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2,070,313

CLEANING DEVICE

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Fig. 1

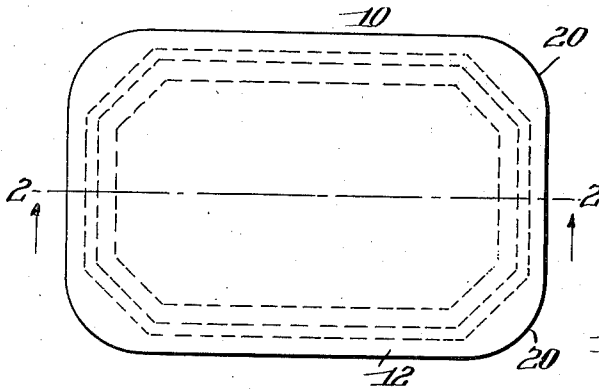


Fig. 3

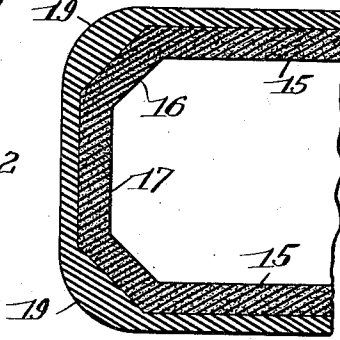


Fig. 2

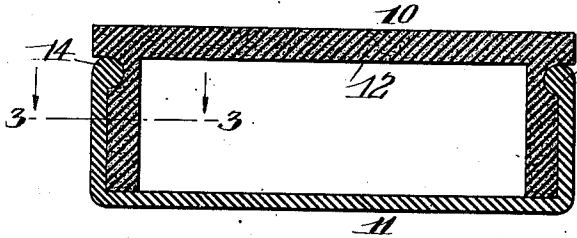


Fig. 4

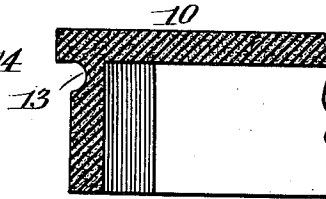


Fig. 5

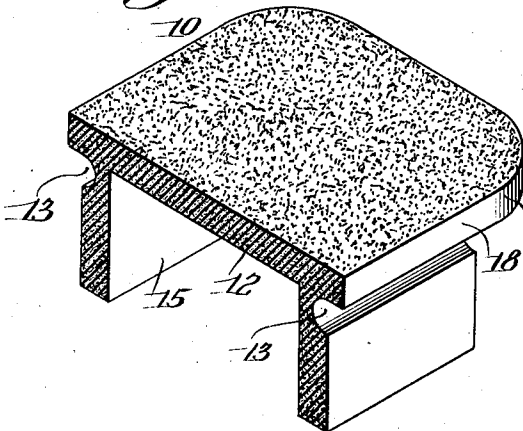
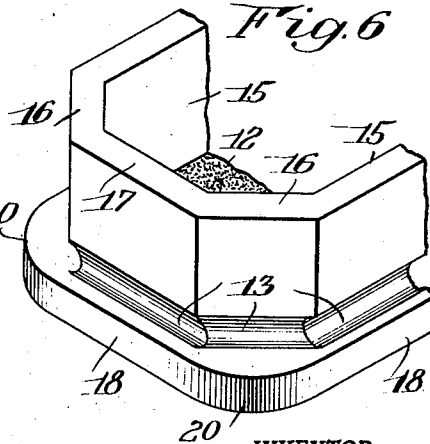


Fig. 6



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CLEANING DEVICE

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2 Claims. (Cl. 15—122)

The present invention relates to an improved cleaning device in the form of a holder or receptacle within which a suitable detergent or cleaning agent is placed, which is intended to seep through or penetrate one or more walls of the holder, constructed of any suitable material of a porous nature, such, for example, as sponge rubber.

One object of the invention is to provide an improved device of this class which is of simple construction, efficient in operation, and one which embodies but few parts capable of being conveniently assembled and separated when desired.

A further object of the invention is the provision of an improved detergent holding receptacle for use as a cleaning device in which the walls are formed of complementary sections, detachably retained in assembled relation without the use of additional securing parts for the same.

A further object of the invention is the provision of an improved receptacle for the purpose described comprising cooperating recessed sections inserted one within another and having interengaging portions affording a gripping action between the sections whereby they are firmly held in detachable relation through frictional engagement of one with another.

A further object of the invention is to provide in a receptacle of this class cooperating sections, one having reinforcements for strengthening the same and one being impervious to liquid while another has one or more of its walls formed of porous or cellular material such, for example, as sponge rubber through which a liquid or semi-liquid detergent may be permitted to seep or escape when rubbing the porous portion of the receptacle upon the surface to be cleaned.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawing:

Fig. 1 is a bottom plan view of a cleaning device embodying one form of the invention;

Fig. 2 is a sectional elevation taken on line 2—2 of Fig. 1;

Fig. 3 is a horizontal section on line 3—3 of Fig. 2;

Fig. 4 is a similar section with the cover of the receptacle removed;

Fig. 5 is a transverse section through the base of the holder showing in perspective an inverted end portion of the same, and

Fig. 6 is a fragmentary view in perspective illustrating the end construction of the base or bottom section of the holder.

The same reference numerals throughout the several views indicate the same parts.

The present invention embodies a recessed holder for the reception of a detergent or cleansing material which may be in the form of a liquid, semi-liquid, or solid. In the case of the latter, such as a cleaning powder or cake of soap, the holder or receptacle may be dipped within water or other liquid, a certain proportion of which will enter the receptacle through the porous walls thereof whereby upon rubbing the holder upon a surface to be cleaned, the resulting lather or liquefied soap will effectively cleanse the same. This, of course, will also be true where a liquefied soap or other liquid cleansing material is placed within the holder which will escape therefrom when pressure is applied thereto by the hand of the operator when rubbing the holder upon the surface which it is desired to clean. While the device may be used for cleaning various articles, it is particularly adapted for use in cleaning windows, bathtubs, sinks, and other articles formed of glass, porcelain, and the like.

Referring to the drawing, the reference characters 10 and 11 designate generally the base and cover sections, respectively, of the improved cleaning device, the former being inserted within the latter as shown in Fig. 2 of the drawing.

The entire base section is preferably formed of cellular or porous material such, for example, as sponge rubber, although if preferred it may be formed of other suitable material.

In the present disclosure, the skin or rind, forming upon the section 10 of the receptacle as a result of the process of manufacture, is removed from the inner and outer faces of the bottom wall 12 of the section to render it pervious to liquid or the liquefied cleaning material placed within the receptacle. The surfaces from which the skin has been removed are indicated by the stippled surfaces shown in Figs. 5 and 6 of the drawing, the surfaces which are not stippled being left with the skin or rind intact to render them impervious to the cleaning fluid used within the receptacle or to any liquid coming into contact therewith.

The cover 11, within which the base or body section 10 extends, is preferably formed of a good grade of non-porous rubber or other material impervious to liquid and having sufficient elasticity to permit it to be slightly stretched when inserted upon the base whereby to better

grip the walls of the latter, thus insuring its retention thereon through frictional engagement therewith.

However to further insure retention of the sections one upon another, one of them, preferably the base, is provided with a groove 13 formed in the outer faces of the side walls thereof, as best shown in Fig. 6, while the peripheral edge portion of the other section 11 is provided with an enlarged or bead-like portion 14 adapted to take into the groove or grooves 13 of the base section when the sections are inserted one upon another as shown in Fig. 2. This construction, however, permits the sections to be readily separated by moving one laterally of the other.

While the shape of the receptacle may be varied as desired, it is preferred to provide the opposite side walls 15 of the bottom section 10 with a plurality of angularly disposed end walls, preferably three at each end, the two which form a direct continuation of the side walls being designated by the reference character 16, and the third or centrally disposed wall by the reference character 17. Thus the side walls are braced by the angularly disposed end walls whereby the rigidity of the receptacle is increased in order that it may better withstand the pressure applied thereto during the cleaning operations, the construction being such as to prevent collapsing of the receptacle when used for the purpose intended.

It will be understood, of course, that the cover section 11 will conform generally to the shape of the body section 10 and will have the corresponding arrangement of side and end walls shown in Fig. 6.

The bottom section 10 of the receptacle is provided adjacent the grooves 13 with an outwardly extending flange or lip 18 which serves to increase the area of the cleaning portion of the base section and which also forms a supporting shoulder for the beaded edge 14 of the cover 11, as shown in Fig. 2. This is advantageous since the pressure exerted by the hand of the operator on the cover is transferred directly to the said flange whereby the latter will be made more serviceable as a means for effecting removal of such dirt particles as tend to cling to the surfaces to be cleaned, it being understood that the cover section of the receptacle is preferably formed of a grade of rubber having greater resistance to pressure than that of the sponge rubber base and will therefore tend to urge the bottom or edge portion of said flange into engagement with the surfaces to be cleaned.

Furthermore by positioning the flange of the base and the enlarged beaded portion of the cover in juxtaposed relation, the rigidity of the receptacle is increased at the proper point and the more or less flexible side walls of the sponge rubber section will be correspondingly relieved of the pressure which would otherwise be applied thereto.

The cover section 11 of the receptacle or holder is provided at its corners with thickened wall portions 19, Fig. 3, which serve to increase the rigidity of the section whereby it will better hold its shape and withstand the pressure applied thereto by the hand of the operator when gripping and using the holder from time to time.

The bottom wall 12 of the base has its corner portions rounded as indicated at 20, said portions preferably forming seats for the lower edges of the thickened wall portions 19 of the cover and conforming generally to the shape or contour of said thickened wall portions.

It will be understood that with the cover 11 in closed position, as shown in Fig. 2, the receptacle will be liquid-tight, except for the porous wall 12 of the bottom section 10, from the opposite faces of which the skin or rind has been removed as previously stated.

I claim:

1. A cleaning device of the class described, comprising a hollow section formed of sponge rubber and including a bottom wall having upstanding side walls, said bottom wall having a flange extending laterally from the side walls, the bottom wall and flange constituting a cleaning base for engaging the parts to be cleaned, said side walls having exteriorly formed grooves therein, and a cover section for said hollow section formed of substantially rigid material impervious to liquid, said cover section including side walls surrounding the side walls of the hollow section, the peripheral edge portion of the cover section engaging the flange of the hollow section and serving to urge said flange in engagement with the surface to be cleaned when pressure is applied to the cover section in the direction of said flange, said cover section having bead-like portions on its side walls extending within the grooves of the side walls of the hollow section by which the cover section is retained on the hollow section.

2. A cleaning device of the class described comprising a substantially rectangular hollow section formed of sponge rubber and including a bottom wall and upstanding side and end walls, said bottom wall having a flange extending laterally from the side and end walls, and a cover section for said hollow section formed of substantially rigid material impervious to liquid, said cover section including side and end walls surrounding the side and end walls of the hollow section, said cover section having the peripheral edge portion thereof seated upon said flange and serving to urge the flange into engagement with the surface to be cleaned when pressure is applied to the cover section in the direction of the flange with the latter in engagement with said surface, said cover section having thickened wall portions at its corners for increasing the rigidity of the section.

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