July 6, 1943. L. C. ROGERS 2,323,568

CLEANER

Filed Feb. 17, 1941

FIG. 1.

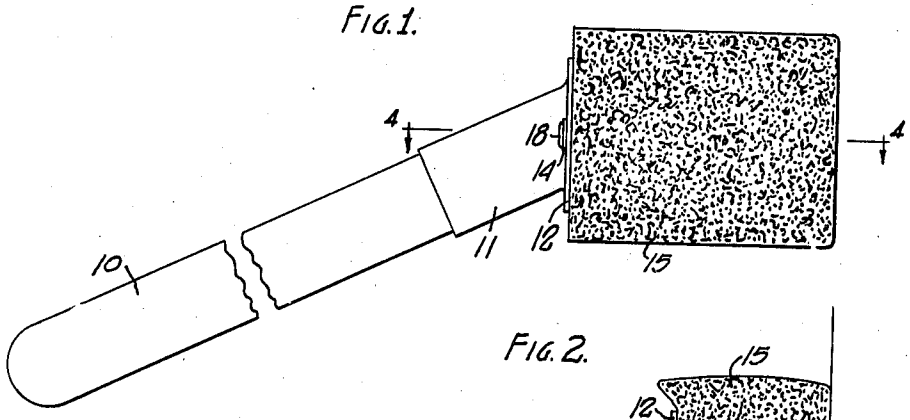


FIG. 2.

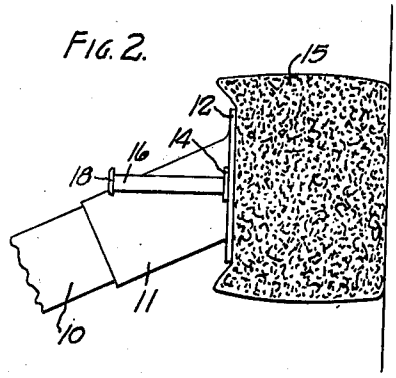


FIG. 3.

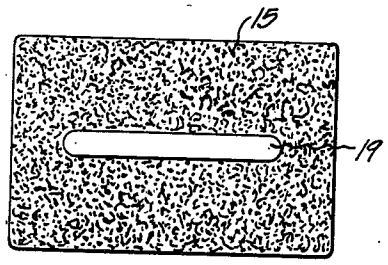


FIG. 4.

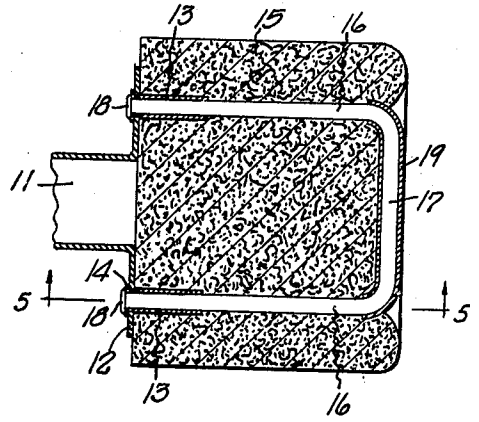
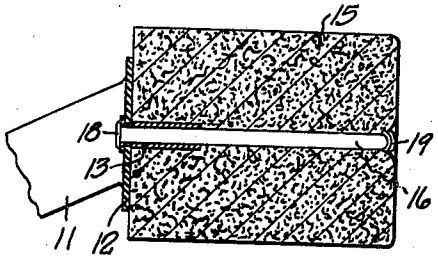


FIG. 5.



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Patented July 6, 1943

2,323,568

UNITED STATES PATENT OFFICE

2,323,568

CLEANER

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Application February 17, 1941, Serial No. 379,159

1 Claim. (Cl. 15—244)

This invention relates to cleaners, and more particularly to a device by means of which the fixtures of bathrooms and kitchens, such as closet bowls, bathtubs, lavatories, and the like may be cleaned.

The primary object of this invention is to provide a simple and inexpensive cleaning device of this character.

A further object is to provide a device of this character which can be easily manipulated to expel liquid from the absorbent cleaning element thereof.

A further object is to provide a device of this character having a compressible cleaning element and means mounting said element on a handle and guiding compression of the element.

A further object is to provide a device of this character having a sponge rubber cleaning element compressible against a flat surface of a member mounted upon the end of a handle, wherein shiftable means mount said element and guide compression thereof against said surface.

Other objects will be apparent from the description and appended claim.

In the drawing:

Fig. 1 is a view of the device in side elevation.

Fig. 2 is a fragmentary side view of the device illustrating the cleaning element in compressed condition.

Fig. 3 is an end view of the cleaning element of the device.

Fig. 4 is a longitudinal sectional view taken on line 4—4 of Fig. 1.

Fig. 5 is a longitudinal sectional view of the device taken on line 5—5 of Fig. 4.

Referring to the drawing, which illustrates the preferred embodiment of the invention, the numeral 10 designates an elongated handle which may be formed of wood, metal, or other suitable material. On one end of this handle is fixedly mounted a metal tubular member 11. A flat plate portion 12 is formed at the outer end of member 11 and projects laterally therefrom. Plate 12 is preferably formed integrally with the tube 11 and extends at an oblique angle thereto. On opposite sides of the tube 11 the plate 12 is provided with a pair of parallel guide sleeves 13, preferably extending perpendicularly to plate portion 12. Sleeves 13 have reduced diameter ends fitting in and projecting through openings in plate portion 12 and the projecting portions 14 thereof are spun or otherwise fixedly secured to plate 12 to securely and fixedly mount said sleeves on said plate.

A cleaning element 15 in the nature of a block of compressible water absorbing material, such as sponge rubber of any desired shape and size, has a flat face bearing against the outer face of plate 12. A rigid U-shaped member comprising a pair of parallel elongated arm portions 16 and a cross piece 17 extending between said arms is employed to secure the rubber 15 to the plate 12. The arms 16 extend through the rubber in a longitudinal direction and also fit snugly and slidably in sleeves 13, and are provided with heads 18 at their ends bearing against sleeve ends 14. Arms 16 are guided and positioned by sleeves 13 to hold cleaning element 15 in desired relation to the plate 12 and the handle 10. A rubber tube 19 is fitted around the cross part 17, as best illustrated in Fig. 4.

The transverse dimension of the cleaning element 15 is greater than the dimension of the plate 12 whereby the edges of the plate 12 may be inset from the edges thereof. Hence, the cleaning element 15 protects the surfaces being cleaned against the contact therewith by the metal of plate 12. The rubber tube 19 also constitutes means for protecting the surface being cleaned from contact with the metal cross bar 17.

The length of the arms 16 of the U-shaped retainer is so proportioned relative to the length of the sponge 15 that the sponge will be slightly compressed when the heads 18 of the arms 16 bear against the plate 12. This compression is preferably sufficient to permit the unconfined portion of the end of said cleaning element to flare or expand longitudinally. This end expansion of the rubber cleaning element 15 serves to normally position the parts so that the rubber tube 19 will not engage the surface being cleaned under normal conditions.

When it is desired to wring the rubber cleaning element, that is, to extract excess water therefrom, the end of the cleaning element is placed against a rigid surface, such as the wall of a bathtub, and the handle is then pushed endwise toward said surface. The rubber compresses incident to this operation, and the arms 16 of U-shaped member 16—17 slide in the sleeves 13 to the position illustrated in Fig. 2. In this way, all excess liquid can be extracted from the cleaning element and dripping of liquid therefrom can be prevented without the necessity of touching the cleaning element and without requiring use of a wringing or compressing element upon the device. Upon release of pressure, the sponge rubber will expand and this expansive action of the rubber will urge member 16—17 to normal

position. Heads 18 of arms 16 engage sleeve ends 14 or plate 12 to limit the expansion of the rubber, as is obvious.

The formation of the cleaning element of a solid block of sponge rubber assures that the device will have a long life, inasmuch as wear of the sponge will occur slowly. The device may be used until its cross sectional dimension is reduced approximately to the dimensions of the plate 12. At the same time, sponge rubber is of sufficiently yielding character so that when confined, only by the plate 12 and the U-shaped member 16—17, it may shape itself to accommodate the curvature of surfaces against which it is pressed in use.

The angular relation of the sponge cleaning element to the handle is also important for the reason that it increases the convenience thereof in use, especially on concave curved surfaces.

I claim:

A cleaner comprising a handle, a plate having a pair of spaced openings therein, means mounting said plate on said handle, a sponge rubber block bearing against said plate and having a pair of parallel passages therethrough registering with said openings, a pair of tubes fixedly anchored in said openings and projecting into said passages, said tubes being shorter than said passages, and a rigid U-shaped retainer including a cross bar and a pair of parallel arms shorter than said passages extending through said passages and tubes and each having an enlarged head at its end bearing against said plate, and a rubber tube encircling said cross bar, said block being compressed by said cross bar to flare around the same.

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