

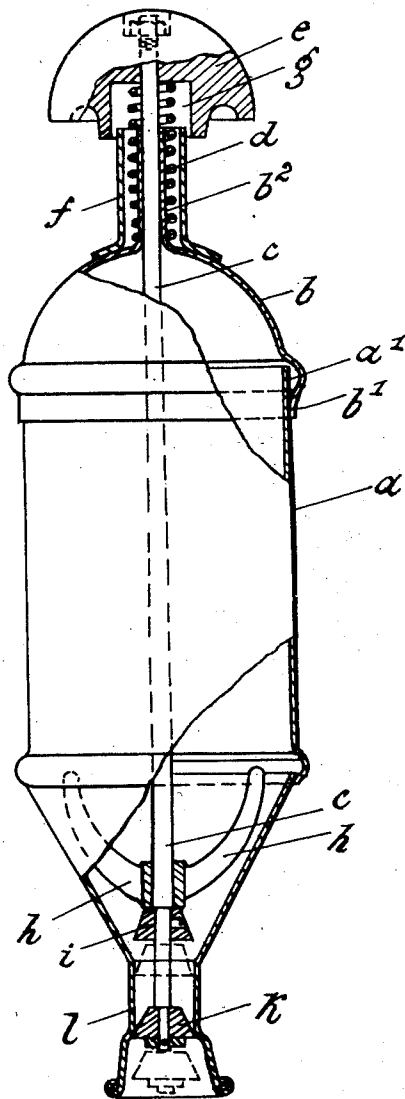
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POWDERED SOAP DISPENSING DEVICE

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POWDERED-SOAP-DISPENSING DEVICE.

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My invention relates to powdered soap dispensing devices of the type in which discharge of the soap from a container is controlled by two valves mounted on a spring pressed plunger.

Dispensing devices of this kind as at present constructed have the disadvantage that, by reason of inadequate or insufficient protection against the entrance of moisture and water into the container, the soap powder cakes or becomes lumpy thus rendering the device practically inoperative after a relatively short period of use.

The principal object of my invention is to provide a construction of dispensing device in which the disadvantage, above referred to, is obviated in a simple and effective manner. I accomplish this object by providing the container for the powdered soap with a special form of cap or cover having at one end a flange which overlies the upper edge of the container, and at the other end a tube in which the plunger is guided in its movement.

The tube is surrounded by a spiral spring which projects into a cavity in an operating button or head for the plunger, and the construction is such that the cap or cover may be raised from the container to fill the latter, and when the container is filled the cap will prevent access of water or moisture to the contents of the container.

An embodiment of the invention is illustrated in the accompanying drawing which shows an elevational view, with parts broken away and other parts in section, of the new dispensing device.

Referring to the drawing, *a* denotes the soap powder container provided with a cover *b* having a lower flange *b'* which overlies the upper edge *a'* of the container *a*. At its upper end the cover *b* is formed as a tube *b²* which serves as a guide for the plunger *c*. Secured to the upper end of the plunger *c* is an operating button *e* having an approximately central cavity *g*. The tube *b²* is encircled by a spiral spring *d* one end of which seats against the top of the cover *b* and the other end of which seats against a wall of the cavity *g*. A protective sleeve *f*, secured by soldering, riveting or otherwise to the cover *b*, surrounds the spring *d* and has its upper end projecting into the cavity *g* in the button *e*.

Secured to the plunger *c*, somewhat above its lower end, are blades or arms *h* which serve to agitate the soap powder in the container. Mounted on the plunger *c* below the arms *h* are spaced conical valves *i* and *k* which cooperate with correspondingly formed valve seats in the discharge nipple *l*. The lowermost positions of the valves are indicated in dotted lines and the construction is such that the lower valve *k* opens only after the upper valve *i* is seated, thus preventing moisture or steam from entering the container *a* through the nipple *l*.

The device operates as follows: To discharge soap powder from the container *a*, the plunger *c* is depressed by the exertion of pressure on the button *e* thereby unseating the valve *k* and permitting flow or discharge of powder until the valve *i* is seated whereupon outflow from the container is stopped and any soap below the valve *i* and in the nipple *l* is discharged. Upon release of the button *e* the plunger rises causing the valve *k* to reseat and stop all discharge from the nipple.

If the container is to be refilled with soap powder, the spring *d* is compressed and the cover *b* raised until the flange *b'* clears the edge *a'*; in this position of the parts the cover *b* with its appurtenant parts can be tilted sufficiently to create a space between the cover and container through which the power may be introduced into the container. If desired, securing means in addition to the spring *d* may be used to hold the cover on the container. After the container has been filled the parts are returned to normal position and a water tight closure results, because water cannot enter the container from the top over the button *e*.

It will, of course, be understood that the relation between the length of the tube *b²* and the depth of the cavity *g* in the button *e* is such that the tube may enter the cavity a distance sufficient to allow the flange *b'* of the cover to be raised clear of the upper edge *a'* of the container.

I claim:

1. A powdered soap dispensing device, comprising a container, a removable cover for the container said cover having a tube projecting therefrom, a plunger operable in said container and guided in said tube, a button at one end of the plunger said button having a cavity therein, and a spring encircling said tube and having one end engaging the cover and its other end within said cavity.

2. A powdered soap dispensing device, comprising a container, a removable cover for the container, said cover having at its lower end a flange to overlie the upper edge of the container and at its upper end a projecting tube, a plunger operable in the container and guided in the tube, a button carried by the plunger and having a cavity facing the cover, and a spiral spring encircling the tube and having one end engaging the cover and its opposite end engaging a wall of the cavity.
3. In a powdered soap dispensing device, the combination with the elements claimed in claim 2, of a protective sleeve about said spring.
4. A powdered soap dispensing device, comprising a container, a plunger operable in said container, an operating button on said plunger having a cavity therein, a removable cover for said container, said cover having at its lower end a flange to overlie the upper edge of the container and at its upper end a tube projecting into the said cavity, said tube serving as a guide for the plunger, a spring encircling the tube and having one end resting against the cover and its other end resting against a wall of the cavity, and a protective sleeve for the spring carried by the cover and projecting into the cavity.

In testimony whereof I have affixed my signature.

HUGO HELBERGER.