Oct. 15, 1968 V. E. DIEBOLD 3,405,997

FOUNTAIN BRUSH

Filed June 20, 1966

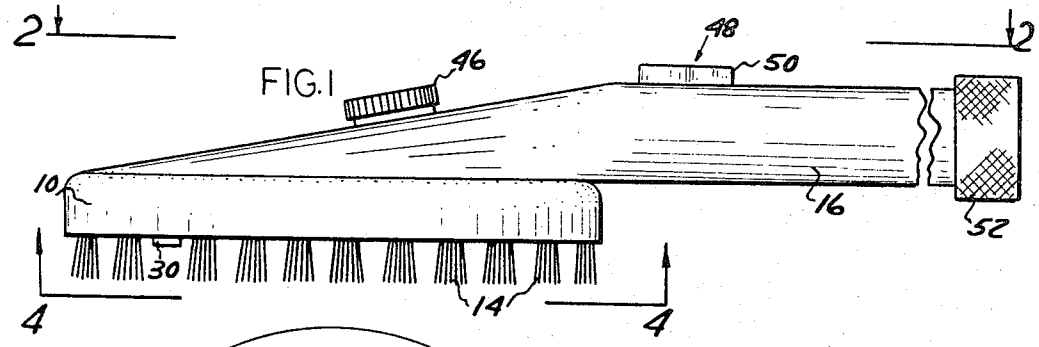


FIG. 1

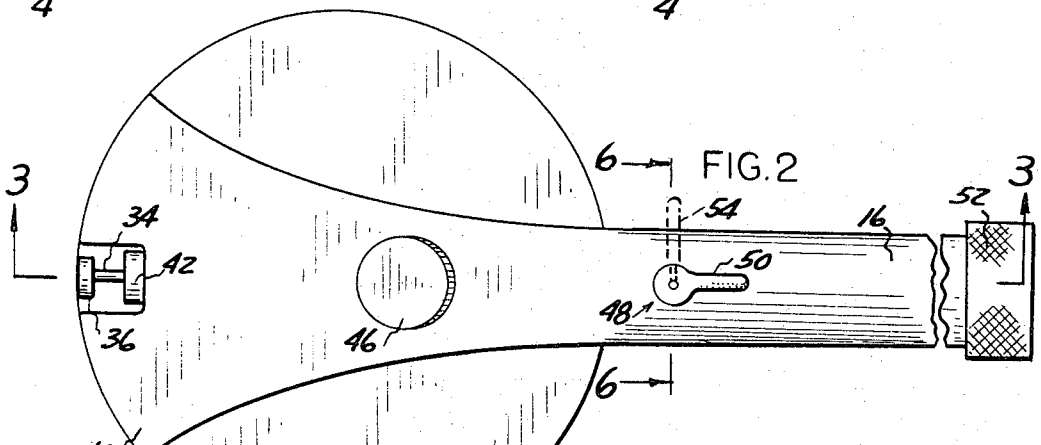


FIG. 2

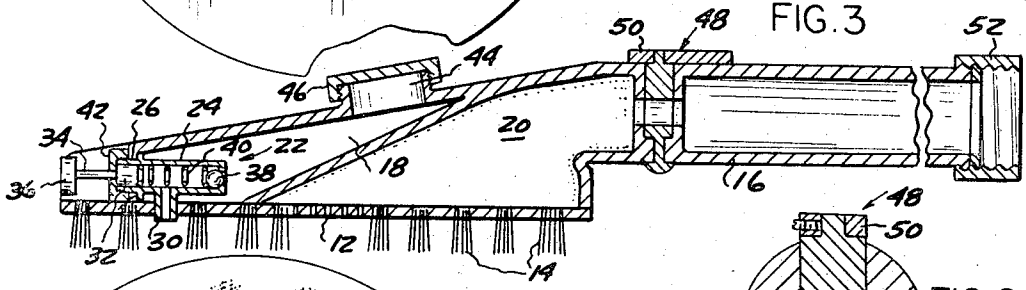


FIG. 3

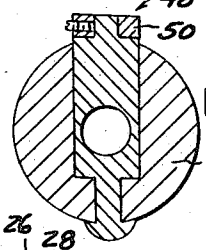


FIG. 6

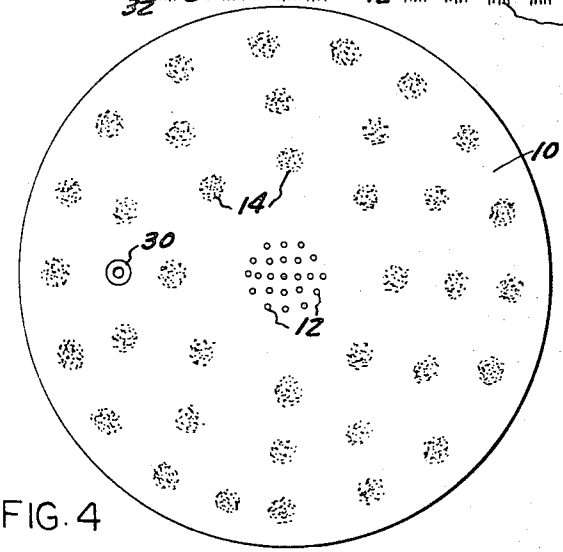


FIG. 4

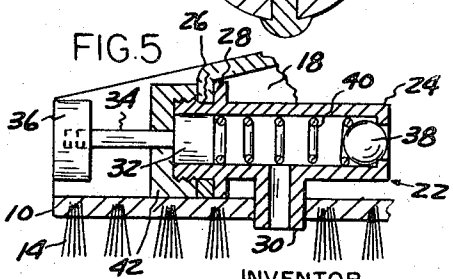


FIG. 5

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FOUNTAIN BRUSH

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1 Claim. (Cl. 401—46)

ABSTRACT OF THE DISCLOSURE

A fountain brush consisting of a tufted scrubber head connectable to a source of pressurized fluid and having therein a pair of independent chambers. One of such chambers directs fluid to the working face of the scrubber head through a central array of discharge ports, and the other chamber selectively supplies a liquid cleaning agent to the working face by means of a fluid pump mounted in the scrubber head.

This invention relates to fountain brushes generally, and more particularly to a hand operated brush of such type suitable for use in washing vehicles, awnings, lawn furniture and other similar items.

It is customary for most home owners periodically to wash their storm windows, screens, lawn furniture, and other items exposed to the elements. This cleaning operation customarily comprises two steps, which consist of a washing procedure, with soap and a detergent, followed by a clear water rinse, usually performed with a hose. To achieve optimum results, the soap or detergent should not be permitted to dry before the rinsing operation is performed.

In such a cleaning operation, the two indicated steps are repeated until the entire task of refurbishing has been completed. Such a repetitious procedure consequently consumes more time than would be required if the washing steps and rinsing steps could be performed in rapid succession with a single implement.

The applicant therefore has, as the primary object of his invention, the provision of a fountain brush with a self-contained means for selectively applying soap and detergent in the course of repetitive washing and rinsing cycles.

Another object of the invention is to provide an implement of the type previously described, which has a finger tip water control valve so that a rinsing operation can be conveniently performed immediately upon completion of a washing operation.

A further object of the invention is to provide an implement of the type previously described which is compact, easy to manipulate, and avoids all contact of the person with the water, soap or detergent.

A still further object of the invention is to provide an implement of the type previously described which is rugged in construction and relatively inexpensive to produce.

Other features and advantages of the invention will become apparent after consideration of a detailed discussion of the same composed with reference to the drawings constituting a portion of this application, and in which:

FIGURE 1 is a side elevation view of the applicant's fountain brush showing its characteristic shape.

FIGURE 2 is a top plan view, taken substantially on plane 2—2 in FIGURE 1, showing the location of the pump in the scrubber head.

FIGURE 3 is a section view taken substantially on plane 3—3 in FIGURE 2, showing internal construction of the scrubber head.

FIGURE 4 is a bottom view of the scrubber head, taken substantially on plane 4—4 in FIGURE 1, showing the relative positions of the pump nozzle and the discharge ports in the scrubber head.

FIGURE 5 is an enlarged fragmentary view showing structural details of the pump in the scrubber head.

FIGURE 6 is an enlarged section view, taken substantially on plane 6—6 in FIGURE 2, showing structural details of the water control valve.

For a more detailed description of the invention, reference is made to the drawings in which numeral **10** designates a circular scrubber head having therein an annular array of downwardly disposed discharge ports **12**, and a plurality of bristle tufts **14**. A tubular handle **16** is moulded integral with the scrubber head **10**, and provides in conjunction therewith, two separate internal chambers **18** and **20**.

A liquid pump **22**, mounted in the forward end of the scrubber head **10**, has a tubular barrel **24** disposed in the internal chamber **18**, and extending through an opening **26** in the forward wall. A circular flange **28**, on the barrel **24** of the pump **22**, seats on the inside wall of the chamber **18**. A nozzle **30** provides communication between the interior of the barrel **24**, and the tufted side of the scrubber head **10**.

A reciprocable plunger **32**, in the barrel **24**, has an axial stem **34** provided with a terminal push button **36**. A ball closure valve **38**, in the back end of the barrel **24**, is held in seat by a compressed coil spring **40** positioned on the plunger **32**. A cap **42** is threadably engaged on the forward end of the barrel **24**, so as to hold the circular flange **28** in sealing engagement with the inner wall of the chamber **18**.

A filler opening **44**, in the upper wall of the chamber **18** has threaded thereon, a removable cap **46**. A control valve **48**, having an operator handle **50**, is mounted in the forward portion of the tubular handle **16**. A standard female hose connector **52**, is provided on the back end of the tubular handle **16** for attachment to a water supply hose not here shown.

The preceding discussion completes a description of the structural details of the applicant's invention as herein disclosed; however, to insure a more thorough appreciation and understanding of the subject matter herein presented, a brief discussion will be directed to the manner in which the applicant's device operates in performing its intended function, so as to make possible the realization of all objectives set forth in the introduction of this specification.

In use, the applicant's fountain brush is connected to a convenient pressurized source of water by means of the hose connector **52**. The removable cap **46** is then detached from the scrubber head **10**, and a quantity of liquid soap or detergent poured into the internal chamber **18** through the filler opening **44**. The cap **46** is then replaced, and the operator handle **50** on the water control valve **48** turned to the off, or broken line position **54**, shown in FIGURE 2.

The water supply, not here shown, is then turned on and the applicant's scrubber head **10** is placed in contact with the surface to be cleaned. The water control valve **48** in the tubular handle **16** is then manipulated so as to provide sufficient water to wet thoroughly a sizeable area of the surface to be cleaned. The water control valve **48** is then turned off, and the push button **36** on the pump **22** is pressed a sufficient number of times to deposit the desired quantity of soap or detergent.

Proper manipulation of the scrubber head **10** will spread the soap or detergent so as to produce a suds or lather which will effectively loosen the dirt and soil from the surface. The water control valve **48** is then immediately shifted to allow water to enter the internal chamber **20** and flow from the discharge ports **12** to provide a rinsing spray. At the conclusion of the rinsing operation, the

above cycle is repeated until the entire cleaning process has been completed.

In practice, it has proven desirable to use a small quantity of wax mixed with the detergent or soap so as to accomplish simultaneously a cleaning and a polishing operation. It has also proven advantageous to insert a section of light weight pliable tubing between the fountain brush and the unwieldable water supply hose to facilitate manipulation, thus making the device more adaptable for use by women and children. It may be preferable for some purposes to vary the spray pattern, or even replace the discharge ports **12** with a nozzle to intensify the rinsing operation.

Based upon the foregoing discussion, the applicant is of the opinion that his invention has fulfilled a long-felt need in the field of fountain brushes, and that he has accordingly made a valuable contribution to the related art. However, while the invention was described with reference to the structural details of a limited number of embodiments, it will be appreciated by those skilled in the art, that the principles involved are susceptible of numerous other practical adaptations.

Therefore, I claim as new, and desire to secure by Letters Patent:

1. A fountain brush comprising a scrubber head having a tufted working face, a centrally disposed array of discharge ports in the tufted working face, a first chamber in the scrubber head communicating with the discharge ports, a tubular handle on the scrubber head connectable to a source of pressurized fluid and communicating with first chamber, valve means on the handle controlling communication between the tubular handle and the first chamber, a second chamber in the scrubber head disposed forwardly from the first chamber and adjacent the working face, a nozzle providing communication between the second chamber and the tufted working face, and a liquid pump in the forward end of the scrubber head controlling flow through the nozzle.

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