Dec. 7, 1926. 1,609,479

G. A. LOEBEN

SOAP DISPENSER

Filed Nov. 4, 1925 2 Sheets-Sheet 1

FIG. 1.

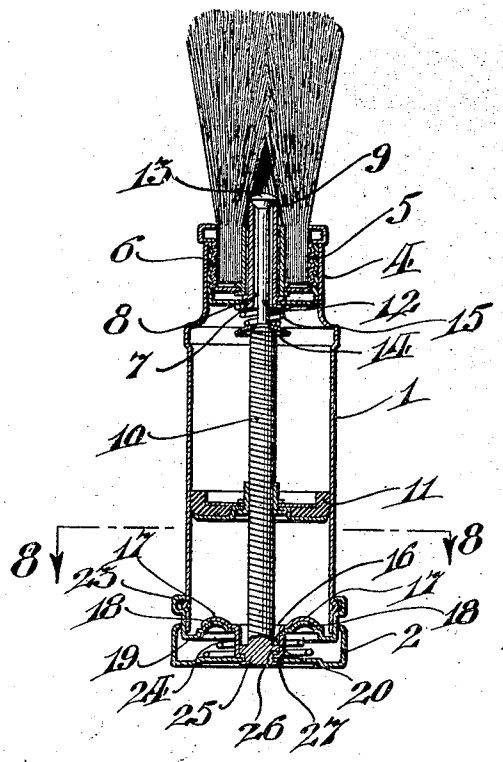


FIG. 2.

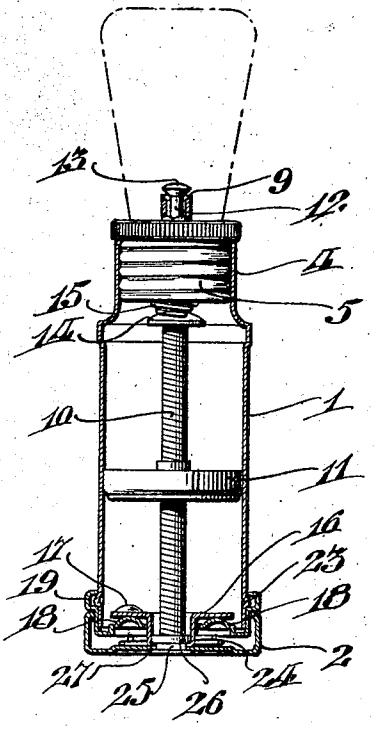


FIG. 3.

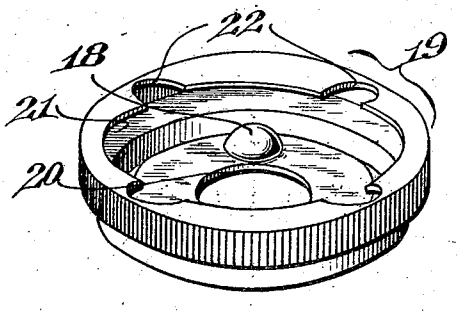
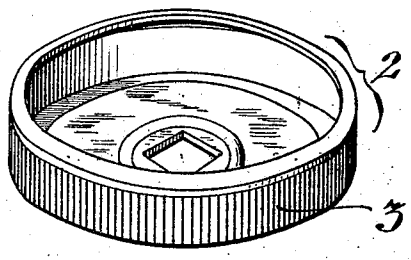


FIG. 4.



WITNESSES:

Alfred E. Dechinger.

George A. Gruss

INVENTOR:

Gustave A. Loeben,

BY

Joshua R. H. Potts

ATTORNEY.

Dec. 7, 1926. 1,609,479

G. A. LOEBEN

SOAP DISPENSER

Filed Nov. 4, 1925 2 Sheets-Sheet 2

FIG. 5.

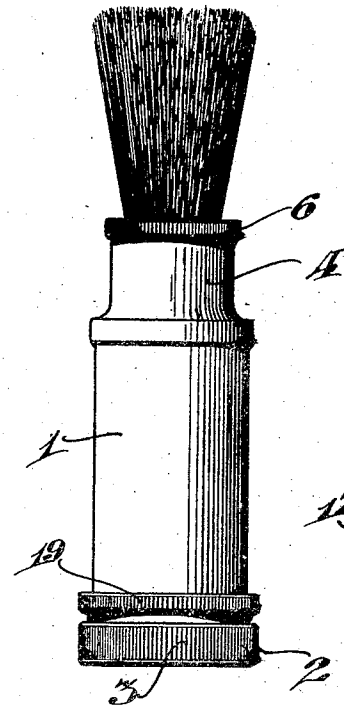


FIG. 6.

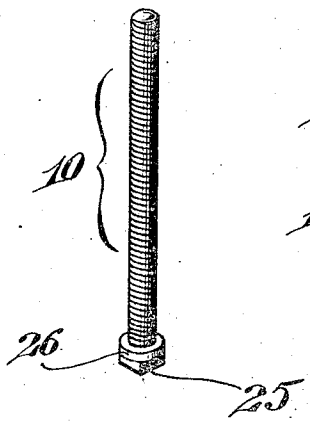


FIG. 7.

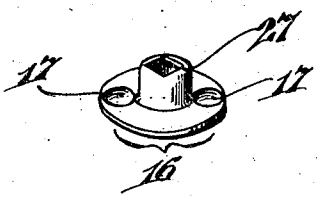
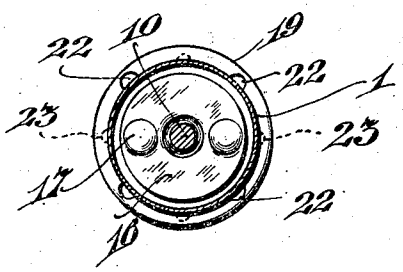


FIG. 8.



WITNESSES:

Alfred E. Ischinger

George A. Gruss

INVENTOR:

Gustave A. Loeben,

BY

Joshua R. H. Stubbs

ATTORNEY.

Patented Dec. 7, 1926. 1,609,479

UNITED STATES PATENT OFFICE.

GUSTAVE A. LOEBEN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO PREMIER APPLIANCE CO., INC., OF PHILADELPHIA, PENNSYLVANIA.

SOAP DISPENSER.

Application filed November 4, 1925. Serial No. 66,776.

My invention relates to soap dispensers.

The object of my invention is to provide a dispenser of simple and efficient construction, serving as the handle of a shaving brush, which is normally sealed against leakage, but may be opened to allow a charge of fluid or semi-fluid shaving soap to be fed to the brush and automatically closed after the charge has been fed.

This object, and other advantageous ends which will be described hereinafter, I attain in the following manner, reference being had to the accompanying drawings in which—

Figure 1 is a central longitudinal section through a brush made in accordance with my invention,

Figure 2 a like view partly in full showing the parts in another position,

Figures 3 and 4 perspective views of elements forming a part of my invention,

Figure 5 a side elevation of the brush shown in Figure 1,

Figures 6 and 7 perspective views of elements which form a part of my invention, and

Figure 8 a section on line 8—8 of Figure 1.

Referring to the drawings, 1 indicates a casing, preferably tubular, adapted to contain the shaving fluid. The casing carries at one end a rotatable knob 2, preferably having a knurled peripheral face 3. At its other end it has a part 4 preferably of reduced diameter, adapted to receive a cup 5 which is threaded to receive the threaded head 6 of a shaving brush. I prefer to secure the cup in the end of the casing by a forced fit. This cup is closed at its bottom except for a central opening 7 which leads into a discharge conduit 8, preferably fixed with the cup, which projects within the bristles of the brush, and is provided at its outer end with a valve seat 9. A screw 10 is fixed to knob 2 and has a piston 11 threaded thereon. A valve stem 12, mounted in conduit 8, carries at its outer end a valve head 13 and at its inner end a plate 14 disposed over the end of screw 10. A coiled spring 15 mounted between plate 14 and the cup normally holds the valve closed. A cam follower 16 is secured to screw 10 and has a pair of cup shaped cam elements 17 adapted to receive corresponding elements 18 projecting from the base of a cap 19 having a bearing 20 surrounding the screw, and an internal annular groove 21 in its side wall, one wall of the groove being provided with notches 22 adapted to take over projections 23 on the casing which, when the cap is turned out of registry therewith, bind in the groove and hold the cap in position. A coiled spring 24 mounted between knob 2 and cap 19 holds the cam elements 17 in engagement with cam elements 18.

For securing actuating knob 2 and cam follower 16 to the screw, I provide the screw with an angular end 25 and an annular shoulder 26 and provide the cam follower with a flanged boss 27, extending through the bearing 20 and cap 19, with the flange disposed under shoulder 26. Knob 2 also has a central opening which fits in the angular end of the screw. By positioning the cam follower and the cap over the angular part of the screw and upsetting the end of the screw both knob and follower are firmly fixed to the screw.

Assuming the parts to be in their idle position and that part of the casing in advance of the piston to be charged with the fluid, the operation is as follows:

A partial rotation of knob 2 advances the piston upon the screw and at the same time, rotates cam follower 16 thereby causing cam elements 17 on the follower to slide relatively to cam elements 18 of cap 19 and shift the follower axially relatively to the cap. This advances the screw axially and, the screw being in engagement with plate 14 on the valve stem, causes the valve to open. A half revolution of knob 2 brings the cam elements into registry again. The screw is then retracted by spring 24 and the valve closed by spring 15. If a further charge of shaving cream is desired, it will be provided by another half revolution of the knob.

While I have described my invention as taking a particular form, it will be understood that the various parts may be changed without departing from the spirit thereof, and hence I do not limit myself to the precise construction set forth, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a soap dispensing device, a casing; a screw rotatably mounted therein; a piston threaded on the screw; a cup seated in one end of the casing and carrying a discharge conduit having a valve seat thereon; a valve stem mounted in the conduit and provided at one end with a valve head; a plate carried by the other end of the valve stem and disposed in engagement with the free end of the screw; a spring between the plate and the cup normally holding the valve closed; a knob rotatable in the other end of the casing and fixed to the screw, and means whereby rotation of the knob will alternately advance the screw to open the valve and permit its retraction, and means for retracting the screw.

2. In a soap dispensing device, a casing; a screw rotatably mounted therein; a piston threaded on the screw; a discharge conduit extending through one end of the casing; a valve stem mounted in the conduit and having a part in engagement with the screw; means normally holding the valve closed; a cap secured to the casing and having cup shaped inwardly extending cam elements; a cam follower fixed to the screw and having corresponding cam elements; a knob fixed to and adapted to rotate the screw, and a spring between the knob and the cap for holding the cam follower in engagement with the cap, whereby rotation of the knob will rotate the screw to advance the piston, and will alternately move the piston axially to open the valve and permit its retraction thereby allowing the valve to close.

3. In a soap dispensing device, a casing; a cup seated in one end of the casing and carrying a discharge conduit having a valve seat thereon; a valve stem mounted in the conduit and passing through the discharge outlet, the valve stem being provided at one end with a valve head resting on the seat; resilient means at the other end of the valve stem for keeping the valve head against its seat; a screw rotatable in the casing and having one end engaging the valve stem; a piston threaded on the screw, and means whereby rotation of the screw will cause it to alternately advance and open the valve and retract to allow the valve to close.

4. In a soap dispensing device, a casing; a conduit in one end of the casing; a valve mounted within the casing and adapted to close the conduit; a screw disposed in the casing and engaging the valve; a piston threaded on the screw; a cap detachably connected with the other end of the casing and having cup-shaped cam elements; a cam follower fixed to the screw, rotatable in the cap and adapted to coact with the cam elements to advance the screw and open the valve and permit its retraction to allow the valve to close; means for rotating the screw, and resilient means between said means and the cap for retracting the screw.

5. In a soap dispensing device, a casing; a discharge conduit in one end of the casing; a valve mounted on the casing and adapted to close the conduit; a screw disposed in the casing and engaging the valve; a piston threaded on the screw; a cap detachably connected with the other end of the casing, and having cup-shaped cam elements; a cam follower fixed to the screw, rotatable in the cap and having cup-shaped cam elements adapted to co-act with those of the cap to advance the screw and open the valve and permit its retraction; a knob fixed with the screw, and a spring between the knob and the cap for retracting the screw to allow the valve to close.

6. In a soap dispensing device, a casing; a discharge conduit in one end of the casing; a valve in the casing adapted to close the conduit; a screw disposed in the casing and engaging the valve; a piston threaded on the screw; a cap detachably connected with the casing and having a bearing and cup-shaped cam elements; a cam follower having a boss rotatable in the bearing and fixed with the screw and provided with cup-shaped cam elements adapted to co-act with those of the cap to advance the screw and open the valve and permit its retraction; means for rotating the screw, and resilient means between said means and the cap for retracting the screw.

7. In a soap dispensing device having a casing, a discharge conduit in one end thereof, and means including a screw mounted in the casing whereby rotation and lengthwise movement of the screw will cause discharge of soap; an angular end on the screw; a cam follower fixed to the angular end; a cap secured to the casing, forming a bearing for the follower and adapted to co-act therewith to move the screw lengthwise, and means secured on the angular end for rotating the screw.

In testimony whereof I have signed my name to this specification.

GUSTAVE A. LOEBEN.