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FOUNTAIN SPONGE HAVING EXPANSIBLE DISCHARGE ORIFICE

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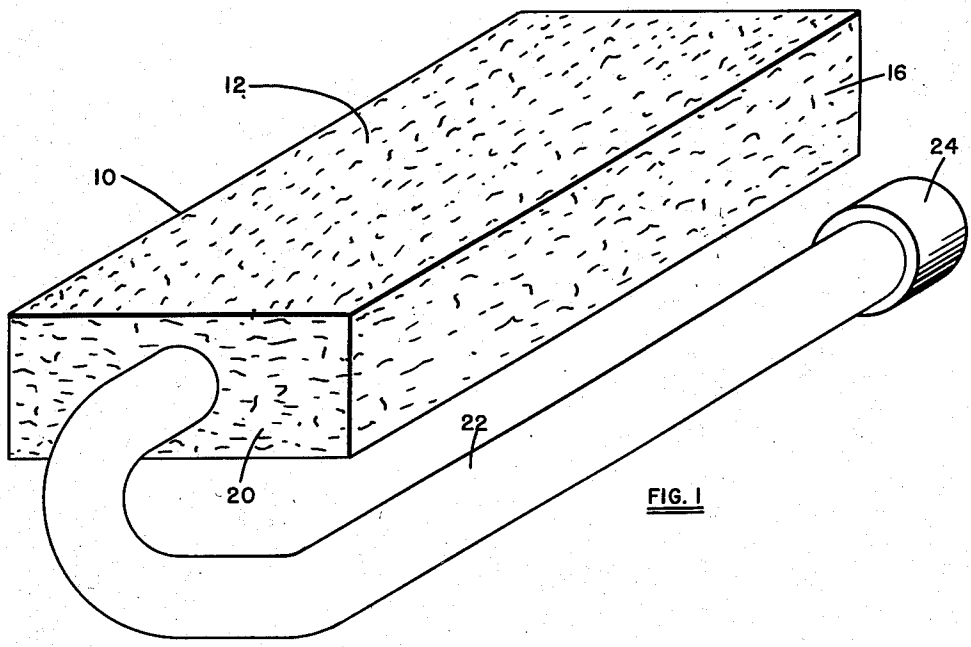


FIG. 1

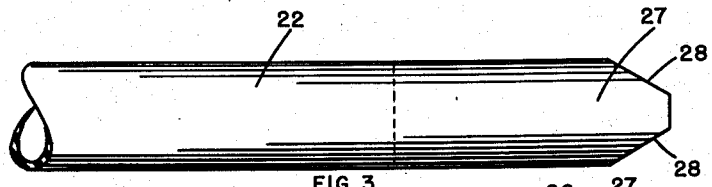


FIG. 3

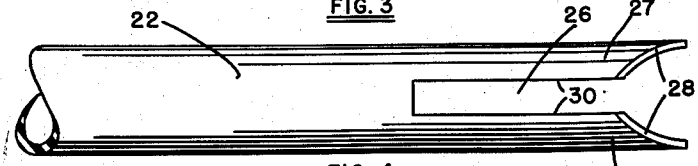


FIG. 4

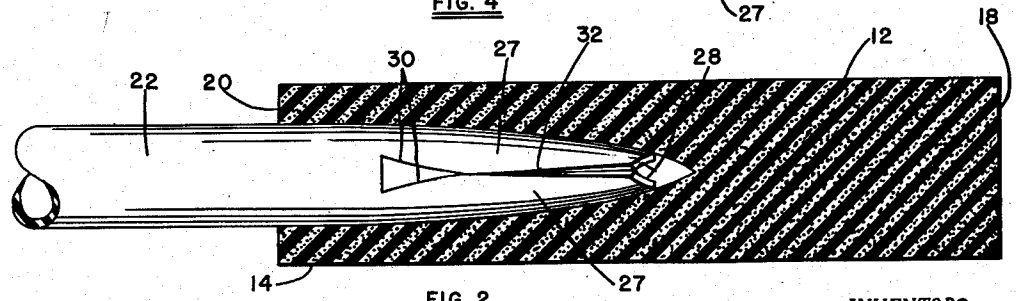


FIG. 2

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FOUNTAIN SPONGE HAVING EXPANSIBLE DISCHARGE ORIFICE

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5 Claims. (Cl. 15—130)

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This invention relates to cleaning devices, and more particularly to fountain sponges.

An object of the invention is to provide an inexpensive, yet highly efficient fountain sponge which includes means for insuring an adequate supply or flow of water to all portions of the active surface of the sponge.

A further object of the invention is to provide a fountain sponge wherein water is discharged interiorly thereof in such a manner as to cause a flow of water thru the body portion of the sponge and thence onto the various cleaning faces thereof.

Still another object of the invention is to provide a fountain sponge wherein the body member is fabricated from porous or cellular material, the outer active or working surfaces of which are continuously cleansed of dirt, grime and other abrasive substances removed from a surface to be cleaned, thereby eliminating the likelihood of scratching or otherwise damaging the surface being cleaned.

A further object of the invention is to provide a fountain sponge having the hereinabove described characteristics and which includes a supply hose having an end shaped in such a manner as to form an inexpensive, yet highly efficient water discharge nozzle thru which water is discharged into and quite evenly distributed throughout the interior of the sponge body, thereby effectively eliminating the localized wet spots which have hithereto been characteristic of fountain sponges.

These and other objects are attained by the means described herein and as disclosed in the accompanying drawings, in which:

Fig. 1 is a perspective view of the fountain sponge of the present invention.

Fig. 2 is a view partly in section of the device of Fig. 1.

Fig. 3 is a top view of the end of a length of hose cut to provide a water distribution member comprising a detail of the present invention.

Fig. 4 is a side view of the hose of Fig. 3.

With reference to Fig. 1, it will be observed that the present device comprises a body portion 10 fabricated from cellular or porous material such as, by way of example, so-called latex air cell foam rubber, sponge rubber or the like. The body of the sponge may be rectangular in shape, including upper surface 12, lower surface 14, side surfaces 16 and front and rear surfaces 18 and 20 respectively. Preferably the length of dimension is from 1½ to 2 times the width dimension, this relationship having proved itself in practice.

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A length of hose 22 has one end permanently embedded within sponge 10, the other end being provided with a suitable coupling member 24 for facilitating attachment of the hose to a source of water under pressure.

With reference now to Figs. 3 and 4, it will be noted that the end of hose 22 is cut, or otherwise formed with a slot 26 to provide a pair of laterally spaced flaps 27, the width of which slot approximates from ⅛ to ¼ of an inch, and the length of which may be from 2 to 4 times the diameter of the hose. The ends of the hose are trimmed in a plane at substantial right angles to the plane of slot 26 to provide a taper 28 of from 30 to 45 degrees. The sponge is prepared for hose 22 by making an incision from the rear surface 20 into the body thereof wherein the depth of the incision exceeds the length of slot 26 by a dimension of from one to three times the diameter of hose 22.

A suitable rubber adhesive is generously applied to the end adjacent outer surface of hose 22, and after flaps 27 have been brought together, it may be introduced forwardly into the interior of the sponge to assume the position illustrated in Fig. 2. It will be noted that the adjacent faces 30 of flaps 27 will be disposed in substantial line contact for the major portion of their length, thereby providing a pair of elongated fluid discharge slits 32 extending along opposite sides of hose 22 and preferably in a plane at right angles relative to upper and lower surfaces 12 and 14 of the sponge. The forward end of said slits terminate in an expansible discharge orifice defined by those portions of flaps 27 which project forwardly from edges 30.

When water under pressure is introduced thru hose 22, it will be discharged interiorly of sponge 10 in such a manner as to adequately and thoroughly saturate the sponge to such an extent that water will literally flow outwardly from the entire area of each of the active surfaces of the sponge. This action effectively cleanses the active surface of the sponge of foreign particles such as dirt, grime, and the like, whereby the active surface will at all times be free of particles which could otherwise scratch the surface being cleaned.

As a greater quantity of water is caused to flow thru hose 22, the adjacent edges of the elongated discharge slit 32 will be moved apart, thereby enabling greater quantities of fluid to be discharged into the body of the sponge at substantial right angles relative to the longitudinal axis of the sponge. Likewise, the expansible characteristics of the end of the hose will result in an

enlargement of the end-orifice incident to an increased flow of water thru the hose, thereby flooding water forwardly as well as sideways and rearwardly throughout the interior of the sponge.

By reason of the construction and physical characteristics of the hose, all danger of building up pressures within the interior of the sponge which might rupture the sponge and/or cause a loosening between the adhesive between the sponge and hose **22** is effectively eliminated.

In those instances where the sponge is fabricated from a good quality latex air cell foam rubber, the device may be disconnected from a source of water and drained whereupon the sponge may be used as a chamois.

What is claimed is:

1. A fountain sponge comprising a sponge rubber body portion and a resilient tubular water delivery channel embedded therein, said channel terminating in a restricted, expansible discharge orifice, and a pair of elongated discharge slits in open communication therewith and extending rearwardly therefrom.

2. A fountain sponge comprising a sponge rubber body portion, and a hose one end of which has a slot of a length in excess of the diameter of the hose, the said slotted end of the hose being imbedded in an incision in the sponge body for providing a tapered delivery channel having continuous interconnected, elongated side and end openings which define a substantially U-shaped discharge orifice in communication with the interior of said body portion.

3. A fountain sponge comprising a body portion and a resilient pliable water delivery channel embedded therein, said channel terminating interiorly of said body portion in an expansible substantially U-shaped orifice, the sides of which are located in opposite portions of the wall of said channel.

4. A fountain sponge comprising a substantially rectangularly shaped sponge rubber body portion having top, bottom, front, rear and side surfaces and a flexible water delivery channel embedded within said body portion intermediate the top and bottom surfaces, said channel having a pair of laterally spaced elongated discharge slits opening toward the side surfaces of said body portion and terminating at their forward ends in a restricted expansible end discharge orifice.

5. A fountain sponge comprising a sponge rubber body portion and a hose with slots of a length greater than the hose diameter in opposite portions of the periphery of the hose for providing a pair of flaps the ends of which taper from the slot to said end of the hose, means for securing said end portion interiorly of the body portion and means within said body portion for normally and yieldably maintaining adjacent portions of said slot in substantially line contact for establishing an expansible substantially U-shaped tapered discharge orifice.

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