

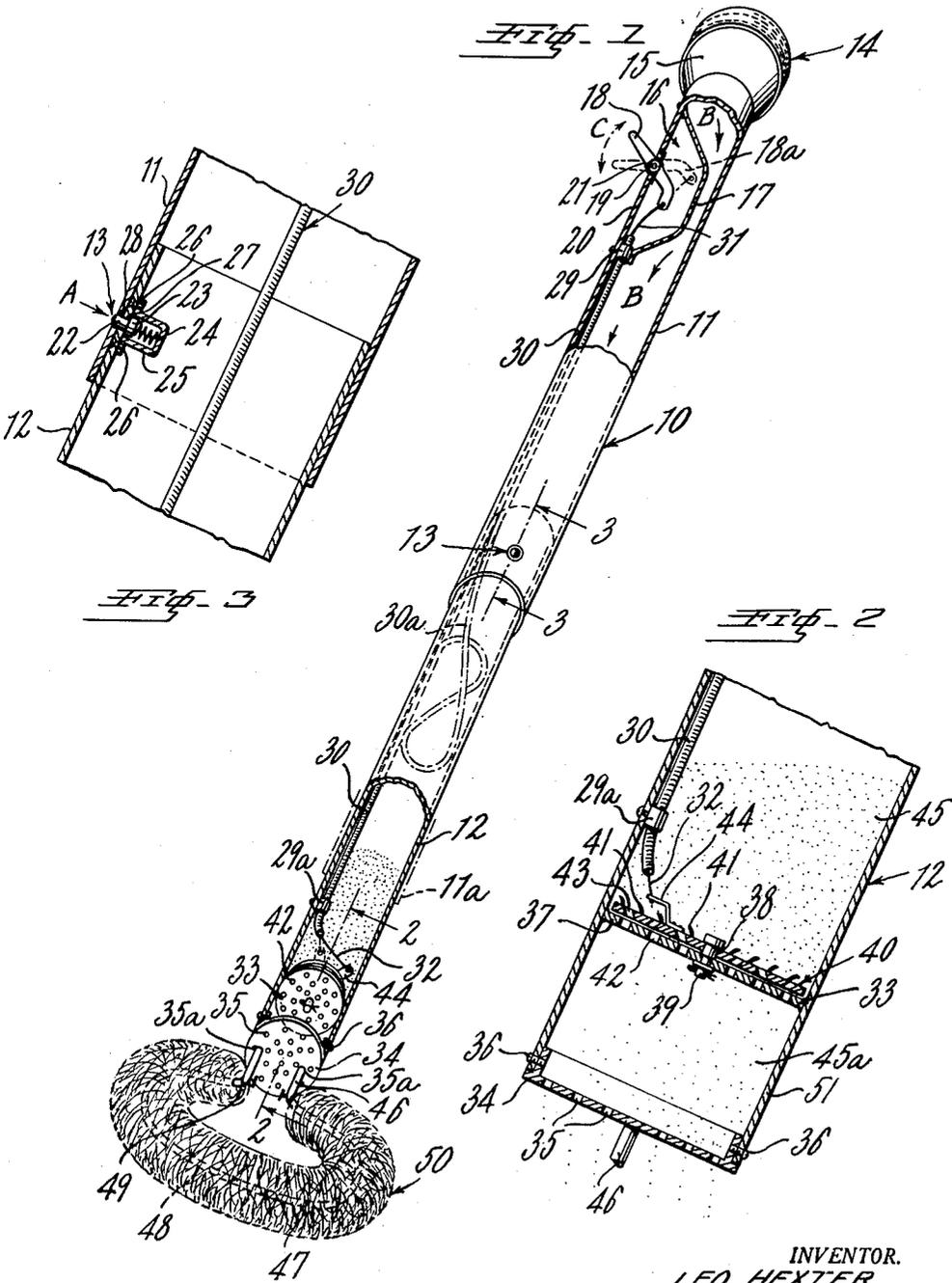
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PORTABLE CLEANSING APPLICATOR

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PORTABLE CLEANSING APPLICATOR

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This invention relates to applicators and more particularly to collapsible and portable cleansing devices especially for use in connection with bathtubs and similar receptacles, floor surfaces and the like.

It is one of the objects of the present invention to provide means affording scrubbing and even distribution of cleansing substances over a surface to be treated.

It is another object of the present invention to provide means for facilitating dispensing of cleansing substances from an applicator while the same is in extended or operative position.

A further object of the present invention is to provide means rendering the possibility of collapsing the applicator when not in use or when in inoperative position, so that the same takes up a minimum of space during storing.

Yet a further object of the present invention is to provide means contributing to effective cleaning of surfaces by means of a substance, even if the same is caked or otherwise influenced by the moisture of ambient atmosphere.

Still a further object of the present invention is to provide means permitting the accommodation of a cleanser or similar substance in the hollow handle of the applicator and for discharge therefrom, manipulating means being further provided to facilitate that the substance is applied to a surface to be cleaned in the form of particles of substantially equal size.

It is another object of the present invention to provide means facilitating the manufacture of a light-weight applicator of the aforesaid type which is easy to handle, can be inexpensively manufactured and complies with the normal working conditions as they exist in bathrooms, sickrooms, and other localities where cleaning is of prime importance.

These and other objects of the invention will become further apparent from the following detailed description, reference being made to the accompanying drawing, showing a preferred embodiment of the invention and in which:

Fig. 1 is a perspective view of the applicator, partly shown in section and constructed in accordance with the present invention.

Fig. 2 is an enlarged sectional view taken along lines 2—2 of Fig. 1.

Fig. 3 is an enlarged sectional view taken along lines 3—3 of Fig. 1.

Referring now more particularly to the drawing, there is shown in Fig. 1 an applicator device 10 which principally consists of two telescopic, tubular members 11 and 12 which may be locked in position by a catch mechanism 13, hereinafter described in greater detail. Tubular member 11 terminates in a gripping head or cap 14. Cap 14 is threadedly engaged with a funnel-shaped extension 15 connected with tubular member 11. It will be seen that upon unscrewing cap 14, access may be had to the interior of tubular member 11 through funnel 15 for

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facilitating filling tubular member 11 with a suitable cleansing substance of predetermined quantity.

In an opening or recess 16 defined by wall 17 in tubular member 11, there is accommodated a manipulating member or lever 18 pivoted on a stud or pin 19 supported by wall 20 of tubular member 11.

About pin 19 there is wound a spring 21 to urge lever 18 into a position shown in full lines. This lever 18 may be pressed into position 18a by means of the hand of an operator for a purpose later to be described.

As stated above, tubular member 11 is coupled with tubular member 12 by means of a catch mechanism consisting of a pin 22 having an enlarged end 23 supported by a spring 24 in a housing 25 which, in turn, is attached within tubular member 12 at 26 (Fig. 3).

Pin 22 extends through suitably registering openings 27, 28 of tubular members 11 and 12, whereby the latter are held in extended position, as shown in Fig. 1. If it is desired to telescope members 11 and 12 into a position of member 11 to member 12 as indicated in dotted lines at 11a, it will be readily apparent that upon pressure exerted on pin 22 in the direction of arrow A tubular member 11 may be slid along tubular member 12 to the position 11a as hereinabove stated.

Within tubular members 11 and 12 there is accommodated and affixed on sleeve members 29, 29a a flexible Bowden cable 30 from which extend at 31 and 32, respectively, cable end pieces which are respectively connected to lever 18 and a distributor mechanism 33, hereinafter more fully described.

Tubular member 12 is closed by a sieve-shaped end plate 34 having perforations 35 and anchored at the end of tubular member 12 by means of screws 36 (Fig. 2). Rearwardly of end plate 34 within the interior of tubular member 12, there is further disposed a stationary partition plate 37 fixed to the interior of tubular member 12 in any suitable manner, such as by soldering.

Rotatably retained on stationary partition 37 at 38 by means of pin 39 is a rotatable or displaceable disk plate 40 provided with teeth or other scraping means 41 for a purpose later to be described. Stationary partition 37 as well as rotatable plate 40 are provided with registrable openings or slots 42, 43, respectively. Cable extremity 32 is anchored on a bracket or lever 44, fixed on the surface of rotatable disk plate 40, as may be more clearly seen from Fig. 2.

If the interior of tubular members 11, 12 is now filled with a cleaning powder or similar substance 45, which may be passed into the applicator upon removal of threaded cap 14, the substance will be guided along a path indicated by arrows B, until substance 45 is retained by disk-partition 40, 37. When tubular members 11, 12 are telescoped to extend into operative position, as shown in Fig. 1, the flexible cable 30 which was heretofore in a position as indicated at 30a will be extended lengthwise of the inner wall 20 of tubular member 11, as shown in full lines at 30.

If it is now desired to dispense or discharge some of the powdery substance 45 through partition 37 and perforations 42, 43 and 35, all that has to be done is to reciprocate the manipulating lever 18 according to arrows C and under the action of spring 21, so that the powdery cleansing substance 45 may be readily and evenly distributed onto the surface to be treated.

Anchored in predetermined perforations 35a of end plate 34 are the wire legs 46 of a mop or similar brushing tool 50, the surface of which may be wound around a suitably bent wire 48 terminating into said legs 46. It is well understood that a similar device 50 may extend crosswise to that shown on Fig. 1 and attached to stationary perforated plate 34 in a manner similar as herein set forth in regard to brushing tool 50.

It is further to be noted that, if desired, legs 46 may be swivelled at 49 in order to more readily apply device 50 to any surface contour to be treated.

The operation of the device will now be readily understood. The cleansing substance 45, in particular when it is used in a moist or damp room, will easily cake and thus clog the dispensing mechanism 33. In order to effectively avoid and overcome this and other deficiencies heretofore experienced with known apparatus, the operation of the lever-Bowden-distributor mechanism 18—30—33 not only acts on lumps or caked substance 45 by means of teeth 41, but also aids in the distribution thereof in a very efficient manner through perforations 42, 43 (when brought in registry with each other during scraping or grinding motion of the teeth 41). Thus, substance 45a in comminuted state contained in chamber or extension 51 will then be discharged through sieve plate 34 onto the mop or applicator tool 50, as may well be understood.

In some instances it will not be necessary to provide chamber or extension 51 as shown and end plate 34 may be omitted, so that the particles of the cleansing mass or substance may directly be discharged from the distributor mechanism 33. In such case the applicator tool 50 may be anchored within the hollow extension 51 in any suitable manner.

It is further to be observed that instead of the Bowden cable 30 telescopic rods or similar flexible structures may be employed which will achieve the aforesaid action of the distributor mechanism 33 and will readily adapt themselves to conditions derived from the collapsibility of the applicator device 10.

As cleansing substance any known detergents, soap powder and like granular material may be employed.

It is further to be noted that coil spring 21 is strong enough to always return manipulating lever 18 to its initial position. If desired, a similar spring may be provided on pin or pivot 39 to return plate 40 always to its starting position, whereby the perforations 42, 43 will be normally out of alignment with each other to achieve quantitative discharge of the cleansing particles or granules, whenever desired.

It can thus be seen that there has been provided in accordance with this invention an applicator of the type described, comprising telescopic tubular means forming a storage space for a cleansing substance, discharge or distributing means for said substance at one end of said tubular means, means for operating said distributing means adjacent the other end of said tubular means, means operatively connecting said operating means with said distributing means, said distributing means being provided with scraping means and with perforations facilitating release of said substance when treated by said scraping means from said distributing means, and tool means located adjacent said distributing means and supported by said tubular means, whereby said substance upon discharge from said distributing means is received by said tool means for application to a surface to be treated, at least a part of said distributing means being rotatable relative to said tubular means upon actuation of said operating means, said operating means and said distributing means being connected by a Bowden cable supported within said tubular means.

Various changes and modifications of the device may be made without departing from the spirit and scope of the present invention, and it is intended that such obvious changes and modifications be embraced by the annexed claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. An applicator of the type described comprising telescopic tubular means forming a storage space for a fluent solid cleansing substance, distributing means for said substance at one end of said tubular means, means for operating said distributing means adjacent the other end of said tubular means, means operatively connecting said operating means with said distributing means, said distributing means being provided with scraping means and with registrable perforations facilitating release of said substance therethrough when treated by said scraping means, and tool means located adjacent said distributing means and supported by said tubular means, whereby said substance upon discharge from said distributing means is received by said tool means for application to a surface to be treated, at least a part of said distributing means being rotatable relative to said tubular means upon actuation of said operating means, whereby said perforations of said distributing means may be brought into and out of registry with each other, said operating means and said distributing means being connected by a Bowden cable supported within said tubular means.

2. An applicator of the type described comprising telescopic tubular means forming a hollow handle for holding a fluent solid cleansing substance, distributing means having cooperable perforated parts for the passage of said substance at one end of one of said tubular means, means for operating said distributing means adjacent the end of another of said tubular means, flexible means extending through said tubular means and connecting said operating means with said distributing means, said cooperable parts of said distributing means being rotatable relative to each other and being provided with scraping means facilitating release of said substance in predetermined position of said cooperable parts of said distributing means, and tool means located adjacent said distributing means and supported by said tubular means, whereby said substance upon discharge from said distributing means is received by said tool means for application to a surface to be treated.

3. An applicator according to claim 2, including coupling means on said one tubular means to connect the latter to said other tubular means, thereby to extend said handle to operative position.

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