventional threaded connection 22, as in Fig. 1. Tube 21 may be 6 to 8 ft. long, or any desired length, and is provided at its oppo-

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site end with a connection 23 for attachment of a garden hose or the like, the light tube 21 reducing considerably the weight to be moved around while washing an automobile or the like.

The pad P, which is formed of cellular material, as described previously, and may be generally oval in longitudinal cross section except for a generally flat bottom 24, is provided with a neck 25 at one end and a hole 26 which extends longitudinally through the neck and into the interior of the pad, as in Figs. 3 and 4, to within a short distance from the opposite end and at least a sufficient distance to accommodate the tube portion 13 of the handle H and so that the neck 25 may be located past the flange 12 toward the inlet end. Hole 26 preferably has a diameter so that the pad is spread slightly by the tube 13 as it is pushed into the pad, the rounded end 11 facilitating such insertion, and also extends at an angle to the generally flat bottom 24, as in Fig. 3. The neck 25 may be tubular in form prior to clamping, but is squeezed down against the handle by the clamp C, which not only securely fastens the pad P to the handle H, but also by compressing the cellular material against the flange 12, reduces to a minimum any tendency for water to run back onto the handle. Neck 25 may also be provided with a sharply cut slit at the top, to facilitate insertion of the handle.

In the form of pad illustrated in Figs. 2 and 3, the bottom 24 thereof is generally flat, as indicated previously, being inclined slightly upward at the front, if desired, the generally flat bottom extending to a shoulder 27 at the rear, so that a comparatively flat surface, through which the water is primarily discharged from the holes 14 in the handle H, will be provided. This flat surface has considerable advantage in washing relatively large areas, such as on an automobile or the like.

While the principal discharge of water from the pad P is through the bottom 24, there will be a tendency for the water to completely saturate the pad, due to its cellular nature, and while the amount of water discharged through the pad will depend upon the amount supplied from the inlet as controlled by the valve V, the discharge can be adjusted so that a constant stream will be discharged from the bottom 24, but a considerably smaller amount of water will be discharged from the remaining outer surfaces of the pad. It will be understood, of course, that water passing through the pad is not discharged in the form of a spray or jet, but rather oozes from the pad, perhaps at a comparatively large rate from the bottom 24 when the inlet flow is adjusted accordingly.

The clamp C, in the form shown in Figs. 2 and 5, may comprise a strip 30 of a suitable resilient material, such as latex of the type commonly used in rubber girdles for women's wear, sufficiently thick to withstand the rigors of use and attached at one end to a clip 31, as by the end of strip 30 being passed through a slot 32 in the clip, then lapped over and sewn or otherwise suitably attached to the adjacent portion of the strip. The opposite end 33 of the strip 30 may be enlarged, such as by the strip being doubled back over a small rod or on itself and then attached together. For attachment of the pad P to the handle H, the strip 30 may be passed around the neck 25 of the pad P—which is already in position on the handle H—and the strip then stretched adjacent end 33 and twisted slightly for insertion into an open slot 34 of clip 31, and then turned back to a transverse position and released. As will be evident, the enlarged end 33 will engage the sides of the clip and the strip 30 will be prevented from pulling out of the clip by the clip ends 35. For detachment, the end 33 of the strip may be pulled outwardly, then twisted for removal through slot 34, thus being disengaged from clip 31. To prevent loss, the strip 30 may be attached to the pad, as by sewing, preferably on the side opposite the clip 31. A heavy rubber band, or similar elastic member, may be

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substituted for clamp C, but a separable clamp is more desirable, in view of the greater ease with which it may be attached and detached.

The embodiments of Figs. 2 and 3 are particularly adapted to be utilized in washing comparatively large surface areas, although they may be made smaller in size for washing smaller surface areas, while the preferred embodiment of Fig. 4 is particularly adapted to be utilized in washing dishes and the like, during which use the washer is inserted within cylindrical articles, such as glass tumblers, bottles, jars and the like. Thus, the handle H' of Fig. 4 may be similar to the handle H' of Fig. 3, or the handle H of Figs. 1 and 2, but may be provided only with a nipple 37 at the inlet end for attachment of a tube 38, such as formed of rubber. The opposite end of tube 38 may be attached to a faucet, and the faucet utilized to control the flow of water to the washing device. Because of the desirability of inserting the pad P' within cylindrical articles, it may be substantially oval in longitudinal cross section and circular or slightly oval in transverse cross section, but provided at one end with a neck 25' adapted to be inserted past the flange on the handle H'', which may be formed and located similarly to the flange 12' of Fig. 3 and clamped on the handle by a clamp similar to the clamp C of Fig. 2.

The pad P' may also be provided with a soap pocket, such as formed by a slot 40 which extends angularly into the body of the pad from the rear and in a plane perpendicular to the final direction of outlets 14, pocket 40 being adapted to contain a piece 41 of soap, such as soap scrap, which may be inserted therein and held by the resiliency of the pad. The slot 40 may extend at an angle of 20° to 30° to the axis of handle H, or any other desired angle, and preferably extends for a sufficient distance that the soap 41 will lie directly in the path of water discharged from a number of the water discharge outlets 14 of the handle. For washing with soap, a comparatively gentle flow of warm or hot water is preferably utilized, so that sufficient soapy water will be exuded from the side of pad P' adjacent outlets 14.

For washing pots, pans and the like, a mitten-like scouring cover S, formed of a woven fabric, at least some of the threads of which are metal in the conventional manner, may be utilized, the pad P' being inserted within the scouring cover S, as shown, and the scouring cover being retained thereon by an elastic band 42 attached to the cover S at the position of the neck 25' of the pad P'. As will be evident, the principal discharge of water through the pad P' and also the scouring cover S when in use, is on the same side as the water discharge outlets 14. The pad P' may, of course, be used without the cover S. After soapy water has been applied to the surface, the soap may be removed, or the pad P' may be removed and the article or object rinsed with water sprayed from outlets 14.

Since the pad P or P' will tend to wear out more quickly than the handle, new pads may be purchased when required. The handle H'' may also be made longer, for washing mason jars, while toilet soap may be placed in pocket 40, and the washing device used as a bath brush.

The handle H may be provided with an indicating mark 43 on the same side as, or opposite to, the holes 14, such as a projection or raised arrow, to indicate the desired position of the flat bottom 24 of the pad P. Similarly, the handle H'' may be provided with an indicating mark 43', to enable the soap pocket 40 to be aligned with the outlets 14. Thus, the user, after inserting the discharge end of the handle within the pad, may twist the pad to align the flat bottom 24 or the soap slot with the discharge holes 14. The handle and/or the pad is preferably wet prior to insertion to facilitate the same.

The size of the various parts of the washing device of this invention may be varied in accordance with the desired use. Thus, the pad P, for washing automobiles and

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the like, may be about 6 in. long (including neck 25), 4 in. wide and 3½ in. thick, while the pad P', for washing dishes and the like may be about 6 in. long and about 3 in. in maximum transverse dimension. The resiliency of the pad permits it to be inserted within articles having a lesser diameter. The handle H may be from 10 to 12 in. long, or any other desired length, while the smooth tube portion 13 may be from 3 to 5 in. in length and any desired diameter, such as ½ to 1 in. The holes 14 may be any desired size, such as about ¼ in. in diameter and spaced about ¼ in. apart in each lateral row, with the rows spaced about ¼ in. apart longitudinally, when the tube 13 has a diameter of about ¾ in. and a length, from the flange 12 to the end 11, of about 3½ in. All of the above dimensions can, of course, be varied considerably. Also, one or more narrow slots or elongated apertures may be substituted for the holes, the slots being either longitudinal or transverse, and the former may be one slot or a longitudinal series of slots.

From the foregoing, it will be evident that the washing device of this invention fulfills to a marked degree the requirements and objects hereinbefore set forth. The discharge holes in the handle, when limited to one side only, insure that a major portion of the water will be discharged through the pad on one side, so that more effective washing action is produced. Also, the use of a clamp to attach the pad to the handle, at a point toward the inlet from the discharge holes, tends to insure that a minimum of water will flow back along the handle, and this is particularly true when the handle is provided with an outwardly extending flange and the pad is provided with a neck, which is clamped to the handle on the inlet side of the flange. The clamp C, when constructed in the manner of Figs. 2 and 5, is readily attached to and detached from the device. The provision of a slot for soap, which is positioned directly in the principal path of the water discharged from one side only of the handle, tends to insure that sufficient soap will be picked up by the water and the soapy water discharged at the desired point of use.

It will be understood that various changes may be made in the construction of the washing device of this invention. The possibility of various types of materials has been discussed above, and it will be understood that other materials, not mentioned, may be utilized. Also, the shape and size of both the handle and the pad may be varied considerably, while the type and location of the valve for controlling the flow of water through the device also may be varied considerably.

Although one preferred embodiment of this invention has been illustrated and described, it will be understood that other embodiments may exist, and various changes made therein, all without departing from the spirit and scope of this invention.

What is claimed is:

1. A washing device comprising a handle formed as an elongated hollow tube adapted to receive water at its inlet end and closed at the opposite end, said tube having a laterally extending flange spaced from each end thereof and also having a series of spaced discharge outlets in one side only extending from a point adjacent the closed end of said tube to a point adjacent said flange; a pad of resilient cellular material generally oval in longitudinal shape and having a longitudinally extend-

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ing neck at one end and a hole extending through said neck and longitudinally into the interior of said pad, said pad hole receiving said tube with at least a major portion of said neck disposed on the inlet side of said flange, said pad also having a soap slot extending from the rear adjacent said neck and at an angle less than a right angle to said hole but spaced from said hole so that a piece of soap inserted therein may lie directly in the path of water discharged from said tube outlets; said tube having an indicating mark in longitudinal alignment with said outlets and disposed between said inlet and said flange, so as to locate said soap pocket directly over said outlets; and means for clamping said neck on said handle.

2. A washing device comprising a handle formed as an elongated hollow tube adapted to receive water at its inlet end and closed at the opposite end, said tube having a series of spaced discharge outlets in one side only extending from a point adjacent the closed end of said tube to a point spaced therefrom; a pad of resilient cellular material generally oval in at least one longitudinal plane, said pad having a hole extending from one end thereof into the interior of said pad, said pad hole receiving said tube with all of said tube outlets within said pad, said pad also having a soap slot extending from the rear and at an angle to said hole but spaced from said hole so that a piece of soap inserted therein may lie directly in the path of water discharged from said tube outlets; and means for attaching said pad to said handle, said handle having an indicating mark between said inlet and said pad in longitudinal alignment with said outlets so that said pad may be attached to said handle with said soap slot in the direct path of flow of water discharged from said outlets.

3. A washing device comprising a handle formed as an elongated hollow tube adapted to receive water at its inlet end and closed at the opposite end, said tube having a series of spaced discharge outlets in one side only extending from a point adjacent the closed end of said tube to a point spaced therefrom; an elongated pad of resilient cellular material having a hole extending longitudinally into the interior of said pad and a soap slot extending into said pad in spaced relation to said hole, so that a piece of soap inserted therein may lie directly in the path of water discharged from said tube outlets, said pad hole receiving said tube with all of said tube outlets within said pad and said tube having an indicating mark in longitudinal alignment with said outlets and disposed between said inlet and said pad so as to indicate the position of said outlets when said outlets are covered by said pad; and means for attaching said pad to said handle.

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