

1,255,813.

W. H. BREW, DEC'D.
A. L. BREW, ADMINISTRATOR.
SOAP DISPENSING DEVICE.
APPLICATION FILED SEPT. 29, 1916.

Patented Feb. 5, 1918.

4 SHEETS—SHEET 1.

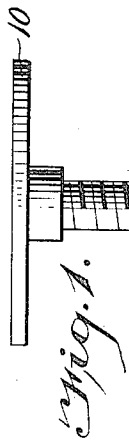
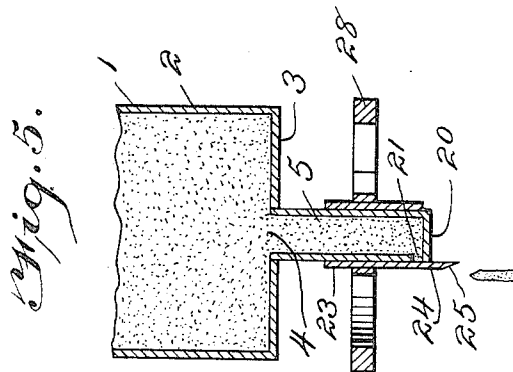
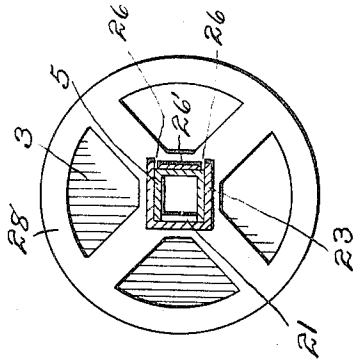


Fig. 6.



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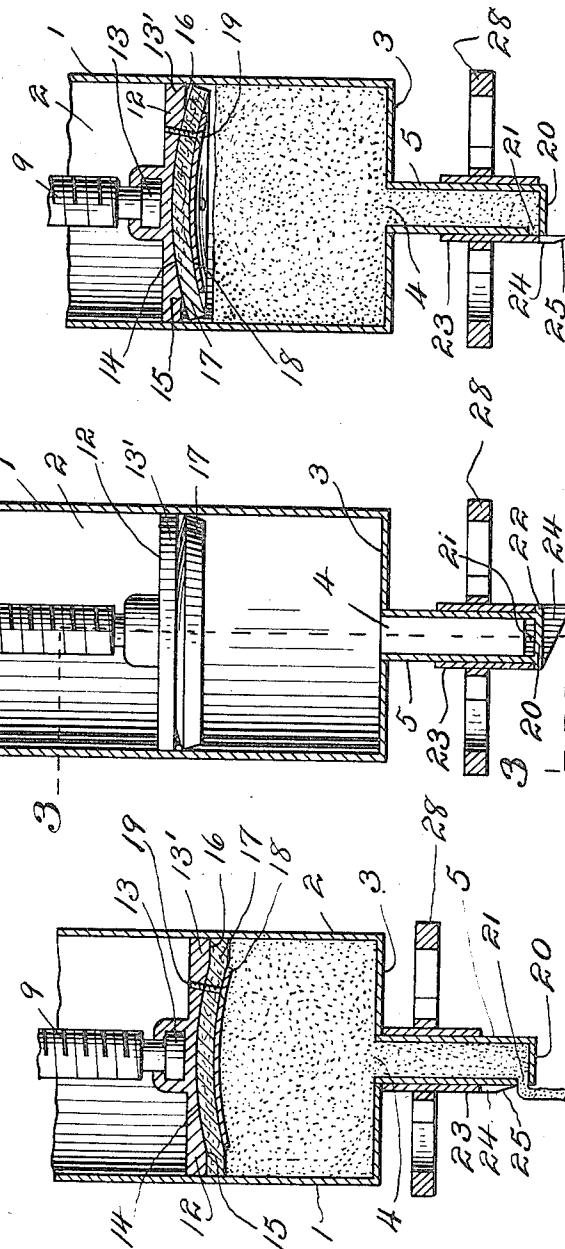
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4 SHEETS—SHEET 2.

Fig. 2.

Fig. 3.

Fig. 4.



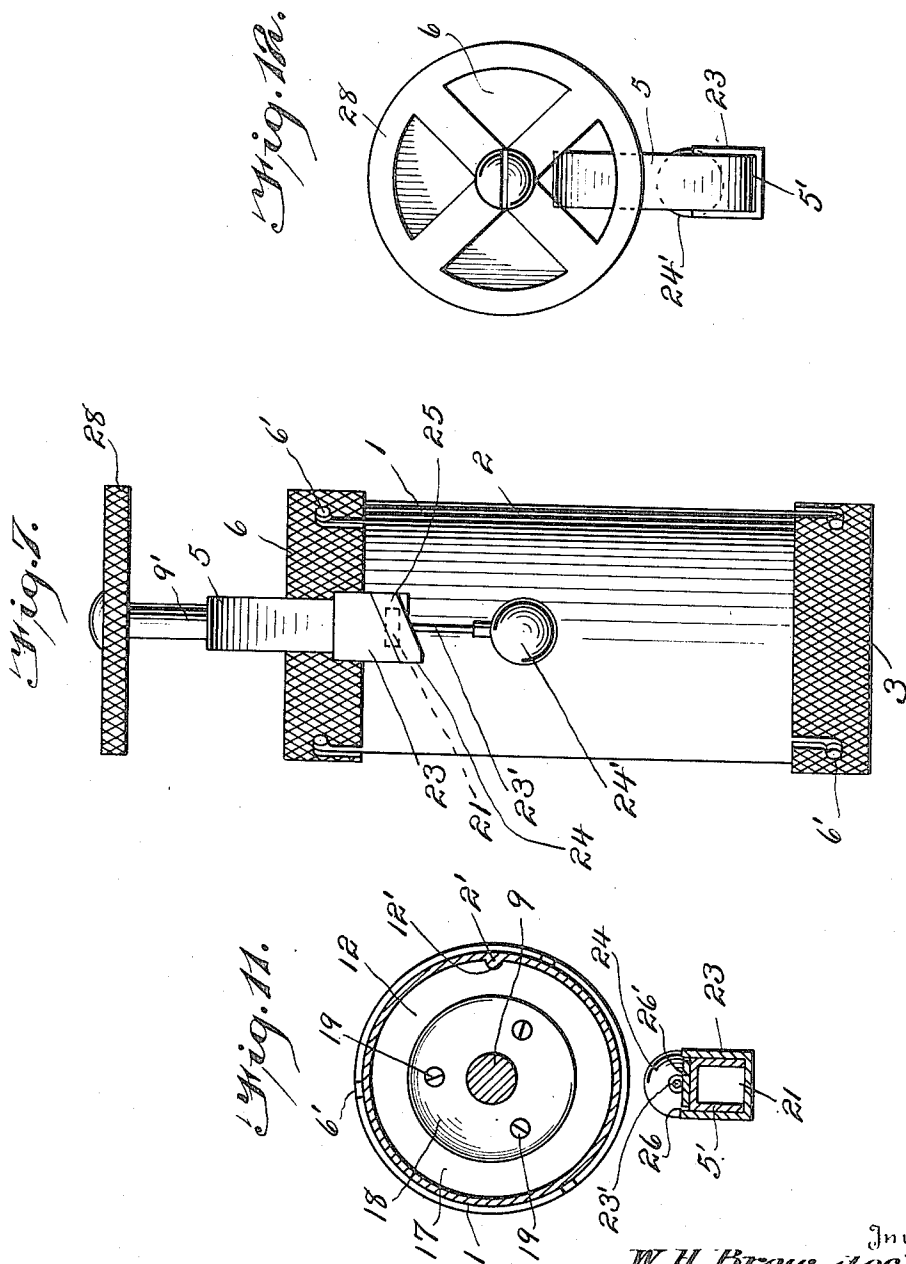
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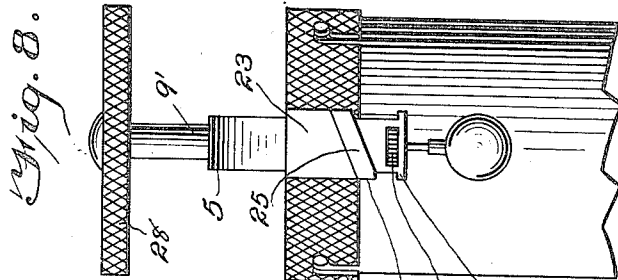
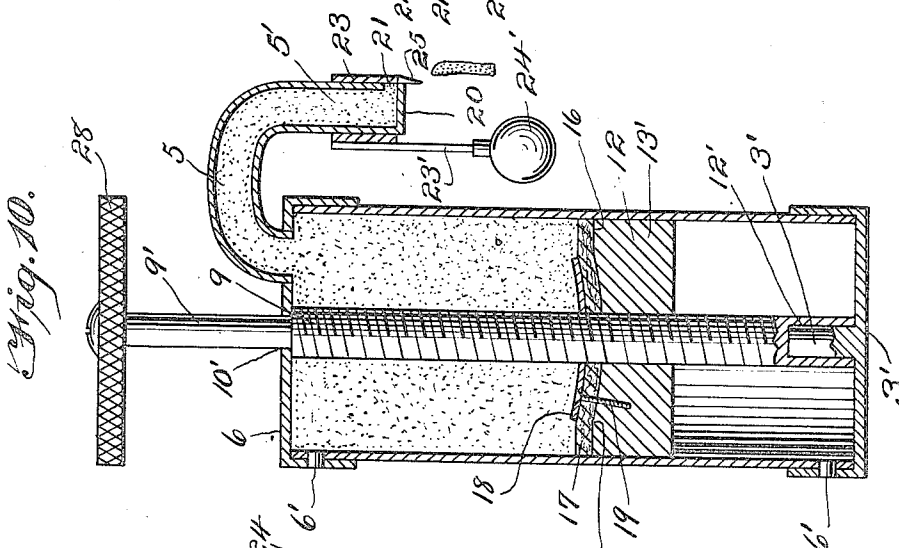
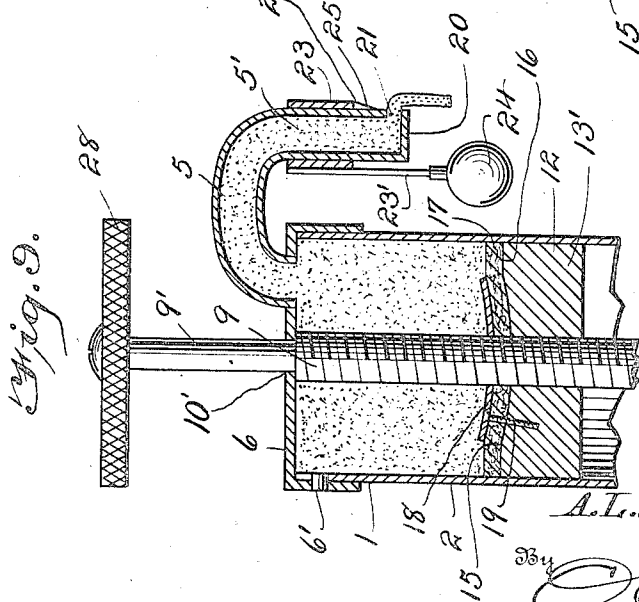
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UNITED STATES PATENT OFFICE.

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SOAP-DISPENSING DEVICE.

1,255,813.

Specification of Letters Patent.

Patented Feb. 5, 1918.

Application filed September 29, 1916. Serial No. 122,918.

To all whom it may concern:

Be it known that I, WILLIAM H. BREW, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Soap-Dispensing Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates particularly to a semi-fluid or pasty soap dispensing device, but as will appear from the following specification taken in connection with the accompanying drawings the device is applicable to be used as a container and dispensing means for other semi-fluid or pasty compositions.

It is generally conceded that the use of soap in cake form in public lavatories is unsanitary and a prevalent source of infection, while the use of soap in liquid form has not been found altogether satisfactory, owing to the ingredients required for the manufacture of the liquid soap and further owing to the necessary waste of the liquid when being dispensed from the container.

In order that the use of a semi-fluid or pasty soap may be entirely satisfactory, it is essential that an efficient container be employed which can be easily and quickly operated by the user in such manner that none of the soap contents of the container are wasted.

This invention, therefore, has for its object to provide a container and dispensing device for semi-fluid or pasty soap and the like, so constructed and arranged that the soap contents can be quickly and easily dispensed and in such manner that the flow of the contents from the container will automatically cut off so as to prevent waste of the soap.

With this object in view the invention consists in the novel construction and arrangements of the container and particularly in the novel construction and arrangement of the dispensing tube closure and soap cutting off means.

The invention further consists in the novel construction of the piston or follower, and the invention further consists in cer-

tain novel details of construction and in combination of parts, all of which will be first fully described and afterward specifically pointed out in the appended claims.

Referring to the accompanying drawings:—

Figure 1 is an elevation of a soap container and dispensing device constructed in accordance with this invention.

Fig. 2 is a vertical sectional view through the container, the piston and screw being in elevation.

Fig. 3 is a fragmentary vertical section taken on line 3—3 of Fig. 2.

Fig. 4 is a fragmentary vertical section illustrating the piston or follower in compression position and also illustrating the soap as being dispensed from the container.

Fig. 5 is a similar view showing the dispensing tube closure and cut-off as cutting off the soap supply.

Fig. 6 is a horizontal sectional view through the soap dispensing tube and its closure.

Fig. 7 is an elevation of a modification.

Fig. 8 is a fragmentary elevation illustrating the closure and cut-off in raised position.

Fig. 9 is a vertical sectional view through the device illustrating the same in position for dispensing the contents of the receptacle.

Fig. 10 is a vertical sectional view illustrating the closure and cut-off as having returned to its normal position cutting off the dispensed contents and closing the dispensing tube.

Fig. 11 is a longitudinal sectional view taken through Fig. 7, and

Fig. 12 is a top plan view of the device.

Like numerals of reference indicate the same parts throughout the several figures, in which—

1 indicates the device, which includes a cylindrical container 2 having a bottom 3 with an opening 4 therein communicating with the dispensing tube 5, which as shown in the drawings is square in cross-section.

6 indicates the container cap threaded at 7 for connection with the container 2, said cap being centrally threaded at 8 to receive the threaded stem 9, which stem 9 is preferably secured to a flange or plate 10 having perforations 11 for the reception of suitable screws or fastenings.

12 indicates the piston or follower which

receives a head 13 on the stem 9 in such manner as to provide a loose connection between the stem 9 and piston 12 so that the piston 12 may rotate relatively to its stem 9.

5 The piston 12 includes a plate 13' having the central portion of its underface concaved at 14 to the point 15, the portion 16 of the underface being flat as shown in the drawings. A disk 17 of pliable material,
10 such as felt, leather or the like, is arranged and fastened in the concaved portion 14 of the plate 13', while the convexed plate or disk 18 is applied under the pliable disk 17, the whole being fastened together by fasten-
15 ings 19 as shown in the drawings.

Referring again to the dispensing tube 5, which as before stated is square in cross-section, it will be seen that the same has a closed bottom 20 and preferably an elongated dispensing aperture 21 in one side of the tube
20 5 and near the closed bottom 20, while opposite sides of the tube 20 have at their bottom edges a small lateral extension 22 to act as a stop to limit the downward movement
25 of the dispensing tube closure and cut off 23.

Referring particularly to this dispensing tube closure and cut off 23, it will be seen that the same is square in cross-section, closely conforming to the shape and sides of the
30 square dispensing tube 5 and arranged for free vertical sliding movement on the square dispensing tube 5. One side of the closure and cut off 23 is extended below the end of the dispensing tube 5, which extension is indicated by the numeral 24, the bottom edge
35 25 thereof being beveled as shown, the beveled edge being itself beveled to provide a knife or cutting edge to facilitate the cutting off of the soap and provide for an
40 easy passage of the extension through the soap passing or protruding from the dispensing aperture 21.

In order to further provide for the close conformation of the knife edged extension
45 24 of the closure or cut off 23, I provide in the side of the said closure or cut off 23 opposite to the knife edged extension 24, two small vertical cuts 26, which forms in effect a resilient tongue 26' and this tongue
50 is slightly bent inwardly against the adjacent side of the dispensing tube 5, sufficiently to cause the knife edged extension 24 to closely hug the side of the square dispensing tube 5 provided with the soap dispensing
55 aperture 21. Sufficient tension is given the closure or cut off 23 to hold the knife edged extension in effective position and at the same time to allow for a free sliding movement of the closure and cut off 23 on the
60 square dispensing tube 5.

Having thus fully described the several parts of this invention, its operation is as follows:

65 The container 2 is filled with a suitable semi-fluid or pasty soap upon removal of

the threaded cap 6 and the piston or follower 12. As a matter of fact the container is disassembled by unscrewing the cylindrical container 2 from the threaded cap 6 and the threaded cap 6 is threaded down on
70 the stem 9 to the piston 12. The piston and cap are again applied to the container and upon rotation of the cylinder 2, said cylinder and cap are threaded up on the stem 9, causing the bottom 3 of the cylinder to ap-
75 proach the piston or follower 12. This action, of course, places the contents of the container under compression. This rotating action is effected by grasping the hand wheel 28, which is secured to and movable
80 with the closure and cut-off 23 and as the said closure and cut-off is freely slidable on the dispensing tube 5, the dispensing aperture 21 in said tube 5 is uncovered by
85 the closure 25, which allows the soap contents of the container to be forced through the dispensing aperture 21 preferably in the form of ribbon.

Instantly that the hand wheel 28 is released the closure and cut-off 23 drops into
90 a normally lowered position, the knife edged extension 25 cutting through the ribbon of soap and dropping in its normally lowered position at the same time effectually closing the dispensing aperture 21 and cutting off
95 further supply from the container.

By means of this construction the dispensing of a semi-fluid or pasty soap or like contents is effected in a simple and efficient manner and with no waste whatever, as the
100 hand of the user is directly under the wheel 28 when rotating the same and thus in perfect position to receive the dispensed contents from the device, while the supply is automatically cut off as soon as the hand of
105 the user is removed from the hand wheel 28.

Referring to the modification illustrated in Figs. 7 to 12 inclusive, it must be stated that where it is desired to place or attach
110 the device on the table portion of a lavatory or wash-basin, it is quite essential that the dispensing tube be positioned at the top of the receptacle, which positioning of the dispensing tube and operating wheel requires a slight rearrangement of the parts as here-
115 tofore described. In the construction referred to it is preferable to have the container 2 removable from the top 6 and bottom 3 of the device. The parts being secured together in any simple manner, such
120 as for instance, by bayonet joints 6', as shown in Fig. 7. It is also preferable to provide a gib 2' vertically of the inner surface of the container 2 and to provide the piston or follower 12 with a slot 12', so as
125 to hold said piston 12 against rotation. In this instance, the threaded stem 9 threads through the piston or follower 12 and is chambered at its bottom end 12' to receive a boss 3' on the bottom 3, while said stem
130

9 is provided with a reduced upper-portion 9', which passes through a perforation 10' in the top 6, the hand wheel 28 being arranged on the upper-end of the stem 9. By means of this construction the piston or follower 12 is operated within the container to compress the contents thereof by manipulation of the hand wheel 28.

In this construction, I prefer to either cast or otherwise form integrally with the top 6 the dispensing tube 5, which as shown in Fig. 10 is of goose neck formation having a straight depending portion 5', which is preferably square in cross-section, as shown in Fig. 11, said straight portion 5' being provided with the dispensing aperture 21 and arranged on the cut-off and closure 23 and depending therefrom by a stem 23' is a weighted-ball or other element 24', the same having sufficient weight to cause the cut-off and closure 23 to operate efficiently automatically under the influence of gravity in the same manner as heretofore described.

Having thus fully described the invention, it is apparent that a semi-fluid or pasty soap or like contents and dispensing means can be constructed in accordance with this invention at slight expense.

It is also apparent that the construction of the follower or piston insures a strong compression and a consequent positive dispensing of the contents of the receptacle, as by my arrangement the pliable disk 17 under influence of compression is distorted out of its true concavo-convex form and lies against the annular flat face portion of the disk 13', which causes a slight increase in the diameter and circumference of the pliable disk 17 sufficient to insure a perfectly tight engagement of the disk 17 with the walls of the container 2.

It is further apparent that the construction is of a particularly simple nature and that there are no weak or delicate parts, such as springs and the like to become deranged and thereby render the device inoperative.

It is further apparent that the container as shown and described is susceptible to certain changes in construction and arrangement of the parts and I consider myself clearly entitled to any and all such changes and modifications as fall within the limit and scope of the appended claims.

What I claim as new and desire to secure by Letters Patent of the United States, is—

1. A device of the character described, including a receptacle, a follower and threaded stem therefor, a cap threaded to receive said stem to progress said follower upon relative rotation of said receptacle and said stem, a dispensing tube square in cross section provided with a dispensing aperture, a closure and cut-off square in cross section, a

cutting extension on said closure, the closure being slidable on said dispensing tube, the said cutting extension passing over said dispensing aperture, said closure including a resilient tongue for engagement with said dispensing tube to hold the cutting extension in effective position in relation to said dispensing aperture.

2. A device of the character described, including a receptacle, a follower therein, a dispensing tube provided with a dispensing aperture, a closure and cut-off slidable on said dispensing tube to command said dispensing aperture, said closure and cut-off including means for cutting off the contents of the receptacle dispensed through said aperture, and also including means for resiliently holding the closure and cut-off in effective position with relation to said dispensing aperture.

3. A device of the character described including a receptacle and follower, a dispensing tube provided with a dispensing aperture, a gravity actuated closure and cut-off vertically slidable on said dispensing tube to command said dispensing aperture, said gravity actuated closure and cut-off including a shearing edge arranged to pass vertically over the said aperture to shear off the contents of the receptacle dispensed through said aperture, substantially as described.

4. A device of the character described, including a receptacle and follower, a dispensing tube square in cross section provided with a dispensing aperture, a closure and cut-off square in cross section slidable on said dispensing tube over said aperture to cut off the contents of the receptacle dispensed through said aperture and to close the aperture, a hand wheel on said closure and cut-off for manual rotation and vertical movement, the square formation of the said closure and cut-off and of the said dispensing tube causing rotary movement of said hand wheel to be transmitted to said receptacle to rotate the same.

5. A device of the character described including a receptacle, a dispensing tube provided with a dispensing aperture, a gravity actuated closure and cut-off vertically slidable on said dispensing tube to command said dispensing aperture, said gravity actuated closure and cut-off including a shearing edge arranged to pass vertically over the said aperture to shear off the contents of the receptacle dispensed through said aperture, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses:

WILLIAM H. BREW.

Witnesses:

FLORENCE A. BARRON,
MINETTE A. BERGMANN.