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SCRUBBING BRUSH WITH CLEANING DETERGENT

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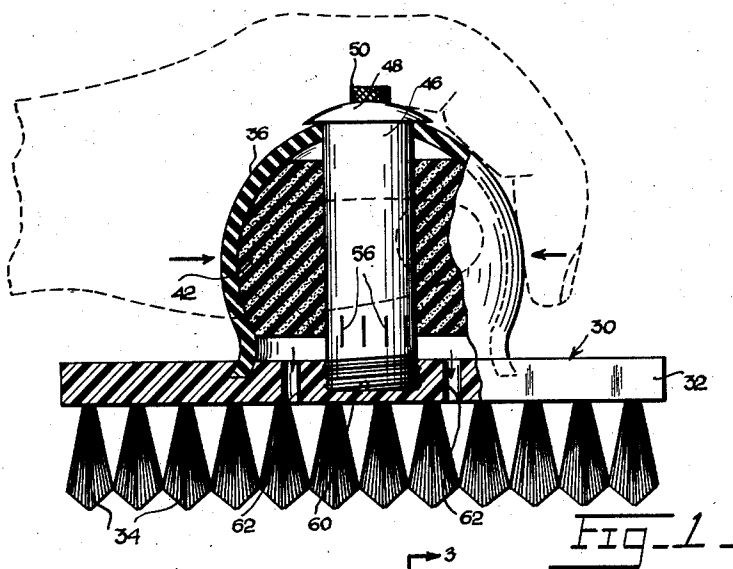


Fig. 1

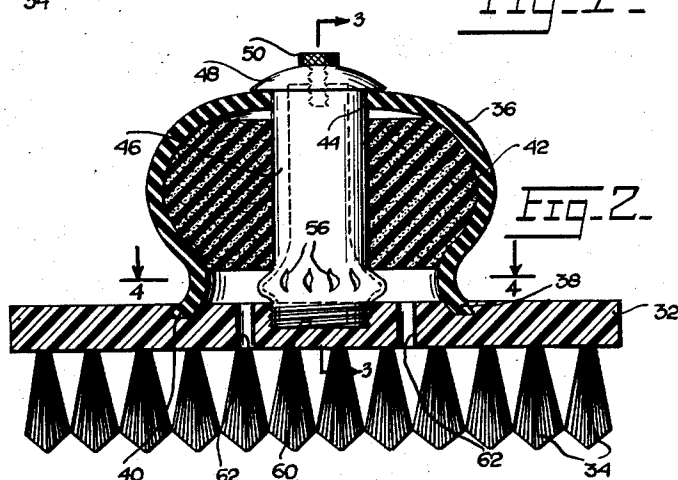


Fig. 2

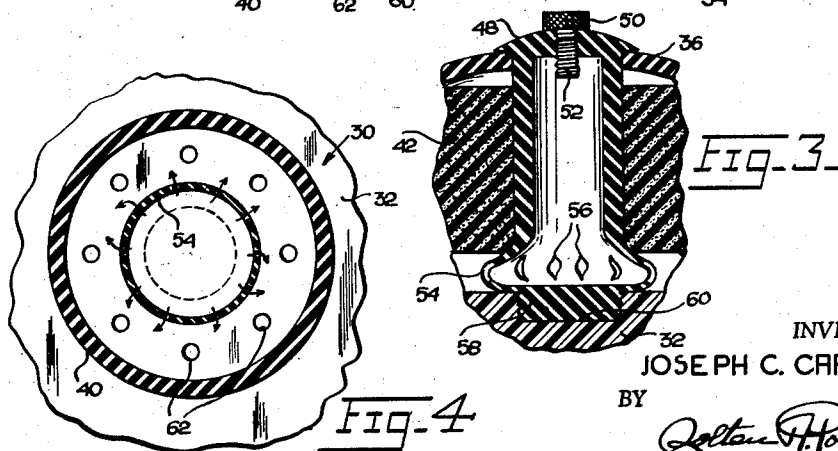


Fig. 3

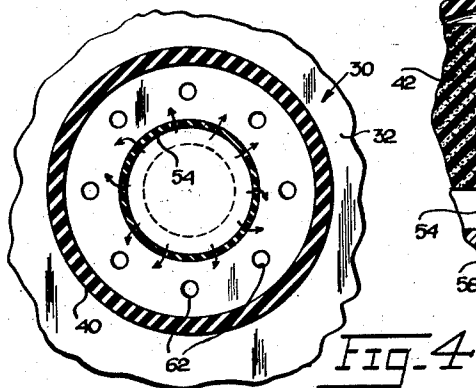


Fig. 4

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1

2,887,709

## SCRUBBING BRUSH WITH CLEANING DETERGENT

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4 Claims. (Cl. 15—136)

This invention relates to kitchen aids. More particularly, the invention has reference to a device for facilitating the cleaning of pots, pans, and other receptacles.

One important object is to provide a scrubber that will include a brush portion and that will further include a handle portion deformable in a manner to squeeze into the brush portion detergents or other liquids that are confined within the handle portion.

Another object is to so design the handle portion as to facilitate its removal whenever the same is to be refilled with a detergent.

Another object is to provide a handle portion which has a plurality of outlet openings into the brush, so arranged that even in instances in which the handle portion does not confine detergents, soaps, or the like, soapy liquid can freely move back and forth into the handle through the openings, to aid in forming suds in which the pots and pans are washed.

Another object is to provide in a device of the character stated a handle portion which will tend to be squeezed responsive to its being grasped in a normal manner during use of the device.

Still another object is to provide a scrubber of the character described with a core for the deformable body of the handle which will normally hold the handle body in an upright position, said core being hollow so as to contain a detergent or similar liquid, the core being designed to permit ejection of a portion of the liquid confined therein by an axial, downward pressure on the core while the handle is being grasped in a natural manner.

Another object is to provide a device as stated so designed that the portion of the body surrounding the core will comprise a second compartment into which the detergent will flow when ejected from the hollow core, the second compartment being designed for intermixing of the detergent with water prior to flow of the mixture into the brush proper.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a view partly in elevation and partly in longitudinal section, showing a scrubber according to the present invention with a hand being illustrated in dotted lines in a handle-grasping position.

Fig. 2 is a view like Fig. 1 but showing the center post or core compressed in an axial direction to eject liquids therefrom.

Fig. 3 is a longitudinal sectional view through the center post or core, taken on line 3—3 of Fig. 2.

Fig. 4 is a horizontal section, taken substantially on line 4—4 of Fig. 2.

Referring in detail to the drawings, a cleansing device or scrubber generally designated 30, is provided with a rectangular base plate 32 of molded plastic and having

2

depending bristles 34. A generally spherically shaped, downwardly opening, resiliently deformable hollow body 36 has a flanged lower end 38 adapted to removably engage in an upwardly opening, annular groove or seat 40 of plate 32. The body is formed of a resiliently deformable material such as a thick soft rubber or polyethylene plastic. The body 36 receives a spongy filler piece 42, which substantially entirely fills the interior of the body. It may be noted, however, that there is an open space left between the top surface of base plate 32 and the bottom surface of the filler piece.

Designated at 44 is a center opening formed in the upper end of the body 36, adapted to receive a hollow center post or core 46, having a rounded head 48 at its upper end formed with a threaded center opening adapted to receive the threaded shank of a filler plug 50, said threaded shank being designated 52.

The center post or core is formed of a thick-walled, soft, resilient material such as rubber. Preferably, the thickness of the wall of the center post, for the greatest part of the length of the center post, is such as to render the center post comparatively inflexible. In other words, the center post, where the wall thereof is thick, may flex laterally, but only to a relatively small degree.

As will be noted, the thick-walled portion merges adjacent the lower end of the center post into a thin-walled portion 54. As a result, the flexibility of the material of the center post increases to a substantial degree, and as will be observed, formed in the thin-walled portion are closely spaced, longitudinally extending slits 56.

The slits 56 are normally closed so as to prevent fluid from passing out of the hollow core. Below the slits 56, the core is solid, and is externally threaded to engage in a correspondingly threaded center recess 60 of plate 32 surrounded by openings 62 communicating with the interior of the body 36.

Due to this arrangement, the core tends to hold the body 36 in an upright position. In normal use of the device, one may squeeze the body 36, so as to compress the filler piece 42. This causes any liquid within the filler piece to be ejected through the openings 62 into the bristle area of the brush.

A concentrated soap or detergent can be deposited in the core, through the opening in head 48. At such times as it is desired to provide the scrubber with a charge of detergent, one exerts a downward, axial pressure on the post in the manner shown to best advantage in Fig. 2. The result will be that the slits 56 will open, with the thin-walled portion of the post bulging outwardly as shown in this figure of the drawing. The axial compression of the post, as a result, will cause the ejection of liquid through the slits 56. In any event, said liquid will tend to pass out through the slits, assuming, of course, that this operation is carried out with the entire device removed from water, so that there is no liquid within the open space surrounding the lower part of the core in the body 36.

In the indicated circumstances, the liquid will flow out through the now open slits 56, and will intermix with liquid passing into and out of the spongy filler piece. Thus, the liquid will be freely mixed in the compartment surrounding the post, and will then be ejected through the openings 62 responsive to squeezing of the handle body 36.

The cleansing device or scrubber is characterized by a hollow, readily deformable handle, containing a spongy substance that will normally retain liquids, but which will cause said liquids to be ejected into a brush portion of the device responsive merely to a comparatively light squeezing of the handle. Further, after squeezing of the handle, a relaxation of the squeezing pressure will cause a partial vacuum to develop, that will in turn cause liquid

3

to be sucked up into the hollow body, to be intermixed with detergents or any other substances. Even where detergent is not confined in the hollow body or in the center post, the alternate squeezing and relaxing of the handle body causes a turbulence or agitation of the liquid in which the receptacle is being cleaned, aiding to a substantial degree in the developing of suds to promote rapid and efficient cleaning.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A scrubber for pots, pans, and like articles, comprising a base plate having a plurality of openings there-through, bristles depending from said base plate, a hollow handle body extending upwardly from said plate, means for detachably connecting the handle to the base plate, and a resiliently compressible filler piece in said handle, said openings communicating with the interior of the handle for flow of liquid between the handle interior and said bristles, said body being formed of a resiliently deformable material, whereby to eject liquid from the interior of the handle body responsive to a squeezing pressure exerted thereon, said plate being formed with an upwardly opening, annular groove, the lower end of said body being adapted to seat in said groove, said handle further including a vertically disposed core extending axially within the body of the handle and detachably connected to the base plate.

2. A scrubber for pots, pans, and like articles, comprising a base plate having a plurality of openings there-through, bristles depending from said base plate, a hollow handle body extending upwardly from said plate, means for detachably connecting the handle to the base plate, and a resiliently compressible filler piece in said handle, said openings communicating with the interior of the handle for flow of liquid between the handle interior and said bristles, said body being formed of a resiliently deformable material, whereby to eject liquid from the interior of the handle body responsive to a squeezing pressure exerted thereon, said plate being formed with an upwardly opening, annular groove, the lower end of said body being adapted to seat in said groove, said handle further including a vertically disposed core extending axially within the body of the handle and detachably connected to the base plate, said core being hollowly formed so as to confine a cleaning agent, the core having openings through which said cleaning agent may pass into the hollow interior of the body surrounding the core.

3. A scrubber for pots, pans, and like articles, comprising a base plate having a plurality of openings there-through, bristles depending from said base plate, a hollow

4

handle body extending upwardly from said plate, means for detachably connecting the handle to the base plate, and a resiliently compressible filler piece in said handle, said openings communicating with the interior of the handle for flow of liquid between the handle interior and said bristles, said body being formed of a resiliently deformable material, whereby to eject liquid from the interior of the handle body responsive to a squeezing pressure exerted thereon, said plate being formed with an upwardly opening, annular groove, the lower end of said body being adapted to seat in said groove, said handle further including a vertically disposed core extending axially within the body of the handle and detachably connected to the base plate, said core being hollowly formed so as to confine a cleaning agent, the core having openings through which said cleaning agent may pass into the hollow interior of the body surrounding the core, said core being formed with a circumferential series of slits, the core being formed of a resiliently deformable material and being of thin-walled formation in the area of the core in which the slits are formed.

4. A scrubber for pots, pans, and like articles, comprising a base plate having a plurality of openings there-through, bristles depending from said base plate, a hollow handle body extending upwardly from said plate, means for detachably connecting the handle to the base plate, and a resiliently compressible filler piece in said handle, said openings communicating with the interior of the handle for flow of liquid between the handle interior and said bristles, said body being formed of a resiliently deformable material, whereby to eject liquid from the interior of the handle body responsive to a squeezing pressure exerted thereon, said plate being formed with an upwardly opening, annular groove, the lower end of said body being adapted to seat in said groove, said handle further including a vertically disposed core extending axially within the body of the handle and detachably connected to the base plate, said core being hollowly formed so as to confine a cleaning agent, the core having openings through which said cleaning agent may pass into the hollow interior of the body surrounding the core, said core being formed with a circumferential series of slits, the core being formed of a resiliently deformable material and being of thin-walled formation in the area of the core in which the slits are formed, the core being of thick-walled formation throughout the greatest part of the remainder of its length, whereby the core when axially compressed will be bulged out at the thin-walled area thereof to open the slits for dispensing of the cleaning agent from the core into the area of the body surrounding the core.

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