

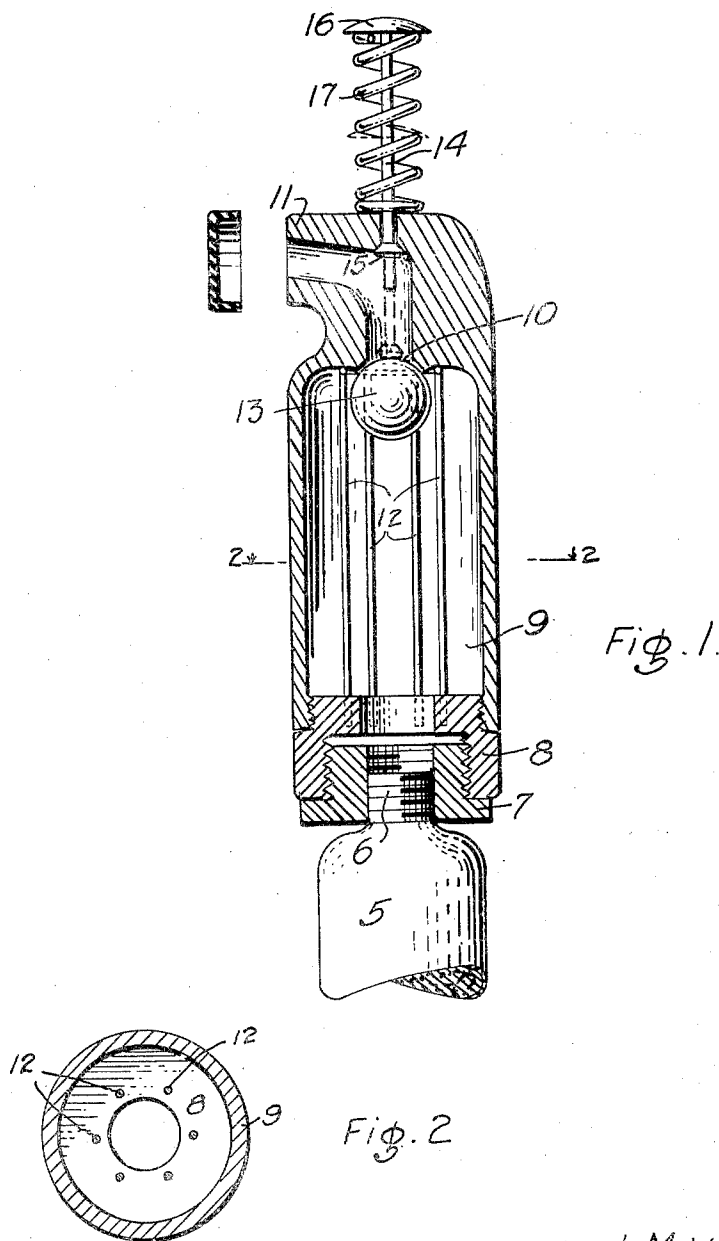
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PRESSURE OPERATED VALVED CLOSURE FOR COLLAPSIBLE TUBES

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PRESSURE OPERATED VALVED CLOSURE
FOR COLLAPSIBLE TUBES

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2 Claims. (Cl. 222—335)

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This invention relates to devices adapted to dispense semiliquid materials, such as tooth paste, petroleum jelly salves, ointments, medicaments, grease, toilet preparations, etc.

The objects of my invention are to provide a cap for the usual collapsible tube container in which the particular material is kept; which will prevent the accidental discharge of the contents of the tube; which may be applied to tubes of various sizes; and which is simple to make and to operate, and effective in use.

I attain these and other objects as will readily be perceived by those familiar with the art by the devices illustrated in the accompanying drawings, in which—

Fig. 1 is a vertical section of my improved dispenser when applied to a small size tube, and drawn to a large scale; and Fig. 2 is a cross-section thereof, taken on the line 2—2 in Fig. 1.

Identical numerals of reference refer to the same parts throughout both the views.

In the household use of tooth paste, it is common for children to drop the uncapped tube on the floor and then accidentally step on it, causing the paste to issue from the tube, wasting the paste and messing up the floor. My device will entirely eliminate this type of accident and has as well many other advantages.

Referring to the drawings, it will be seen that the usual collapsible tube 5, which is provided with a screw threaded neck 6 (on which a cap is usually screwed), is screwed into a threaded hole in the bushing 7, if the tube 5 is of the smaller size, or directly into the base 8 if the tube 5 is of the large size, after the original cap has been removed therefrom. The bushing 7 is screw threaded into the base 8.

This base 8 has a central hole therethrough and screws into the tubular chamber 9, which extends upward therefrom, and which is provided with a central opening 10, communicating with the lateral outlet spout 11. A cage of parallel wires 12 is fastened in the upper side of the base 8 and extends up on the inside of the chamber 9. A ball valve 13 is mounted in this cage and is adapted to seat beneath the opening 10 to close said opening or outlet. A rod 14 passes downward through the end of the body of the dispenser, above the opening 10, and is adapted to engage the ball 13 to remove it from its seat closing the said opening. This rod 14 is provided with a stop 15 and a head 16, and is normally held in its withdrawn

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position by a suitable spring 17 acting between the head 16 and the end of the dispenser.

My improved dispenser is used in the following manner: When first placed on a tube 5, the tube is squeezed to fill the chamber 9, thus raising the ball 13 and closing the outlet 10. When it is desired to use some of the contents the rod 14 is depressed against the action of the spring 17 until it engages and displaces the ball 13. At the same time the tube 5 is further compressed thus forcing a limited quantity of the material out past the ball 13 and through the spout 11. Upon releasing the pressure on the rod 14, the ball 13 closes the outlet opening 10 and the dispenser is again ready for use.

My dispenser is preferably made of metal, though other material, such as plastic, may be used, if desired.

It is, of course, to be understood that changes may be made in the details as shown and described, without departing from the spirit of my invention as outlined in the appended claims.

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

1. A dispenser for soft material in a collapsible tube, comprising a base adapted to be secured to the collapsible tube; a cylindrical body secured to said base and normally kept filled with the soft material from the tube; an outlet from the end of said cylindrical body; a ball valve closing said outlet; a cage independently secured to said base and adapted to guide the ball valve to said outlet; and a spring-resisted rod passing through the end of said body and adapted to engage said ball valve to remove it from said outlet to permit the flow of said soft material from said body.

2. A dispenser as set forth in claim 1, together with an adapter bushing interposed between the end of said tube and said base.

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