R. H. LITTLE.

DISPENSING MACHINE.

APPLICATION FILED JUNE 23, 1920.

1,413,340. **Patented Apr. 18, 1922.**

Fig. 1.

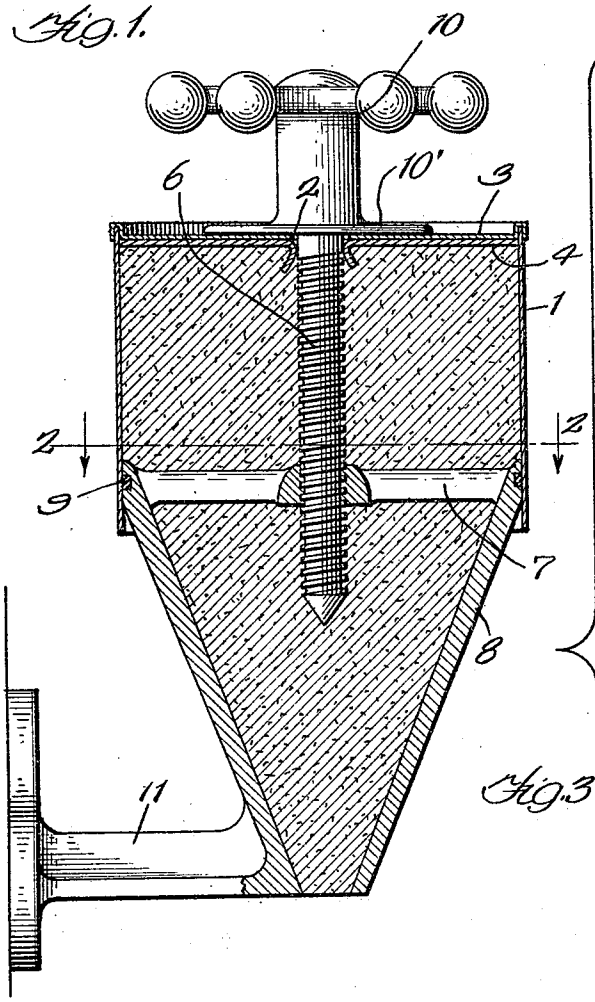


Fig. 3

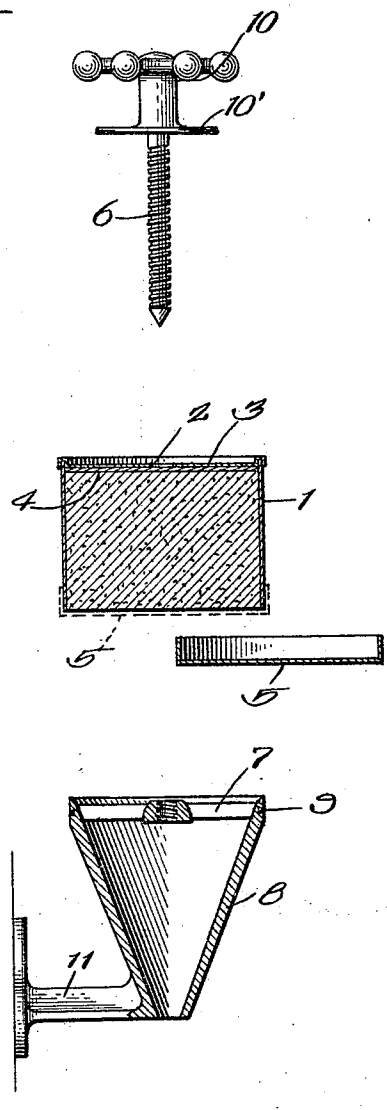
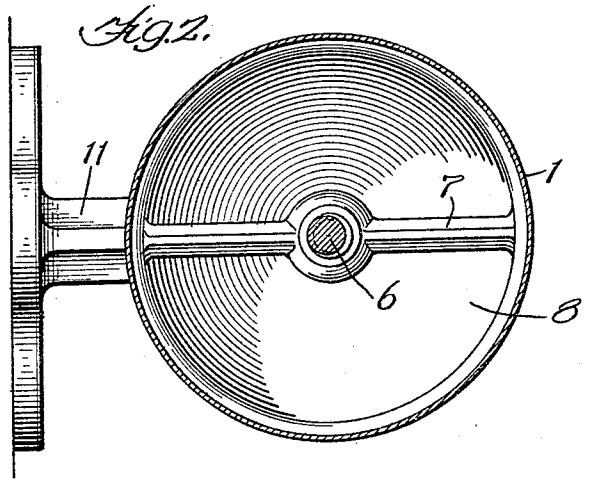


Fig. 2.



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DISPENSING MACHINE.

1,413,340. Specification of Letters Patent. Patented Apr. 18, 1922.

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To all whom it may concern:

Be it known that I, ROBERT H. LITTLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Dispensing Machines, of which the following is a full, clear, concise, and exact description.

My invention relates to dispensing machines, being of particular service in the dispensing of soap.

In accordance with my invention I employ the container for the soap, or other substance that is to be dispensed, as an actuated material ejecting element.

It is common to package soap in cylindrical cans. In accordance with my invention the bottom end wall of such a can is retained to serve as a soap ejecting element for forcing the soap through the top of the can and thence through a dispensing nozzle which replaces the can cover and has a sealed sliding fit with and within the can. It is more convenient to place the nozzle at the bottom of the structure in which case the can is inverted. A follower is preferably employed that is in engagement with and is rotatable upon the outer surface of the can bottom and is in threaded connection with the nozzle element whereby the can may be forced bodily downward along its axis to eject a quantity of soap through the nozzle that corresponds with the movement of the can bottom toward the nozzle.

I will explain my invention more fully by reference to the accompanying drawing showing the preferred embodiment thereof and in which Fig. 1 is a view in sectional elevation of the device; Fig. 2 is a sectional view on line 2—2 of Fig. 1; and Fig. 3 illustrates the parts of the structure as they are illustrated in Fig. 1, but in separated relation, the removed can cover being also shown.

Like parts are indicated by similar characters of reference throughout the different figures.

The can 1 which I have illustrated is similar to those in which soft or semifluid soap is packaged, the form of machine shown being designed particularly to include such a can as a part thereof, a full can replacing each can that is emptied by the machine. However, it is to be understood that the can may form a permanent part of the machine, to be refilled each time it is emptied. Where the invention is practiced with replaceable previously filled cans, such a can has a bottom wall portion either originally formed with a hole 2 in the center of the bottom end wall 3 thereof or which end wall is so weakened in the region of the hole 2 that the material where the hole should be is readily displaceable to form the hole. Where the hole 2 is originally present, it should be sealed as by a false bottom 4 constituting a closure for the hole and through which a hole may readily be formed in line with the hole 2, this false bottom being desirably cardboard or fibre.

When the can which I have illustrated is to be made a part of the machine for the purpose of so operating upon the can that it will eject its own contents, I remove the can cover 5 and pass the threaded stem 6 of the follower 7 through the hole 2 in the can bottom, this stem being pointed to make its way through the false bottom 4 of cardboard.

While the can is inverted, the threaded stem 6 is screwed into the rib 7 that extends diametrically across and is in rigid connection with the top end of the funnel shaped nozzle 8 which has sealed sliding fit with and within the cylindrical wall or body of the can. To ensure the sealing of the place of engagement of the receiving or top end of the nozzle with the can wall or body, I provide a packing of string 9 or other suitable material in a groove in and surrounding the top of the nozzle and engaging the interior of the can body, though I do not limit myself to the use of packing for securing sealing fit of the can and nozzle.

The follower 10 may be provided with a flanged portion 10′ to engage the exterior of the can bottom wall 3 adjacent the hole 2, the stem 6 passing snugly through this hole. In ejecting soap, the follower turns upon, toward, and with respect to the can which moves longitudinally of its axis.

The follower 10 is formed to enable it to be gripped for the purpose of turning the stem 6 and forcing the flange portion 10 of the follower downwardly upon the can bottom wall 3. The can body is lowered upon and moves longitudinally of its axis with respect to the nozzle each time the follower 7 is turned in a feeding direction, the can bottom wall in being lowered, forcing soap from the can body into the nozzle.

For convenience, the discharge end of the nozzle is at the lower end of the machine, at which place it is convenient to provide a bracket 11 in integral formation with the nozzle and adapted for attachment to a wall or other convenient form of support.

After the contents of the can have been completely discharged therefrom, the can may be refilled, or a filled fresh can, similarly constructed, may be substituted.

While the can illustrated is cylindrical, it is to be understood that my invention is not to be limited to cans of such shape.

Having thus described the preferred embodiment of my invention, I claim as new and desire to secure by Letters Patent the following:—

1. A dispensing machine including a can having a wall at one end of the can formed with a hole therethrough; a follower, rotatable with respect to the can, engaging the exterior of the can at said end wall and having a threaded stem that passes through said hole in said end wall of the can; and a discharge nozzle having a portion with which said stem is in threaded engagement and whose receiving end is in sealed sliding fit with and within the body of the can, the latter being movable longitudinally of its axis with respect to the nozzle.

2. A dispensing machine including a can having a wall at one end; a follower, rotatable with respect to the can, engaging the exterior of the can at said end wall; and a discharge nozzle with which the follower is in threaded connection and whose receiving end is in sealed sliding fit with and within the body of the can, the latter being movable longitudinally of its axis with respect to the nozzle.

3. A dispensing machine including a can having a wall at one end; a follower, rotatable with respect to the can, engaging the exterior of the can at said end wall; and a discharge nozzle toward which the follower is movable and whose receiving end is in sealed sliding fit with and within the body of the can, the latter being movable longitudinally of its axis with respect to the nozzle.

In witness whereof, I hereunto subscribe my name this 19th day of June, A. D. 1920.

ROBERT H. LITTLE.