

(No Model.)

2 Sheets—Sheet 1.

E. LEE.
RESERVOIR FOR LIQUID SOAP.

No. 570,935.

Patented Nov. 10, 1896.

Fig. 1.

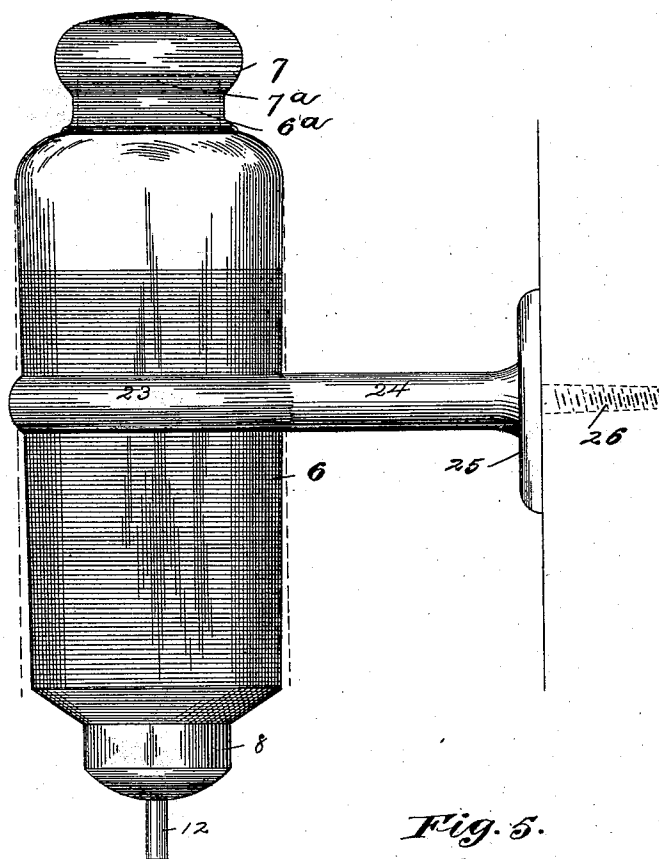


Fig. 3.

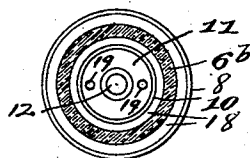


Fig. 2.

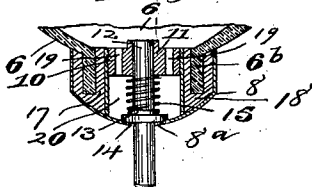


Fig. 5.

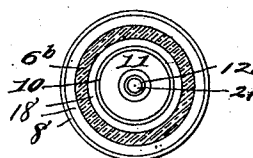
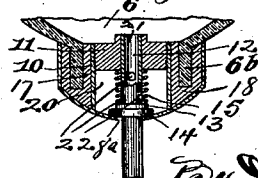


Fig. 4.



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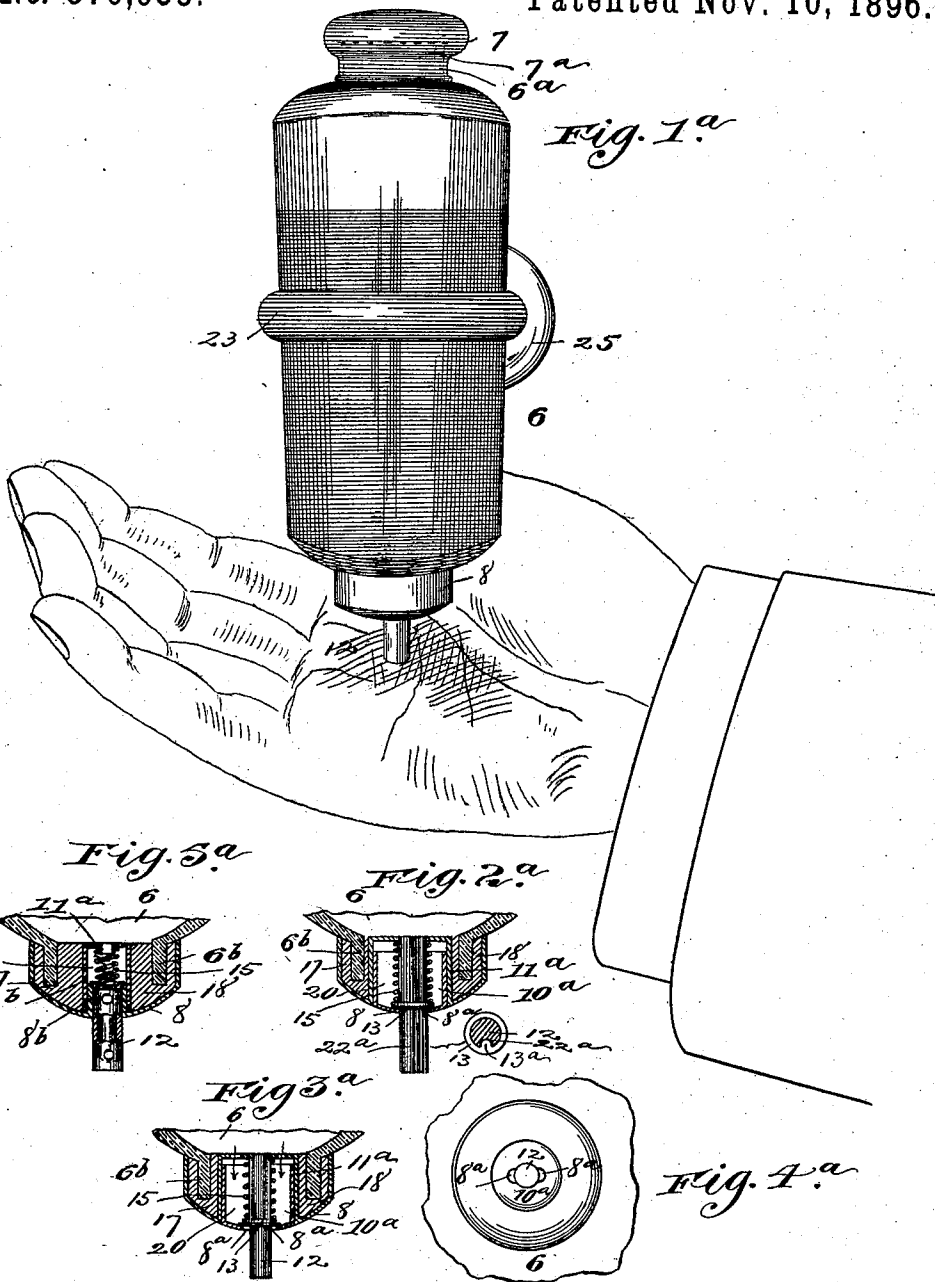
(No Model.)

2 Sheets—Sheet 2.

E. LEE.
RESERVOIR FOR LIQUID SOAP.

No. 570,935.

Patented Nov. 10, 1896.



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UNITED STATES PATENT OFFICE.

ELMER LEE, OF CHICAGO, ILLINOIS.

RESERVOIR FOR LIQUID SOAP.

SPECIFICATION forming part of Letters Patent No. 570,935, dated November 10, 1896.

Application filed March 31, 1894. Serial No. 505,857. (No model.)

To all whom it may concern:

Be it known that I, ELMER LEE, of Chicago, Illinois, have invented certain new and useful Improvements in Reservoirs for Liquid Soap, of which the following is a specification.

This invention relates to certain improvements in reservoirs (for dispensing liquid soap for toilet purposes) of the character described in my application, Serial No. 463,029, filed February 20, 1893; and the present improvements relate more particularly to the provision of a reservoir which will not corrode and which is of a form to provide for so attaching the valve that the latter may be operated to draw off all of the liquid from the body of the reservoir, while the valve may be kept at all times submerged in the liquid, so as to keep it lubricated thereby and prevent its corrosion. The form of the valve and its supports is also improved.

In the accompanying drawings, Figure 1 shows the reservoir in elevation and its means of support. Fig. 1^a shows the manner of using the device. Figs. 2 to 5 and 2^a to 5^a, inclusive, are details showing the preferred construction of the valve and certain modifications thereof, and showing also its manner of attachment to the reservoir.

In the drawings, 6 represents a reservoir which is composed of crystal glass, its main body being cylindrical and slightly tapered from end to end, as indicated by the dotted vertical line of Fig. 1. The ends of the cylinder are shouldered, and beyond the shoulders are projecting open-ended necks 6^a 6^b, which form, respectively, filling and discharge openings. To the neck 6^a is applied the cap or closure 7, having a minute perforation 7^a to admit air above the liquid, and to the neck 6^b is applied a cap 8, having a central aperture 8^a axially of the discharge-opening. Concentrically within this cap 8 is the thimble 10, as shown in Figs. 2 and 4, having its upper end interiorly threaded to adapt it to receive the treaded plug 11. Said plug is centrally and vertically bored to furnish an aperture through which the valve-stem 12 may play, said valve-stem having a small metallic collar or washer 13 thereon and below said collar or washer a valve 14. A coiled spring 15 surrounds the valve-stem, its upper end bearing upon the under side of the plug

and its lower end bearing on the metallic collar of the valve-stem. Said valve-stem is made long enough so that its lower end protrudes through the aperture of the cap. The cap 8 and thimble 10 are secured to the neck 6^b by means of a suitable cement, (indicated at 17 18.)

As shown in Figs. 2 and 3, the screw-plug has the vertical apertures 19, through which the liquid soap may find its way into the subchamber 20, where it will be confined until by a slight pressure of or blow from the hand on the protruding end of the valve-stem the valve will be unseated and permit a quantity of soap contained in said subchamber to escape through the aperture in the lower end of the cap and around the valve-stem into the palm of the hand. The aperture in the cap is of course sufficiently larger in diameter than the valve-stem to permit such escape.

In the construction shown in Figs. 4 and 5, instead of the apertures 19, I have shown the upper end of the valve-stem as hollow, as seen at 21, with transverse apertures 22 in its walls, which will permit the liquid soap to flow down through such hollow stem and escape into the subchamber through the openings in the wall of the valve-stem. In this construction when the valve-stem is raised the apertures will be closed by passing above the plane of the lower face of the screw-plug as to the upper apertures, and the lower ones will be closed by the close impingement of the coils of the spiral spring. The flow of the soap is thus cut off in this case while the valve is unseated.

In the construction shown in Fig. 2^a the threaded plug 11 is omitted and instead thereof the metal is struck up to form an inverted cup 11^a, in which is telescoped a cup 10^a. In this construction also the valve-stem is scored longitudinally, as seen at 22^a, Fig. 2^a, and the aperture 8^a in the cap 8 is of such form that its walls closely encircle the valve-stem except at the score, so that the stem is guided in its reciprocations. The collar has a lip 13^a, which enters the score in the valve-stem and cuts off the flow of the liquid when the valve is held to its seat. When the stem is raised, the liquid in the subchamber flows out. In Figs. 3^a and 4^a, the latter being a bottom plan view, the score in the valve-stem is omitted, and the aperture 8^a is laterally

enlarged to permit the escape of the liquid when the valve is raised. In the construction shown in Fig. 5^a the cap 8 is provided with an internal integral flange 8^b, which surrounds the discharge-aperture and forms a guide for the valve-stem, which has apertures at different elevations therein, so that some of them are normally covered by the flange, while the lower apertures are near the bottom of the valve-stem and exterior to the chamber 20. The apertures are connected by a longitudinal bore of the valve-stem. In this construction the spring is seated on the upper end of the valve-stem and surrounds a flange 11^a on an inverted cup 11^b, which latter is telescoped over the flange 8^b.

To affix the reservoir in place, I have provided the annular supporting-ring 23, having a bracket-arm 24, provided with a rose or flush-plate 25 and a screw 26. The supporting-ring, bracket-arm, rose, and screw may be formed in one piece. When the reservoir is made slightly tapered, it will wedge itself into this ring when inserted therein from above, thus supporting it in the desired position and fitting the ring so tightly that it will not be moved upward by pressure on the valve-stem sufficient to unseat the valve. The fixture may be readily secured in place by inserting the reservoir in the ring and then using the reservoir as a handle to turn the screw into place.

To withdraw a quantity of the liquid soap for toilet use, the palm of the hand is placed underneath the reservoir, and, by a slight upward pressure or blow upon the protruding end of the valve-stem, the valve is raised and the liquid soap flows down into the palm. The amount withdrawn at a single actuation will be determined by the extent to which the valve is raised above and the length of time it is held off its seat in the construction shown in Figs. 1 to 3, inclusive, while in the construction shown in Figs. 4 and 5 the quantity withdrawn will depend upon the size of the subchamber and the extent to which the flow of the soap is cut off by closing of the perforations in the valve-stem.

From the foregoing description it will be seen that there is provided a convenient method of and means for dispensing liquid soap, which can be furnished as an appurtenance to a lavatory, and the device may form one of the fixtures of a bath-tub, stationary wash bowl or stand. It can be so arranged that it will not take up any room required for other purposes. It takes the place of the unsightly soap-dish and furnishes a superior form of soap in an economical manner and without any liability of spreading contagion by personal contact with the soap. The particular construction of the supporting-bracket and also of the valve may be varied. I prefer to use a glass reservoir because it will not corrode and because, by reason of its

transparency, the quality and quantity of soap can at all times be observed. By locating the valve below the plane of the bottom of the reservoir the latter may be drained of soap while the valve is kept submerged, thus providing for its thorough lubrication and preventing its corrosion.

While I have described my improved fixture as particularly adapted for the dispensing of liquid soap, I do not of course intend to limit my invention to this single use, as I contemplate employing the same for dispensing toilet-waters, perfumes, and other lotions or liquids.

It will be understood that some of the details of construction may be varied. For example, that part which I have called the "cap" for the lower end of the reservoir may be omitted where some vitreous material other than glass is employed, the particular use of the cap being to cover the cemented joint between the valve-support and the neck. I do not confine my invention to glass as the material from which the reservoir is to be constructed, because other vitreous material may be employed. Glass is in all cases preferred because of its transparency.

I claim—

1. A reservoir for liquid soap, comprising a glass body constricted at its ends to provide annular necks, a cap or closure applied to the upper neck and a second cap having a perforation in its bottom applied to the lower neck, and a valve to control the discharge-aperture supported by the cap, the valve-stem protruding through the aperture thereof, substantially as described.

2. In a reservoir for dispensing liquid soap, the combination with a containing-body having a filling-opening and a neck at its lower end providing a discharge-aperture, a thimble supported within the neck and having a perforated closure at its upper end and a discharge-opening at its lower end whereby there is provided a subchamber below the closure and a valve whose stem has a bearing in the closure and its lower end provided with a discharge-aperture, substantially as described.

3. In a reservoir for dispensing liquid soap, the combination with a containing-body having a filling-opening and a neck at its lower end, a thimble applied interiorly of the neck, a perforated closure for the upper end of said thimble, a valve applied to the discharge-aperture and the valve-stem entering the aperture and having a bearing toward its lower end against the walls of the discharge-aperture, said valve-stem having a score or channel to provide an inlet to and an outlet from the subchamber, substantially as described.

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Witnesses:

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