Nov. 30, 1926. 1,608,818

C. SCANLON

SOAP DISPENSER

Filed August 1, 1925

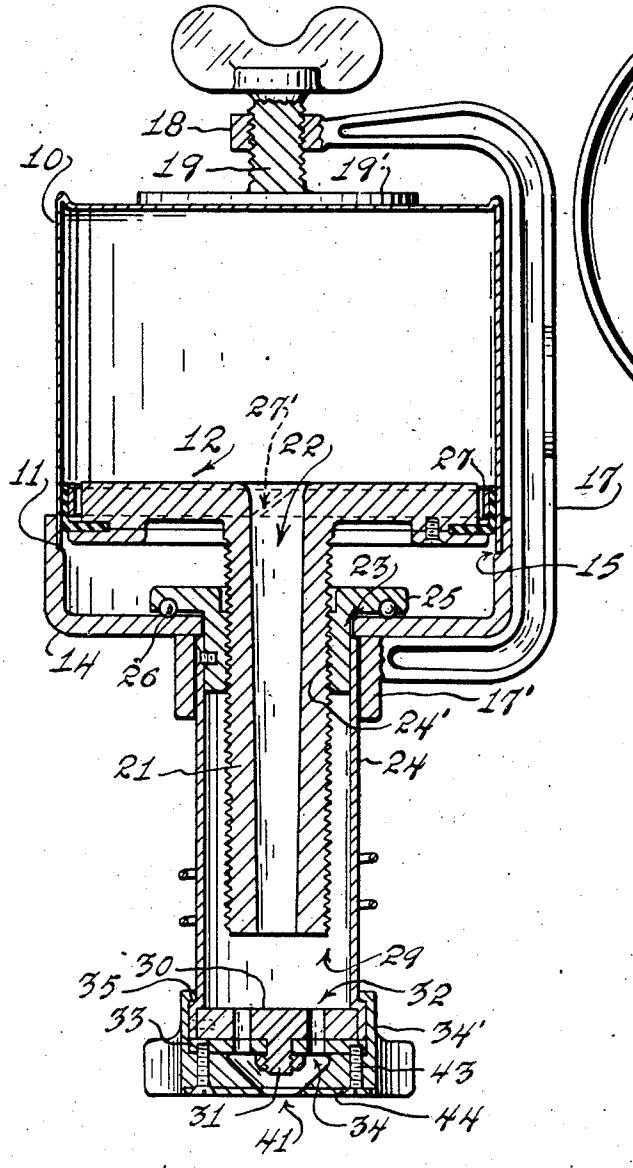


Fig. 1.

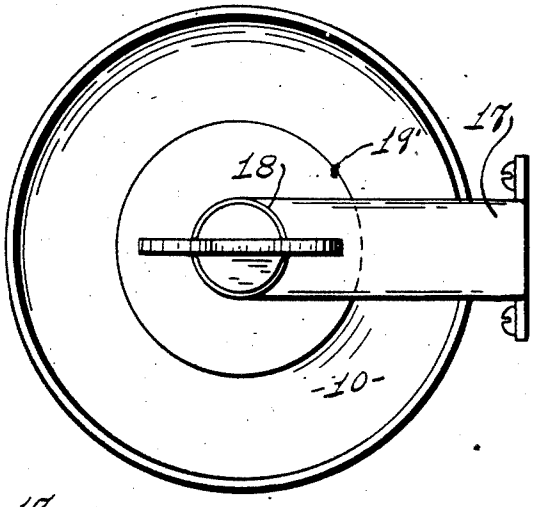


Fig. 2.

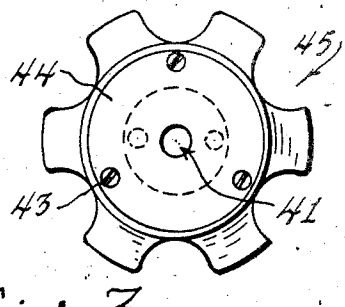


Fig. 3.

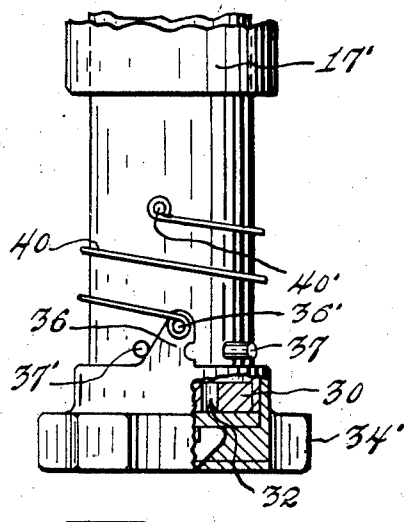


Fig. 4.

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SOAP DISPENSER.

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This invention relates to soap holders and dispensers and pertains more particularly to dispensers for soft soaps, cleaning paste and the like.

The invention has for its principal object the provision of a convenient, efficient and sanitary device of the above described character.

Another object of the invention is to provide a device of the above described class, which by a single movement of one hand will measure and eject a small quantity of soap directly into the palm of the hand.

Another object of the invention is to provide a soap dispenser which is conveniently and quickly refilled without waste.

Another object of the invention is to provide for ejecting soap in a ribbon and definitely cutting off the ejected ribbon after each operation, thus closing the device against accidental or delayed discharge.

Still other objects and advantages of the invention will appear hereinafter.

I have illustrated my invention by the accompanying drawings, in which,

Figure 1 is a view in vertical section of one embodiment.

Figure 2 is a plan view thereof.

Figure 3 is a view in bottom elevation of a lower part thereof.

Figure 4 is a view in elevation of a lower part of the device, with parts broken away to show underlying parts.

In carrying out my invention in the embodiment illustrated I provide the material to be dispensed in a common tin container 10. The container is provided with a suitable cover (not shown) which after being removed, leaves the lower end open and smooth edged, as at 11.

The device includes a leather cup piston 12 adapted to fit very snugly with the container 10. It is the purpose of the device to force the piston inwardly relative to the container and gradually displace the contents thereof.

The device includes a shallow cup-like base 14, formed with a groove 15 for the receipt of the lower end of the can. Into the cup the piston is adapted to be retracted. The inside diameter of the cup is slightly less than that of the soap container so that when the piston is advanced it will readily enter a new can, provided that the can is held firmly upon the cup base in inverted position as shown.

From the base a yoke 17 continues in the form of a C-clamp. The upper end 18 of the yoke is provided with a screw 19, such as is commonly employed in C-clamps, and thereby the container may be held very firmly relative to the base; a plate-like member 19′ serving to reenforce the bottom.

The piston is provided with a substantially integral depending stem 21 externally threaded. Said stem is provided with a tapered bore 22 through which the contents of the can is continually extruded as the piston is moving upward. The cup-like base is provided with a large central aperture 23 through which extends a removable sleeve 24. Said sleeve is internally threaded, as at 24′ and the depending piston stem is screw threaded into the internally threaded sleeve. Said sleeve is provided at the upper end with a thrust collar 25 under which balls 26 are retained. Thus the thrust collar rides on the cup-like base with minimum friction.

It will be apparent now that if sleeve 24 is rotated while the piston is held against rotation, the piston will gradually ascend; the screw stem and threaded sleeve coacting as a jack for the piston. Obviously the piston presses against the soap above it with considerable force. Friction between the piston and the contents of the can will serve to hold the piston against rotation. To further frictionally hold the piston an expansion ring 27 is placed inside of the leather cup to make it frictionally engage the walls of the container. As the piston ascends the stem of course ascends with it and the soap is extruded through the stem into bore 29 of the sleeve from which it seeks to escape.

The lower end of the sleeve is fitted with a fixed plug 30 from which depends a stud 31. The plug is provided with a plurality of holes 32 through which the extruded con-

tents of the can may escape, provided said holes are not obstructed. Below the plug 30 a cut-off disc 33 is provided having holes 34 corresponding in number and spacing to those in plug 30. Disc 33 is revoluble upon stud 31. The disc is shown with the holes in alignment with the holes in the plug but a few degrees retrograde rotation of the disc will move the holes out of alignment and then the bore of the sleeve is closed against escape of soap. The cut-off disc is a fixed part of an operating knob 34' which is retained upon the sleeve by a shoulder 35. The knob is movably fitted around the sleeve and carries a projecting member 36 which is disposed to abut a projecting member 37 carried by the sleeve. Thus, first movement of the knob around the sleeve does not move the sleeve. However, when the projecting members 36 and 37 come into contact the knob carries the sleeve. When the members 36 and 37 are in contact the holes in the disc and plug respectively are in alignment. A coil spring 40 connects the knob and the sleeve so that the knob is yieldably held in such position, relative to the sleeve, as to keep the holes closed in the plug. Thus, normally the holes in the plug are closed and the members 36 and 37 are spaced from each other as shown in Fig. 6. The operation of the parts is partially apparent from the foregoing and the operation of all the parts in unison will now be described. To operate the device the user places his hand, palm uppermost, under the knob so that discharge aperture 41 leads directly into the palm of the hand. The operator now turns the knob to the right. First movement of the knob does not move the sleeve but merely opens the holes in the plug. Now the holes are open and the members 35 and 36 are in contact so that the knob rotates the sleeve and the sleeve on rotating causes the piston to ascend and displace a small quantity of the contents of the container. Thus, some of the contents is forced out of the aperture 41 in a ribbon and is deposited directly in the user's hand. With the hand still under the knob the operator releases same and the spring turns the knob backward slightly enough to cut off the ribbon coming through the holes in the plug. As the several ribbons pass through aperture 41 they join into a single ribbon. When the cut-off is affected all soap which has passed through the disc will gravitate through the discharge aperture into the user's hand, or will be drawn through said aperture when the hand is retracted. Thus, the user receives all the soap ejected and such ejected soap is cut off from attachment with the device leaving same always clean and free. In operating devices of this kind it has been found that there is a tendency for soap to ooze out slowly after operation of the device is discontinued; with my device this is impossible because the outlets are tightly closed.

While I have shown and described a specific embodiment of my invention I do not limit myself to any specific construction, and I may alter same as I desire without enlarging the scope of my invention.

I claim,

1. In a dispenser of the class described, a piston, an externally threaded depending stem to said piston, a fixed base, an internally threaded sleeve revolubly supported by said base; said stem threaded into said sleeve, a depending extension to said sleeve enclosing said stem; said sleeve and its extension being revoluble with regard to said base and said base acting to hold said sleeve against ascent or descent; said piston and stem provided with a through bore leading to the interior of said sleeve.

2. In a dispenser of the class described, a piston, an externally threaded depending stem to said piston, a fixed base, an internally threaded sleeve revolubly supported by said base; said stem threaded into said sleeve, a depending extension to said sleeve enclosing said stem; said sleeve and its extension being revoluble with regard to said base and said base acting to hold said sleeve against ascent or descent; said piston and stem provided with a through bore, and a cup leather carried by said piston.

3. In a dispenser of the class described, a piston, an externally threaded depending stem to said piston, a fixed base, an internally threaded sleeve revolubly supported by said base; said stem threaded into said sleeve, a depending extension to said sleeve enclosing said stem; said sleeve and its extension being revoluble with regard to said base and said base acting to hold said sleeve against ascent or descent; said piston and stem provided with a through bore, and a turning knob closing the lower end of the sleeve extension; said knob provided with apertures.

4. In a dispenser of the class described, a piston, an externally threaded depending stem to said piston, a fixed base, an internally threaded sleeve revolubly supported by said base; said stem threaded into said sleeve, a depending extension to said sleeve enclosing said stem; said sleeve and its extension being revoluble with regard to said base and said base acting to hold said sleeve against ascent or descent; said piston and stem provided with a through bore, and a turning knob closing the lower end of the sleeve extension; said knob provided with apertures in its under surface, and cut-off mechanism normally closing said apertures, and arranged to open said apertures upon first forward turning movement.

5. In a soap dispenser, soap dispensing

means, a sleeve rotatable to operate said means, said means provided with a through bore communicating with the interior of said sleeve, a closure for the lower end of said sleeve provided with downwardly opening apertures disposed to receive soap displaced by said means, a revoluble cap fitted revolubly over said closure and provided with apertures disposed to be registrable with the first named apertures on proper turning movement of the sleeve, coacting stops on the sleeve and cap, respectively, arranged to abut when the apertures are in registration, and a spring connecting the sleeve and cap and constantly urging the cap to turn to move the apertures thereof out of registration with the apertures of the closure.

CHARLES SCANLON.