Dec. 26, 1967 J. W. McGUIRE 3,359,591

AUTOMOBILE CLEANING DEVICE

Filed July 20, 1965

Fig. 1.

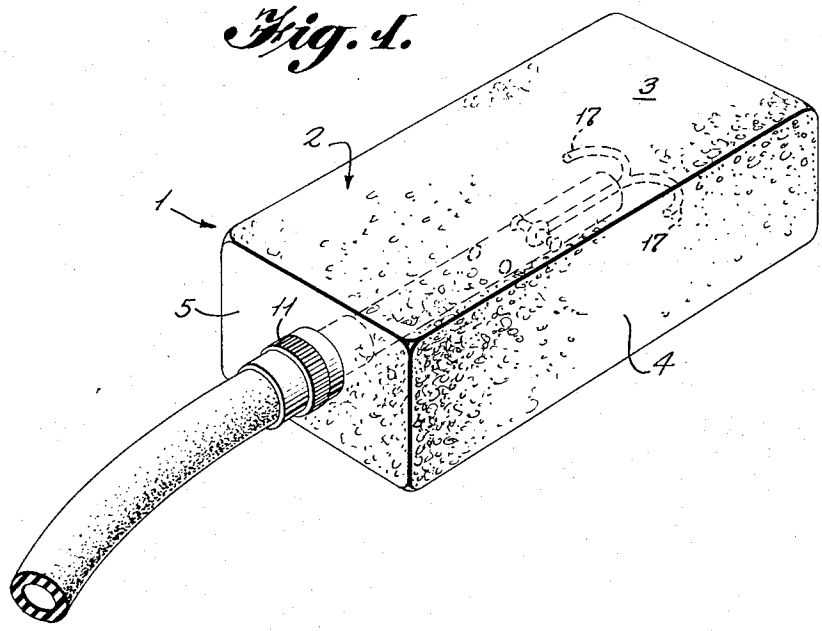
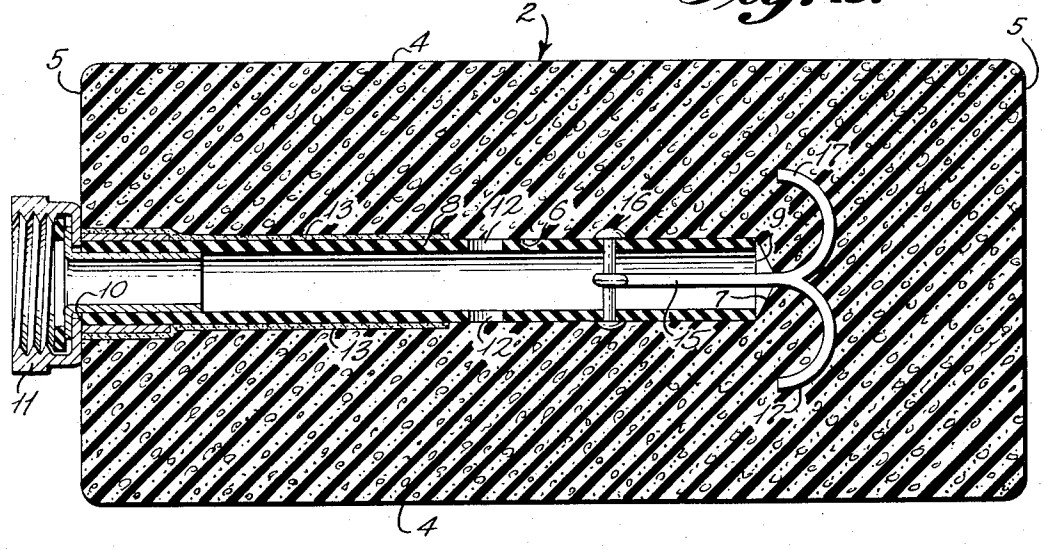


Fig. 2.



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AUTOMOBILE CLEANING DEVICE

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ABSTRACT OF THE DISCLOSURE

A fountain sponge cleaning device having a sponge body with a bore formed therein and an open ended fluid conduit secured within the bore by bonding and by a hook member pivotally secured to the open end of the conduit within the sponge body.

This invention relates to an improved cleaning device, and more particularly to an improved fountain type sponge cleaning device useful particularly in washing automobiles or other finished surfaces.

Numerous fountain type cleaning devices have been devised for cleaning the finished surface of an automobile or the like. However, these prior devices have not met widespread acceptance principally because they have not provided a satisfactory means for attaching the sponge cleaning body portion onto the conduit conveying the cleaning water into the center portion of the sponge.

It is a primary object of this invention to provide an improved fountain type cleaning device for washing finished surfaces.

Another object is to provide such a cleaning device including an improved means for securing the sponge cleaning body onto the fluid conduit.

Another object is to provide such a cleaning device in which the sponge cleaning body is bonded to the fluid conduit portion in a manner which prevents relative movement between the two portions.

In the attainment of the foregoing and other objects, an important feature of my invention resides in providing an elongated cylindrical bore into the sponge cleaning body. A flexible fluid conduit having an outside diameter substantially equal to the inside diameter of the bore is disposed within the cylindrical bore to convey cleaning water into the central portion of the sponge. The external surface of the fluid conduit is bonded to the internal surface of the cylindrical bore, by an adhesive which is insoluble in water, in a manner to positively prevent relative movement between the sponge and the fluid conduit. If desired, additional means such as rigid or semi-rigid hook members may be attached to the fluid conduit to positively assure against the conduit being withdrawn from within the hollow bore of the sponge.

Other and further objects of the invention will become apparent from the following specification taken with the drawings in which:

FIG. 1 is a perspective view of the automobile cleaning device according to this invention, and

FIG. 2 is a sectional view of the device taken on line 2—2 of FIG. 1.

Referring now to the drawings, in detail, a fountain type cleaning device according to the present invention, is illustrated generally by the reference numeral **1**, and includes a sponge-like cleaning body portion **2**. The cleaning body **2** is preferably a cellulose sponge of commercial quality and of conventional elongated rectangular cross sectional shape, having opposed parallel side surfaces **3**, opposed parallel edge surfaces **4** and opposed parallel end surfaces **5**. An elongated cylindrical bore **6** extends from one of the end surfaces **5** through the central portion of the body **2** to terminate in a bottom wall **7** at a point spaced from the other end surface **5**.

An elongated flexible fluid conduit **8**, having a length slightly greater than the depth of cylindrical bore **6**, is disposed within the cylindrical bore, with one end **9** of the conduit adjacent the bottom wall **7** of bore **6**, and the other end **10** of the conduit **8** projecting from the end surface **5** and having a conventional hose coupling **11** mounted thereon. A plurality of openings **12** are formed in the side wall of conduit **8** to provide fluid passage through the conduit into the sponge body **2** along the length of the fluid conduit as well as through the open end **9**.

The external surface of fluid conduit **8** is bonded directly to the internal surface of cylindrical bore **6**, as by a layer **13** of suitable adhesive preferably extending substantially the full length of fluid conduit **8**. However, if desired, the adhesive layer **13** may be eliminated in the area of openings **12** or, as shown in FIG. 2, the openings **12** may be omitted near the end **10** having the coupling thereon and the adhesive **13** only applied in the area in which the openings have been eliminated.

When the fluid conduit **8** is not bonded to the sponge throughout its entire length, or in other instances when it is deemed necessary, a hook member **15** formed from rigid or semi-rigid material may be fixedly secured, as by pin **16**, adjacent end **9** of conduit **8**. Hook **15** includes a pair of reversely bent portions **17** projecting radially outward from the outer periphery of the end **9** of conduit **8** and inclined in the direction of end **10** so that, upon application of a force tending to pull the conduit **8** from bore **6**, the reversely bent portion **17** of hook **15** will tend to bite into the side walls of the cylindrical bore and thereby prevent any relative movement between the sponge body portion **2** and the flexible conduit **8**.

From the above it may be seen that I have provided an improved fountain type cleaning device for use in cleaning automobiles or the like in which relative movement between the fluid conduit and the sponge cleaning body is positively prevented during use of the device. Further, the use of a flexible fluid conduit firmly bonded in place within the body portion of the sponge eliminates the hazards of exposed rigid metallic elements to the finished surface being cleaned.

While I have disclosed a preferred embodiment of my invention I wish it understood that I do not intend to be restricted solely thereto, but that I do intend to include all embodiments thereof which would be apparent to one skilled in the art and which come within the spirit and scope of my invention.

What is claimed is:

1. A cleaning device comprising a soft porous water-absorbent sponge-like body portion, an elongated bore formed in said body portion from one surface thereof and terminating withn said body portion, an elongated flexible conduit having an outside diameter substantially equal to the diameter of said bore disposed within and extending substantially the full length of said bore, said conduit being longer than the depth of said bore and having an open end disposed therein and its other end projecting outwardly therefrom, hose coupling means secured on said other end, a rigid hook member pivotally secured to the open end of said conduit, said hook mem-

ber including a pair of slender reversely bent hook portions projecting radially outward from said open end and inclined in the direction of said other end and penetrating the side walls of said bore adjacent the terminal end thereof to prevent withdrawal of said conduit from within said bore, and means bonding said flexible fluid conduit to the internal surface of said bore throughout a major portion of the length thereof.

2. The cleaning device defined in claim 1 further including a plurality of openings in the side walls of said conduit providing fluid communication between the interior of said conduit and said sponge-like body.

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