Sept. 14, 1926. 1,599,660

R. H. LITTLE ET AL

SOAP DISPENSER

Filed May 29, 1919 2 Sheets-Sheet 1

Fig. 1.

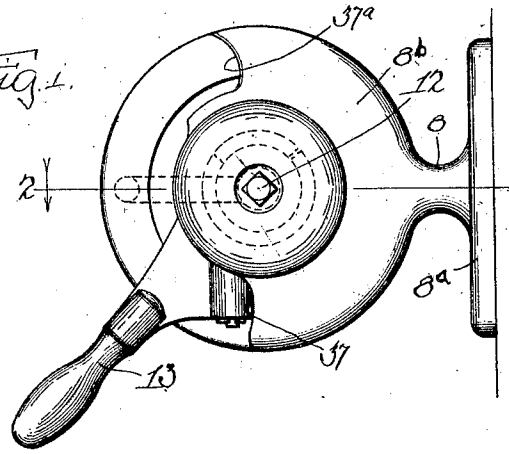


Fig. 3.

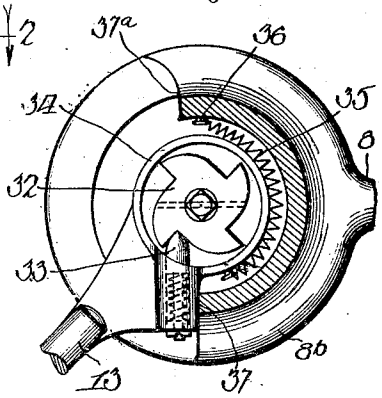


Fig. 2.

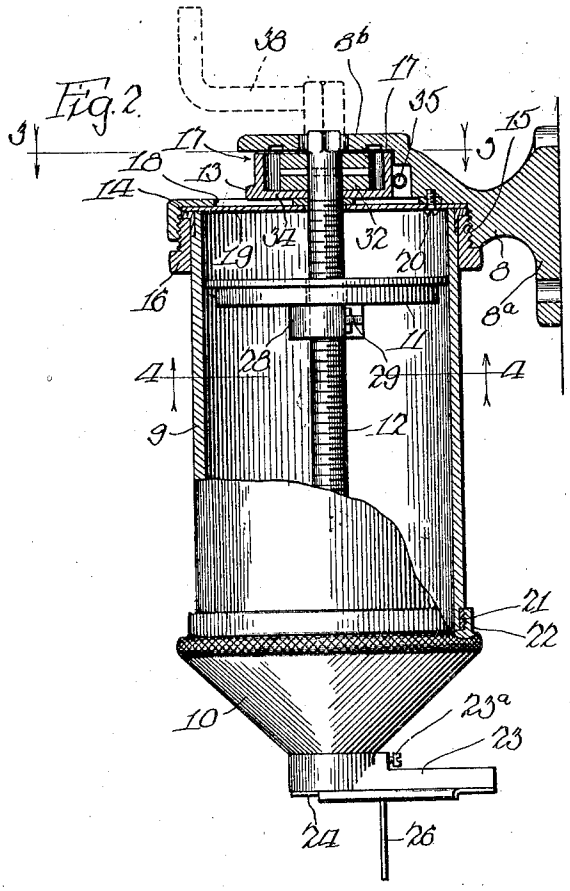


Fig. 4.

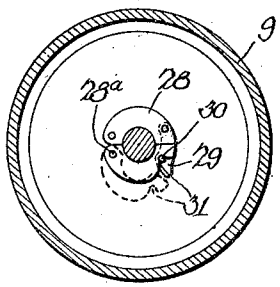
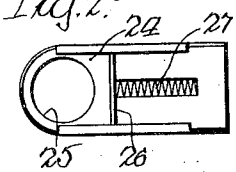


Fig. 2a.



Witness:
Leo A. DuMais

Inventors.
Robert H. Little.
Edgar L. Morris.
By Miller Chrisdahl & Parker
Attys.

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R. H. LITTLE ET AL

SOAP DISPENSER

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Fig. 5.

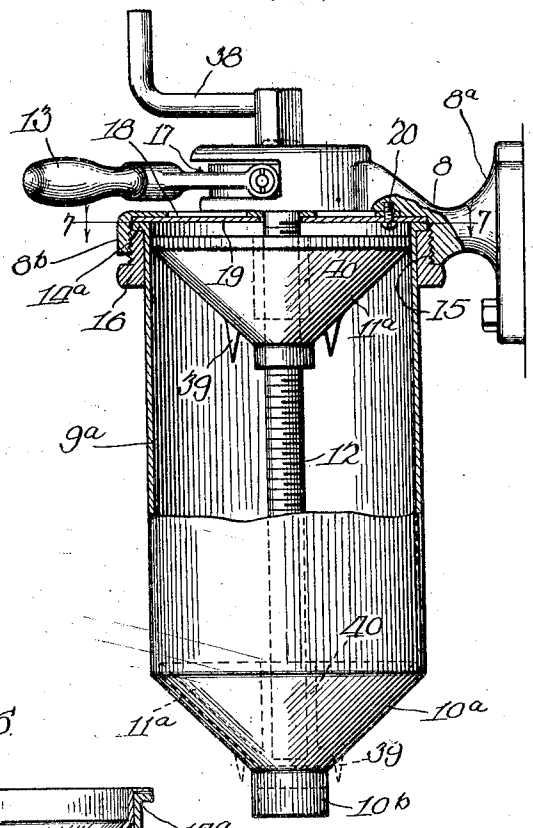


Fig. 6.

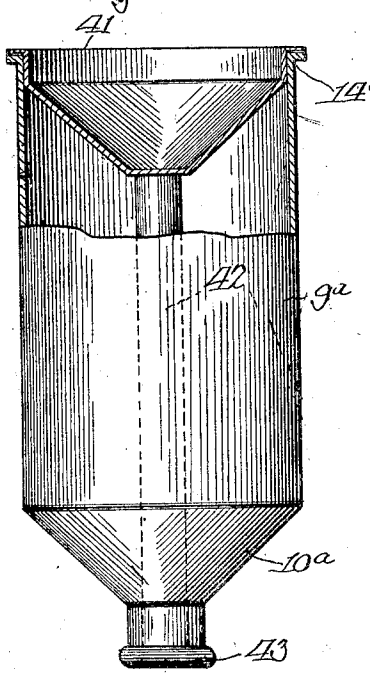
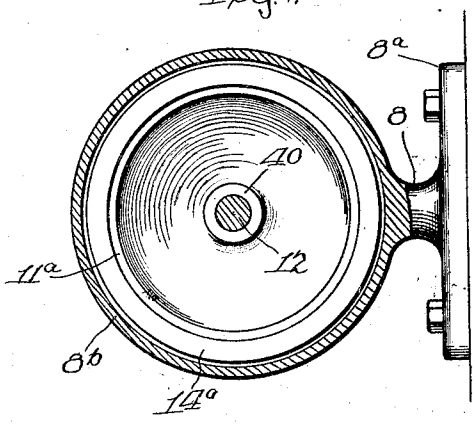


Fig. 7.



Witnesses:
Leo J. Dubrau.

Inventors.
Robert H. Little.
Edgar L. Morris.
By Miller Chindahl Parker Attys

Patented Sept. 14, 1926. 1,599,660

UNITED STATES PATENT OFFICE.

ROBERT H. LITTLE AND EDGAR L. MORRIS, OF CHICAGO, ILLINOIS, ASSIGNORS TO U. S. SANITARY SPECIALTIES CORPORATION, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

SOAP DISPENSER.

Application filed May 29, 1919. Serial No. 300,705.

The invention has reference to a device for dispensing soap in the form of a pasty mass such as is used by mechanics and other artisans, and the general object of the invention is to provide a device of advantageous construction and arrangement adapted to dispense soap in a semi-liquid state in measured quantities.

A more specific object of the invention is to provide a soap dispenser of the character indicated in which the soap container is capable of being readily detached when emptied and a new one filled with soap quickly secured in operative position.

A further object of the invention is to provide a soap dispenser in which the container for the soap becomes ruptured in use, which renders it incapable of use a second time by refilling.

In the drawings, Figure 1 is a top plan view of our improved soap dispenser. Fig. 2 is a fragmentary sectional view taken on line 2—2 of Fig. 1. Fig. 2^a is an under side view of a soap cutter adapted to be secured to the dispenser. Fig. 3 is a fragmentary horizontal sectional view taken on line 3—3 of Fig. 2. Fig. 4 is a horizontal section taken on line 4—4 of Fig. 2. Fig. 5 is a view similar to Fig. 2 but showing another form of soap container and plunger. Fig. 6 is a detached view of the container shown in Fig. 5 but in the form of a soap package. Fig. 7 is a transverse sectional view taken on line 7—7 of Fig. 5.

The dispenser comprises generically, a supporting bracket 8; a receptacle or container 9 or 9^a detachably secured to the under side of the bracket 8 and having a tapered or conical discharge end or nozzle 10 or 10^a; a plunger 11 or 11^a operable in the containers 9 or 9^a; an operating stem 12 having a screw-threaded engagement with the plunger 11 or 11^a; and actuating mechanism for the stem operable by means of a handle 13.

The bracket 8 comprises an upright fastening portion 8^a and a horizontal portion 8^b for supporting the soap container and the plunger operating mechanism. The container is made cylindrical in form and at its upper end is provided with an outwardly extending flange 14. To support the upper end of the container which is thus formed the bracket portion 8^b is provided with a screw-threaded socket 15 in its under side in which the flange is held by means of screw-threaded collar 16; and to support the plunger operating mechanism said portion 8^b of the bracket is shaped to form a cavity 17 within which the actuating mechanism for the operating stem 12 is enclosed. For convenience in assembling the parts, the part of the bracket which would normally form the bottom wall of said cavity is cut away so as to form an enlarged opening 18 in the bracket and this opening is closed by a separable plate 19 which is secured to the bracket as by means of screws 20. When the soap container is entered into the socket 15 in the bracket, the collar 16 serves to clamp the flange 14 against the under side of the plate 19.

In the construction shown in Fig. 2, the container 9 is preferably made of fiber board with metal securing rings at its opposite ends. Thus the flange 14 at the upper end of the container is formed on a metallic ring suitably secured to the outer periphery of the container and at its lower end the container is provided with a screw-threaded ring 21 as a means by which the lower discharge nozzle 10 of the container may be detachably secured thereto, said discharge nozzle being in this instance made for use with different containers and hence of a permanent character. Accordingly, it is preferable to form it of metal, and at its upper end it is provided with an annular portion 22 internally threaded so that the nozzle may be secured in holding engagement with the ring 21 on the lower end of the container.

By reason of the fact that the nozzle is made tapered or conical in form the soap will not discharge therethrough except when the plunger is actuated in the operation of the device; and in order that when a quantity of soap is discharged it may be conveniently removed for use, a slicing or cutting device may be removably fastened as by means of a set screw 23^a upon the extreme lower end of the nozzle which for this purpose may be made annular in form as at 10^b (Fig. 5). This device 23 may be of any preferred construction. Herein it is shown as comprising a slide 24 provided with a circular opening 25 normally registering with the discharge outlet and having a depending finger-engaging portion 26 by means of which the slide can be

moved against the action of a spring 27 to cut off the soap which has been forced through the opening 25.

The plungr 11 may be in the form of a flat disk of suitable construction and has fixed on one side a nut 28 which is made sectional in form so that it may be disengaged from its threaded engagement with the stem 12. Thus, as shown in Fig. 4, one of the sections is pivoted at one end as at 28^a and the other section carries a pivoted latch member 29 carrying a pin 30 which is movable into holding engagement with a notch 31 formed in the pivoted section of the nut. The onening in the disk portion of the plunger is made sufficiently large to enable the plunger to be slid longitudinally when the pivoted section of the nut is in inoperative position.

The operating stem 12 extends vertically through the portion 8^b of the supporting bracket 8, suitable openings being provided therein and in the plate 19 for this purpose, and the lower portion of the stem depends into the container. The actuating mechanism for the stem is operatively associated with the upper end thereof and is partially enclosed within the cavity 17 formed in the bracket. This mechanism may comprise a toothed ratchet wheel 32 keyed onto the stem and adapted to be engaged by a spring-pressed dog 33 carried by the operating handle 13. This handle has formed on its inner end a cup shaped portion 34 swingable on the stem as an axis and having a tension spring 35 fixed thereto at one end, the other end of the spring being fixed to the bracket at 36 (Fig. 3). The cup-shaped portion 34 of the handle is made of sufficient depth to neatly receive the ratchet wheel 32. It will be understood that the cavity 17 and the bracket are cut away at one side to accommodate the handle 13, the opposite ends 37 and 37^a of the opening thus formed serving as stops to limit the swinging movements of the handle 13.

Referring to Fig. 3, a movement of the handle 13 in a clockwise direction rotates the stem 12 and thereby causes the plunger to move downwardly. When this movement of the handle is arrested by the stops 37^a, a measured quantity of soap has been forced through the discharge nozzle, whereupon, the handle being released, the spring 35 retracts it into position against the stop 37, the dog 33 escaping past the teeth on the ratchet wheel 32. When the plunger has reached the lower end of the container, the sectional nut 28 may be disengaged from the stem and the plunger slid back to its position at the upper end thereof. If, at any time, it is desired to retract the plunger in the container, this may be accomplished by rotating the same; and to this end the upper end of the stem is squared and the opening in the upper portion of the bracket may be sufficiently large to permit the insertion thereinto of the socketed end of a crank 38.

In the form of the dispenser shown in Figs. 5 to 7, the container 9^a is adapted to be ruptured in the operation of forcing the soap therefrom, thus rendering the containers used non-refillable. In this embodiment of the invention the nozzle 10^a is made integral with the container proper, the latter being preferably made of tin or the like. At its upper end the container 9^a is flanged as at 14^a which flange is adapted to be clamped in the supporting bracket in the manner above set forth. The means for rupturing the container are herein in the form of prongs or projections 39 carried by the plunger and adapted to pierce the walls of the container in the operation of the plunger. Herein the plunger is shaped to conform to that of the interior of the discharge nozzle and the projections are formed on the bottom side of the plunger so that when the plunger approaches the bottom of the container, the projections serve to rupture it, as shown in dotted lines in Fig. 5. The plunger may be constructed in any prefered manner. Herein it is made in the form of a hollow inverted cone with a central tubular stem 40 internally screw-threaded so as to operatively engage with the operating stem.

In Fig. 6, the container is shown as a soap package. Thus it is provided at its upper end with a cover 41 frictionally held in position in a well known manner. Preferably the cover is cone shaped so as to form a depression for the plunger in the soap which fills the upper portion of the container. To provide a bore for receiving the operating stem 12 a rod or core 42 is inserted into the container, said rod having a head 43 on its lower end closing the discharge end of the container.

While we have herein illustrated and described our invention with considerable particularity, it will be understood that the invention is not to be limited in the interpretation of the appended claims except as may be necessitated by the state of the prior art.

We claim as our invention:—

1. A soap dispenser having, in combination, a supporting bracket having a socket in its upper side, a container having a flange on its upper end, a clamping member for holding said flange in said socket, a plunger operable in said container, an operating stem operatively mounted in the bracket and having a screw-threaded connection with said plunger, and means operatively associated with said bracket and stem to actuate the latter.

2. A soap dispenser, having in combination, a container having a discharge nozzle, a plunger operable in the container to force

soap through said discharge nozzle, and means operable only at the end of such movement of the plunger to rupture the container.

3. A soap dispenser, having in combination, a container having a discharge nozzle, a plunger operable in the container to force soap through said discharge nozzle, and means on the plunger operable in the movement thereof to engage the discharge nozzle of the container to rupture it as the final contents of the container are expelled.

4. In a soap dispenser having a container and a plunger operable therein, cutting devices carried by the plunger and operable to pierce an end wall of the container whereby to render it non-refillable.

5. A dispenser comprising, in combination, a container open at its upper end and having a discharge opening at its lower end, a stationary support, means removably securing the upper end of the container in said support, the lower end of said container being conical in form, a conical plunger operable in the container, an actuating stem with which the plunger has a screw-threaded connection, said stem being journaled at its upper end in said support, and reciprocatory means for rotating the stem whereby to impart to the plunger a step by step movement to effect a discharge of material from the container, said plunger having means adapted to engage with the conical end of the container to rupture it.

In testimony whereof we have hereunto set our hands.

ROBERT H. LITTLE.
EDGAR L. MORRIS.