

No. 795,676.

PATENTED JULY 25, 1905.

C. AMMEN.
DISPENSING APPARATUS.
APPLICATION FILED JAN. 16, 1905.

Fig. 1.

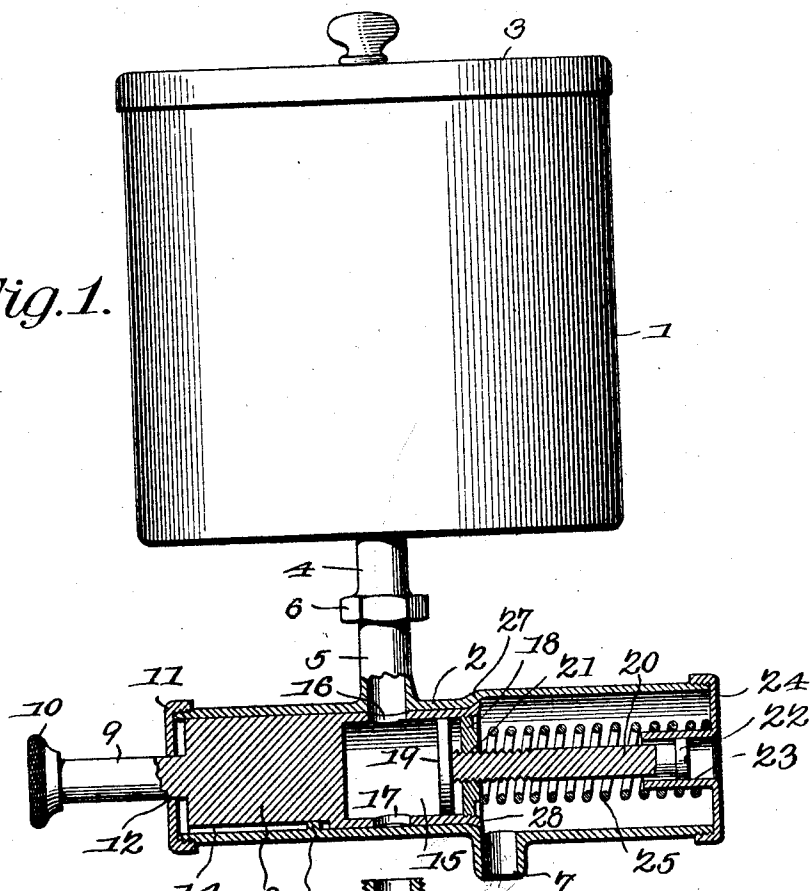


Fig. 2.

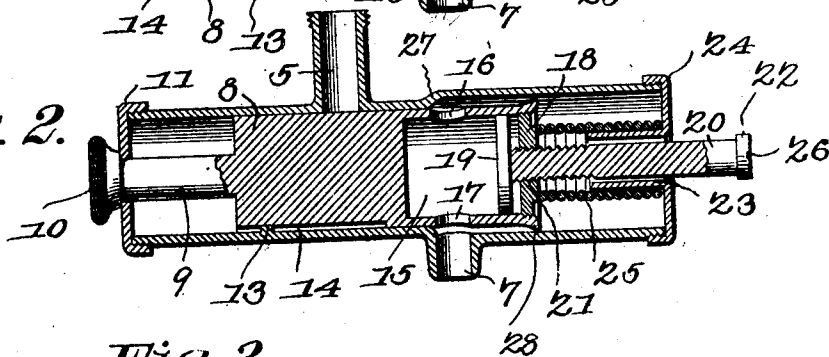
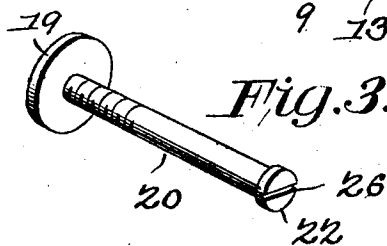


Fig. 3.



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DISPENSING APPARATUS.

No. 795,676.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES AMMEN, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Dispensing Apparatus, of which the following is a specification.

This invention relates to dispensing apparatus, and has for its object to provide an improved apparatus of this character which is constructed for dispensing liquid soap, and is therefore especially adapted for use in public and semipublic toilets.

Further objects of the invention are to facilitate the manipulation of the device to obtain a charge of soap; to cut off the supply and thereby prevent waste of the soap when a charge is being dispensed, to automatically return the feed mechanism to its normal condition after the charge has been ejected, and to provide for conveniently varying the quantity of the charge without taking the apparatus apart.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a side elevation of a dispensing apparatus embodying the features of the present invention with the delivery mechanism in section. Fig. 2 is a sectional view of the delivery mechanism in position to deliver a charge. Fig. 3 is a detail perspective view of the adjustable follower for varying the quantity of the charge.

Like characters of reference designate corresponding parts in each and every figure of the drawings.

The apparatus of the present invention includes a supply tank or receptacle 1 and a charge-casing 2 in communication therewith. The tank or receptacle 1 has a removable cover 3 to facilitate the filling of the tank with liquid soap or other material, and the bottom of the tank is pierced by a service-pipe 4, to which is connected the inlet-pipe 5 of the charge-

casing 2 by means of a suitable coupling 6. The inlet pipe or passage 5 pierces the substantially cylindrical casing 2 about midway of its ends, and there is an outlet spout or passage 7 depending from the bottom of the casing 2 in rear of the inlet 5.

Within the casing 2 there is a plunger 8, which has a working fit in the front portion of the casing and is provided at its front end with a stem 9, having an outer terminal finger-piece 10, there being a removable head or cap 11 preferably threaded upon the front end of the casing and having a central opening 12 for the slidable reception of the stem 9. The plunger 8 is about half as long as the casing 2 and is limited in its outward movement by the cap or closure 11. A stud or projection 13 rises from the bottom of the casing 2 about midway of the ends of the plunger 8, and the latter is provided with a longitudinal groove or channel 14, in which the projection 13 is received, so as to guide the plunger and prevent rotation thereof. In the inner end of the plunger there is a chamber 15 of predetermined size which intersects the inner extremity of the plunger and is pierced at diametrically opposite points by an inlet-opening 16 and an outlet-opening 17, the inlet-opening being normally in communication with the inlet-pipe 5, while the outlet-opening 17 is normally closed by the bottom of the casing. The open end of the chamber 15 is normally closed by a closure-plug 18, which is preferably threaded into the open end of the chamber. A follower 19 has a working fit in the chamber 15 and is carried by a stem 20, which has a threaded portion working in a threaded opening 21 in the closure-plug 18, the other end of the stem having a head 22 working in an open-ended tubular guide 23, carried by a removable head or closure 24, preferably threaded upon the rear end of the casing. A helical spring 25 embraces the stem 20 and bears in opposite directions against the head or closure 24 and the closure-plug 18, which constitutes the inner or rear end wall of the plunger 8, whereby the latter is yieldably held at its outer limit.

In practice the tank 1 is filled with liquid soap or other material to be dispensed, whereby the chamber 15 will be filled with a single charge in readiness to be removed therefrom. By pressing inwardly upon the finger-piece 10 the plunger may be moved to the position

shown in Fig. 2, so as to aline the outlet-opening 17 of the charge-chamber 15 with the outlet-spout 7, whereupon the charge will be dispensed through the spout 7 and only so much material as is contained in the chamber 15 will run out of the casing 2, for the reason that the supply is cut off from the tank 1 by the solid or imperforate portion of the plunger 8. Upon releasing the finger-piece 10 the spring 25, which has been compressed, will automatically return the plunger to its normal position and a new charge will be received within the chamber 15, whereupon the apparatus is in readiness for another operation. It will now be understood that while a predetermined quantity of material can be dispensed at any one time a loss of material between operations is effectually prevented. If a greater quantity of material is desired, the plunger may be manipulated a number of times until the required amount has been obtained. By reason of the fact that the follower 19 is normally fixed upon the plunger and the stem 20 moves therewith through the guides 23 there is no interference in the operation of the device by the member 20. The amount of the charge may be varied by varying the capacity of the chamber 15, and this is accomplished by shifting the follower 19 within the chamber to increase and diminish the length thereof. To facilitate this adjustment of the follower, the stem 20 is accessible through the guide-tube 23, and its head 22 is provided with a diametric groove or screw-driver seat 26, whereby the stem 20 may be conveniently rotated, so as to shift the threaded part thereof through the threaded opening 21 in the adjacent end 18 of the chamber 15.

To prevent leakage through the annular joint between the inner end of the plunger 8 and the casing, the rear end portion of the casing is enlarged so as to form an internal annular shoulder or seat 27 and the inner end of the plunger is enlarged to form an external annular flange 28, which engages the seat 27, the engaging faces of the seat 27 and the flange 28 being inclined or tapered in order to accommodate themselves to wear, and thereby maintain a tight joint at this point to prevent leakage from the chamber 15 through the outlet 17 and the discharge-nozzle 7.

Having fully described the invention, what is claimed is—

1. A dispensing device comprising a casing having an inlet and an outlet offset therefrom and also provided with an annular internal seat located between the inlet and the outlet, and a shiftable charge-chamber working in the casing for alternate communication with the inlet and the outlet at opposite limits of the movement of the chamber, said chamber being provided with an external annular por-

tion to normally engage the seat and form a tight annular joint between the charge-chamber and the casing.

2. A dispensing device comprising a casing having an internally-enlarged portion which is provided with an outlet, there being an inlet in the other portion of the casing, and a shiftable charge-chamber working in the casing for alternate communication with the inlet and the outlet at opposite limits of the movement of the chamber, said chamber being provided with an external annular flange to engage the annular shoulder between the inlet and outlet portions of the casing to form a tight annular joint at this point.

3. A dispensing device comprising a casing having an inlet and an outlet offset therefrom, a charge-chamber working in the casing for alternate communication with the inlet and outlet, one end of the casing being pierced by a tubular guide, a follower contained within the chamber, and a stem connected to the follower and working in the tubular guide with its outer end accessible in said guide for adjustably shifting the follower.

4. A dispensing device comprising a casing having an inlet and an outlet offset therefrom, a charge-chamber working in the casing for alternate communication with the inlet and the outlet, a follower within the chamber, a stem connected to the follower and accessible through one end of the casing, and a spring embracing the stem and bearing in opposite directions against the chamber and the adjacent end of the casing to yieldably maintain the chamber at one limit thereof.

5. A dispensing device comprising a casing having an inlet, an outlet offset therefrom, and a tubular guide leading inwardly from one end of the casing, a charge-chamber working in the casing for alternate communication with the inlet and the outlet thereof, chamber-actuating means piercing the opposite end of the casing, a follower within the chamber, a stem adjustably threaded through one end of the chamber and connected to the follower with the outer end of the stem working in the tubular guide and accessible through the open outer end thereof for adjustment of the follower, and a spring embracing the stem and the tubular guide and bearing in opposite directions against one end of the casing and the adjacent end of the chamber to yieldably maintain the latter in communication with the inlet.

6. A dispensing device comprising a casing having an inlet, an outlet offset from the inlet, the casing being provided between the inlet and the outlet with an internal annular tapered seat, a plunger working in the casing and provided with a chamber having an inlet for registration with the inlet of the casing at one limit of the plunger and an outlet

which is normally closed by the casing and capable of alinement with the outlet at the opposite limit thereof, the plunger being provided with an external annular tapered flange to fit the seat, and a spring to yieldably maintain the plunger at one limit with the flange in engagement with the seat.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHAS. AMMEN.

Witnesses:

WM. H. WRIGHT,

A. S. PERKINS.