Oct. 16, 1962 E. DRYDEN 3,058,139

SPONGE IMPLEMENT HAVING A DETACHABLE HOLDER

Filed Aug. 25, 1959 2 Sheets-Sheet 1

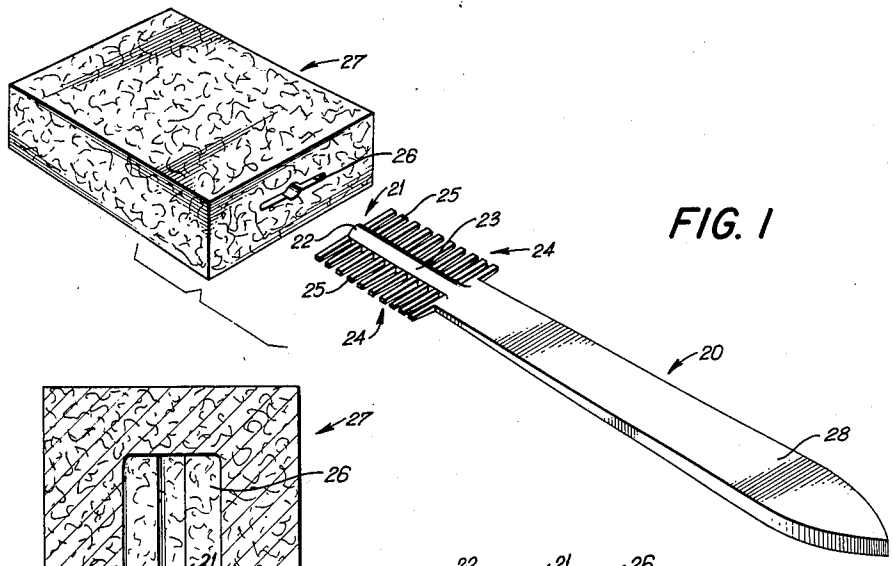


FIG. 1

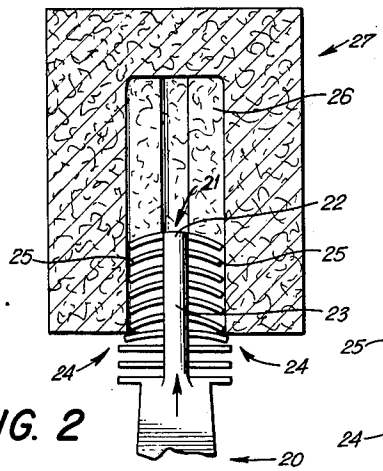


FIG. 2

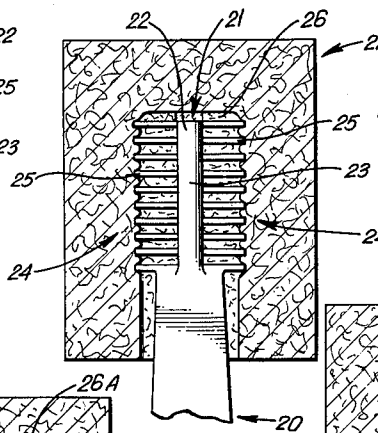


FIG. 3

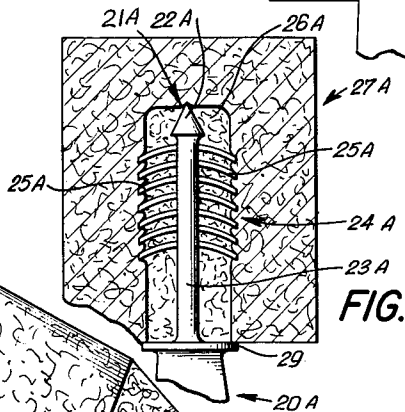


FIG. 4

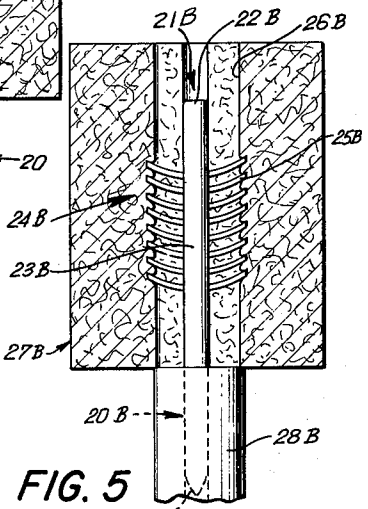


FIG. 5

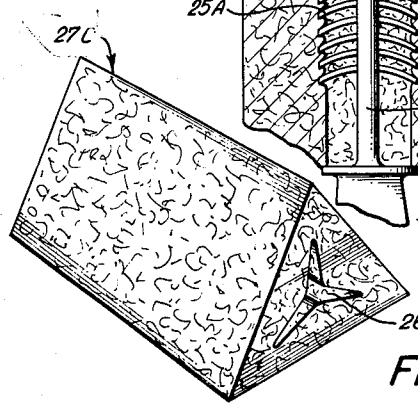


FIG. 6

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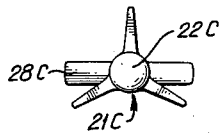


FIG. 7

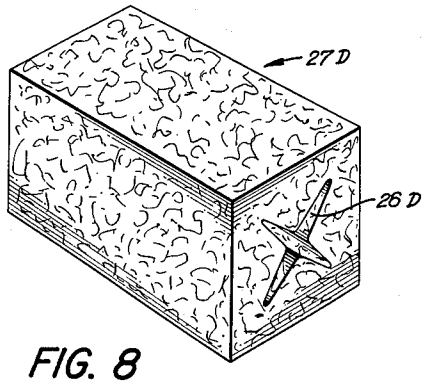


FIG. 8

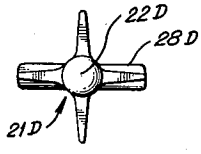


FIG. 9

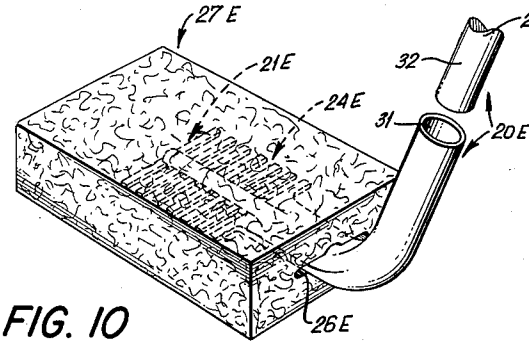


FIG. 10

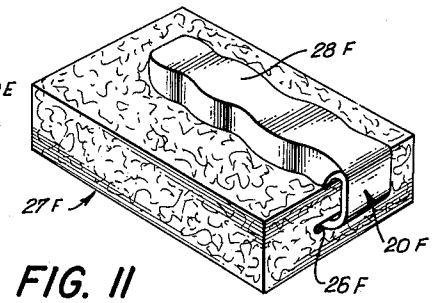


FIG. 11

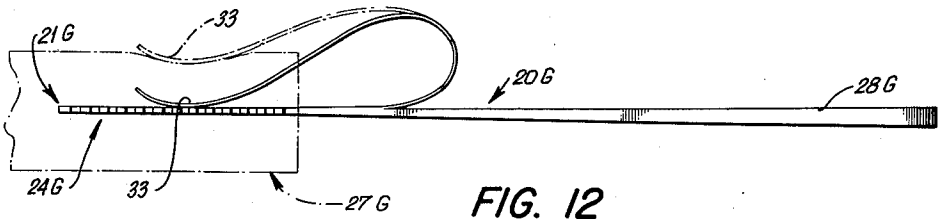


FIG. 12

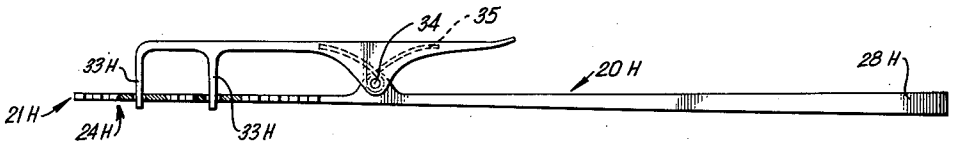


FIG. 13

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3,058,139

SPONGE IMPLEMENT HAVING A DETACHABLE HOLDER

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Filed Aug. 25, 1959, Ser. No. 835,899
6 Claims. (Cl. 15—244)

The present invention consists of an improved holder for a cleaning sponge of the type conventionally used for household cleaning and normally consisting of a compressible liquid-absorptive body of any of various different shapes defining a plurality of interconnected hollow cells having a high water-holding capacity. Conventionally, according to prior art practice, such a prior art cleaning sponge may be manually grasped for cleaning purposes or may be operated by a holder permanently attached thereto, which therefore necessarily must be discarded along with the sponge when the sponge is worn out.

The purpose of the present invention is to provide an improved holder for such a cleaning sponge which very effectively holds the sponge during any desired number of cleaning operations but which may be removed therefrom when the sponge becomes worn out so that a new sponge may be mounted on the holder for subsequent cleaning use.

It is an object of the present invention to provide an improved holder for a cleaning sponge of the general type referred to above and including a shaft of resilient material having a sponge-insertion end provided with retaining means projecting from said sponge-insertion end in a manner such as to have at least one directional component substantially transverse thereto for retaining said insertion end within a sponge after insertion thereinto (usually by means of a mounting entry aperture or slit extending into the sponge from one surface thereof), and with said retaining means being elastically deflectable to a degree such as to allow its insertion into the sponge for firmly mounting the sponge on said sponge insertion end until such time as it is desired to remove the sponge therefrom after it is worn out to allow it to be replaced by a new sponge.

It is a further object to provide an improved sponge holder of the type set forth in the preceding object, wherein the shaft is provided (usually adjacent the other end from the sponge-insertion end thereof) with manually graspable handle means. In one form this may be integral with the shaft and in another form this may be non-integral and comprise a longitudinal extension handle removably engageable with the shaft through the action of attachment means removably interconnecting same.

It is a further object to provide an improved holder of the type referred to in any of the preceding objects wherein the retaining means includes a plurality of projecting elastic fingers mounted so as to be adapted to be centrally deflected toward the shaft of the sponge-insertion end during insertion thereof into a sponge and adapted to project outwardly from the shaft portion of the sponge-insertion end into the sponge for effective retention thereof after insertion into the sponge.

It is a further object to provide an improved holder for a cleaning sponge of the character set forth in the preceding object, wherein the projecting fingers are circularly spaced around the shaft adjacent the sponge-insertion end thereof and, in one form, are normally inclined in a direction away from the penetrating tip of said sponge-insertion end, with said shaft portion being provided with an enlarged sponge-abuttable stop member adapted to abut the sponge and prevent any further penetration of the sponge-insertion end of the shaft into the sponge after the retaining means has been fully inserted into the sponge.

It is a further object to provide an improved holder for a cleaning sponge of the character set forth in the second preceding object, wherein the projecting fingers are circularly spaced around the shaft adjacent the end thereof and are inclined in a direction toward the tip of said insertion end, and wherein the other end of said shaft is provided with manually graspable handle means engaged therewith after insertion of said insertion end into a sponge from the opposite end of the sponge. In other words, the handle end of the shaft actually comprises the penetrating tip adapted to be passed completely through the sponge and then to be provided with enlarged manually graspable handle means in this form of the invention.

It is a further object to provide an improved holder for a cleaning sponge of the type defined in any of the preceding objects, wherein the shaft is also provided with a resilient controllably manually laterally deflectable sponge-engageable member effectively resiliently biased toward the shaft of the sponge-insertion end adapted to abut an outside surface of a sponge mounted on said sponge-insertion end.

It is also an object of the present invention to provide an improved holder for a cleaning sponge of the type defined in any of the preceding objects in combination with a cleaning sponge of virtually any desired shape, such as flat, triangular, square, rectangular, round, or various other configurations both as to plan view and elevational view configurations.

It is a further object to provide an improved holder for a cleaning sponge of the character set forth in any of the preceding objects, which is of extremely simple, cheap, foolproof construction such as to facilitate wide-spread use thereof.

Further objects will be apparent to persons skilled in the art after a careful study hereof.

For the purpose of clarifying the nature of the present invention, several exemplary embodiments are illustrated in the hereinbelow-described figures of the accompanying drawings, and are described in detail hereinafter.

FIG. 1 is an exploded perspective view illustrating one preferred embodiment of the sponge holder of the present invention in exploded relationship with respect to a sponge which it is adapted to removably but firmly hold.

FIG. 2 is a fragmentary sectional view illustrating the insertion of the sponge insertion end and the retaining means carried thereby of the sponge holder of the present invention into the sponge illustrated in FIG. 1, and shows how this is permitted by the elastic deflection of the plurality of projecting elastic fingers of the retaining means.

FIG. 3 is a view very similar to FIG. 2, but shows the retaining means and the sponge after completion of the insertion operation shown in process in FIG. 2, and after the elastic projecting fingers have been caused to return substantially to their normal outwardly projecting position, thus effectively and firmly mounting the sponge.

FIG. 4 is a fragmentary, partly sectional, view illustrating a slight modification of the form of the invention illustrated in FIGS. 1–3, wherein the projecting elastic fingers of the retaining means are normally inclined in a direction away from the penetrating tip of the sponge-insertion end and toward the handle end of the device, thus facilitating the mounting operation, and wherein a stop member is carried by the shaft to prevent the penetrating tip of the sponge-insertion end from working its way on through the sponge during use.

FIG. 5 is a fragmentary, partly sectional, view similar to FIG. 4, but illustrating another slight modification of the invention wherein the sponge-insertion end does not carry the penetrating tip, which is actually at the handle

end of the device; said penetrating tip at the handle end of the device being adapted to be pushed through the sponge from the opposite end thereof until it projects into a position on the other side of the sponge, where it may be provided with an enlarged manually graspable handle means. In this modification the sponge-insertion end mounted within the sponge has the projecting fingers of the retaining means inclined in a direction toward the tip of the insertion end and away from the handle-carrying end.

FIG. 6 shows a sponge of different shape having a differently shaped mounting entry aperture or split adapted to receive therein the correspondingly shaped insertion end shown in top plan view in FIG. 7.

FIG. 7 is a top plan view of the sponge-insertion end of a modified sponge holder adapted to engage the sponge entry aperture shown in FIG. 6.

FIG. 8 shows a sponge of a different shape having a differently shaped mounting entry aperture or split adapted to receive therein the correspondingly shaped insertion end shown in top plan view in FIG. 9.

FIG. 9 is a top plan view of the sponge insertion end of a modified sponge holder adapted to engage the sponge entry aperture shown in FIG. 8.

FIG. 10 is a reduced-size perspective view of a flat rectangular sponge of the type shown in FIGS. 1–3 engaged by a slightly modified form of sponge holder wherein the handle portion of the shaft is provided with attachment means adapted to effectively removably attach the sponge to a longitudinal extension handle member.

FIG. 11 is a reduced-size perspective view of a flat rectangular sponge of the type shown in FIGS. 1–3 engaged by a slightly modified form of sponge holder wherein the handle portion of the shaft is curved back above the sponge-insertion end and above the sponge carried by the sponge-insertion end.

FIG. 12 is an elevational view showing a modified holder having retaining means of the general type shown in FIGS. 1–3 and additionally including a resilient sponge-engageable member effectively resiliently biased toward the shaft portion of the sponge-insertion end and adapted to abut an outside surface of a sponge when such a sponge is mounted on said sponge-insertion end.

FIG. 13 is an elevational view very similar to FIG. 12 but illustrating a slight modification of the resilient sponge-engageable member.

As illustrated in FIGS. 1–3, the hereinbefore-mentioned shaft takes one exemplary form, as indicated generally at **20**, wherein it is preferably made of molded plastic of a resilient type, or the like, although not so limited, and wherein it has a sponge-insertion end, indicated generally at **21**, which, in the example illustrated in FIGS. 1–3, includes a penetrating tip **22** at one end of a shaft portion **23** which carries the hereinbefore-mentioned retaining means, which, in the specific example illustrated in FIGS. 1–3 is indicated generally at **24** and consists of a plurality of projecting elastic fingers **25** of deflectable material mounted so as to be adapted to be deflected toward the shaft portion **23** in the manner clearly shown in FIG. 2 during insertion of the insertion end **21** into a mounting entry aperture or slit **26** in one end of a sponge indicated generally at **27**; the resilient character of the projecting fingers **25** being such as to cause them to readily reposition themselves in an outwardly projecting manner after insertion into the sponge insertion entry aperture or slit **26** and after readjusting relative movement of the sponge **27** with respect to the shaft **20** as is best shown in FIG. 3, which illustrates the position of the retaining means **24** within the sponge **27** after completion of the complete handle-mounting operation just described. In certain forms of the invention, the mounting entry aperture or slit **26** may have opposed depressions at the center thereof effectively defining a slightly larger bore-shaped central portion of said mounting entry aperture **26** adapted to forcibly resiliently receive the shaft portion **23** when the sponge insertion end **21** has been fully inserted into the sponge **27** into a position such as that shown in FIG. 3.

It will readily be understood that after the sponge and the handle have been used for a number of washing operations to an extent such that the sponge becomes worn and relatively ineffective, it may readily be removed from the retaining means **24** by merely forcibly withdrawing the entire insertion end **21** and the retaining means **24** from the mounting aperture or slit **26**. This will cause the projecting fingers **25** to be resiliently deflected in the opposite direction from that which they assume during the mounting operation previously described, which will thus allow the insertion end **21** to be withdrawn from the sponge so that said insertion end **21** and retaining means **24** may be similarly again reinserted into the entry aperture or slit of a new sponge in a manner similar to that described hereinbefore. In other words, the entire improved holder of the present invention may be reused with a new or replacement sponge as many times as desired by reason of the novel construction of the retaining means **24**.

In the specific embodiment illustrated in FIGS. 1–3, the other end of the shaft **20** is provided with manually graspable handle means **28**, which may be separately formed and mounted on said other end of the shaft **20** or which may be integral therewith, as illustrated.

It should be noted that the sponge **27** illustrated in FIGS. 1–3 is substantially rectangular in plan view and is also substantially rectangular in cross section, thus having large flat washing or cleaning surfaces. This particular type of sponge is especially effective when washing large flat areas or surfaces such as walls, floors, ceilings, cupboards, shelves, bathtubs, and the like, and it should be noted that the size of the sponge and also the size of the handle and the various portions thereof may be suitably modified according to the intended usage thereof. However, it should be noted that the present invention is not limited to this particular type, shape, or configuration of sponge. Actually, the sponge may assume virtually any desired shape and may be contoured or have flat surfaces depending upon the type of surface which is to be washed by the sponge and the type of usage to which it is to be put.

FIG. 4 is a view generally similar to FIG. 3 but illustrating a slight modification of the invention wherein similar parts will be indicated by similar reference numerals, followed by the letter "A." In this modification, projecting fingers **25A** comprising the retaining means **24A** are inclined in a direction away from the penetrating tip **22A**, which has a sharpened point whereby to facilitate insertion of the insertion end **21A** into the slit **26A** in the sponge **27A**. In order to prevent the penetrating tip **22A** from passing completely through the sponge **27A**, the shaft **20A** at its junction with the reduced size forward shaft portion **23A** is provided with an enlarged sponge-abuttable stop member **29** adapted to abut the sponge **27A** and prevent any further penetration of the sponge insertion end **21A** and retaining means **24A** into the sponge **27A**.

FIG. 5 is a view similar to FIGS. 3 and 4 but illustrates another slight modification of the invention wherein similar parts will be indicated by similar reference numerals, followed by the letter "B." In this modification, the projecting fingers **25B** are inclined in a direction toward the tip **22B** (which actually is not a penetrating tip like the penetrating tip **22A** shown in FIG. 4) and are inclined in a direction away from the handle **28B** which is attached to and carried by a sharpened end **30** at the opposite end of the shaft **20B** from the tip **22B** of the insertion end **21B**. In this modification, the sharpened handle end point **30** is passed completely through the sponge **27B** by way of the slit **26B** and out the opposite end thereof so as to effectively position the insertion end **21B** and the retaining means **24B** in the

proper location within the sponge and then the handle **28B** is fastened over the sharpened point **30** whereby to produce the structure illustrated in FIG. 5.

FIG. 6 illustrates a sponge **27C** which is triangular in cross-sectional shape and which has an appropriately modified mounting aperture or slit **26C** which is adapted to receive a correspondingly shaped, as seen in end elevation, insertion end **21C** and penetrating tip **22C** of a slightly modified holder of the type illustrated in FIG. 7; said holder including a handle **28C** generally similar to the previously-described handles.

FIG. 8 illustrates a sponge **27D** which is square in cross-sectional shape and which has an appropriately modified mounting aperture or slit **26D** which is adapted to receive a correspondingly shaped, as seen in end elevation, insertion end **21D** and penetrating tip **22D** of a slightly modified holder of the type illustrated in FIG. 9; said holder being provided with a handle **28D** generally similar to the previously-described handles.

FIG. 10 shows a slightly modified shaft portion **20E** including attachment means comprising a socket **31** adapted to be effectively attached to a corresponding end **32** of an extension handle portion **28E**, with the shaft **20E** being angularly inclined with respect to the insertion portion **21E** thereof mounted within the sponge **27E**, whereby the entire device may be conveniently used for washing overhead flat surface areas such as ceilings, or the like, or whereby, the device may be used in a manner simulating a conventional mop and a user may conveniently wash a floor surface while standing up. The insertion end **21E** is inserted through the entry slit or aperture **26E** in this modification of the invention in a manner analogous to that previously-described in connection with the first form of the invention and is adapted to be retained within the sponge **27E** by the retaining means **24E** in a similar manner.

FIG. 11 illustrates another slight modification of the handle portion **28F** of the device, which is carried by the shaft **20F**, which is curved in a manner whereby the handle portion **28F** lies substantially over and above the sponge **27F**, thus facilitating the direct manual and forcible application of the sponge to various surfaces which are to be cleaned.

FIG. 12 illustrates a slightly modified form of sponge holder wherein similar parts are indicated by similar reference numerals, followed by the letter "G." This modification additionally includes a resilient sponge-engageable member **33** effectively resiliently biased toward the shaft portion **23G** of the sponge-insertion end **21G** and thereby being effectively adapted to forcibly resiliently abut an outside surface of a sponge when such a sponge is mounted on the sponge-insertion end **21G** in a manner similar to that hereinbefore-described.

FIG. 13 is a view very similar to FIG. 12 and similar parts will be indicated by similar reference numerals, followed by the letter "H." In this modification, the resilient sponge-engageable member **33H** is not integrally formed with the remainder of the shaft **20H** but is pivotally mounted with respect thereto as indicated at **34** and is provided with spring means **35** normally biasing it toward the closed position illustrated.

It should be clearly understood that any of the various elements illustrated in various of the figures of the drawings may be interchanged with the structures shown in other of the figures, if desired. It should also be clearly understood that various other shapes of sponges may be effectively mounted by the improved holder of the present invention and that, in certain forms, the mounting or entry slits may be eliminated and the penetrating tip may be forcibly directly inserted into a sponge in a manner such as to form its own entry aperture or slit.

It should be understood that the figures and the specific description thereof set forth in this application are for the purpose of illustrating the present invention and are not to be construed as limiting the present invention to the precise and detailed specific structure shown in the figures and specifically described hereinbefore. Rather, the real invention is intended to include substantially equivalent constructions embodying the basic teachings and inventive concept of the present invention.

I claim:

1. An improved holder for a substantially flat cleaning sponge comprising: a longitudinal elastic shaft having a forward sponge-insertion end provided with two longitudinal rows of projecting elastic fingers, each of said two rows of said elastic fingers lying in a substantially common plane and being positioned on opposite sides of a longitudinal axis of said shaft relative to each other and each row of said elastic fingers comprising a plurality of similarly outwardly projecting elastic fingers extending in similar substantially parallel directions each having a similar lateral directional component, and each of said elastic fingers of each row of said fingers being longitudinally spaced apart from adjacent fingers by a distance substantially in excess of the thickness in a similar direction of adjacent ones of said elastic fingers, said two substantially coplanar rows of said elastic fingers defining broad substantially planar deflectable elastic retaining means having directional components substantially transverse to the longitudinal direction of said shaft and of a substantially flat planar configuration generally similar to the substantially flat exterior configuration of a substantially flat spatulate sponge which is to be retained thereon by insertion of said deflectable elastic retaining means thereinto, said deflectable elastic retaining means comprising said two substantially coplanar rows of similarly outwardly projecting elastic fingers being elastically deflectable toward the shaft during insertion thereof into a sponge and adapted to project outwardly in said substantially common plane from the shaft into the sponge for effective retention thereof after insertion thereinto, the other end of said shaft being provided with manually graspable handle means positioned extending away from the sponge-insertion end into a location exterior of the sponge for applying the sponge to a surface from said exterior location.

2. A device of the character defined in claim 1 wherein the projecting elastic fingers of each row of said elastic fingers are inclined in a direction away from a forward portion of said insertion end and toward said handle, said shaft being provided with an enlarged sponge-abuttable stop member adapted to abut the sponge and prevent any further penetration of the sponge-insertion end of the shaft into the sponge.

3. A device of the character defined in claim 1 wherein the projecting elastic fingers of each row of said elastic fingers are inclined in a direction toward a forward portion of said insertion end; said handle means being carried by the opposite end of said shaft for abutment with the end of said sponge opposite the forward portion of the sponge-insertion end whereby to facilitate rearward insertion of said shaft completely through said sponge and attachment thereto of said handle means whereby to leave said sponge-insertion end within the sponge.

4. A device of the character defined in claim 1, wherein said handle means is positioned extending away from the sponge-insertion end and at an angle with respect thereto and is provided with attachment means and removable extension handle means for remotely applying the sponge to a surface.

5. A device of the character defined in claim 1, wherein said handle means is positioned extending away from the sponge-insertion end and curved back above the sponge-insertion end and a sponge carried by the retaining means.

6. A device of the character defined in claim 1, wherein said shaft is provided with a resilient sponge-engageable member effectively resiliently biased toward the shaft

and adapted to abut an outside surface of a sponge mounted on said sponge-insertion end.

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