W. G. KENDALL.

CAP FOR RECEPTACLES.

APPLICATION FILED JULY 13, 1915.

1,194,186.

Patented Aug. 8, 1916.

Fig. 1.

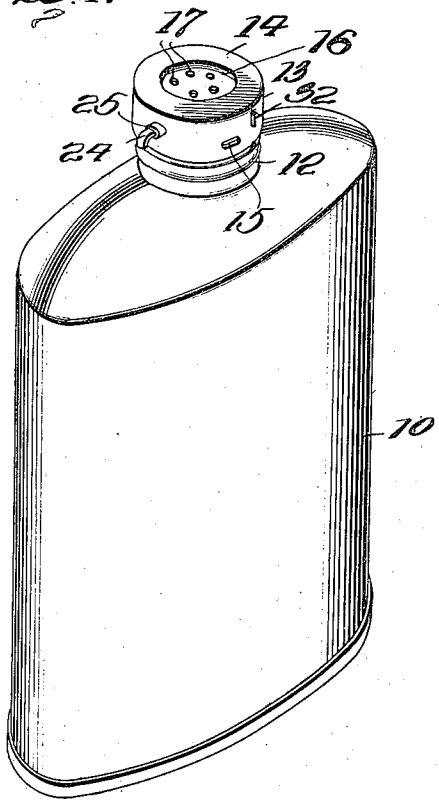


Fig. 2.

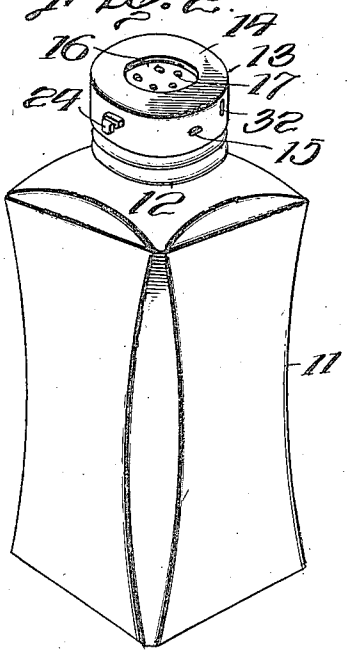


Fig. 3.

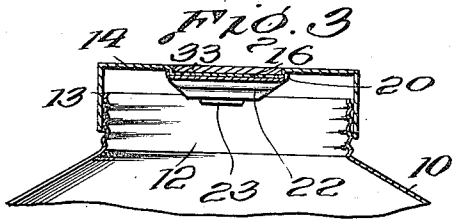


Fig. 4.

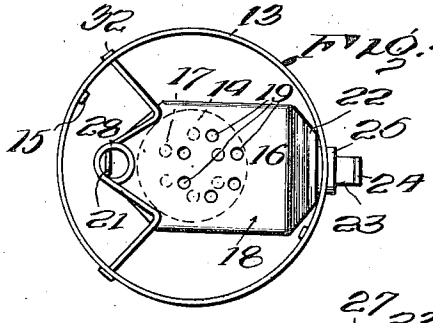


Fig. 5.

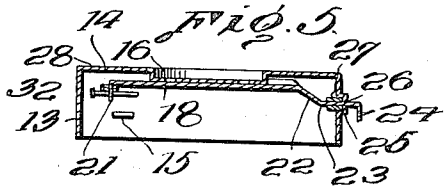


Fig. 6.

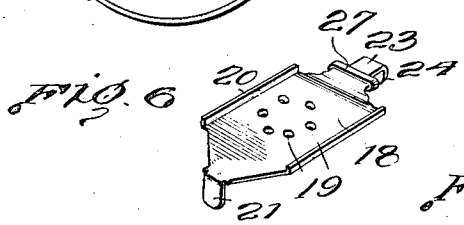


Fig. 7.



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CAP FOR RECEPTACLES.

1,194,186. Specification of Letters Patent. Patented Aug. 8, 1916.

Application filed July 13, 1915. Serial No. 39,693.

To all whom it may concern:

Be it known that I, WILLIAM G. KENDALL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Caps for Receptacles, of which the following is a specification.

My present invention relates to improvements in covers or caps for cans or other receptacles, the object of my invention being the provision of a sifter cap for toilet powder cans or bottles, although it will be understood that the cap may be used upon powder boxes, jars or in fact upon receptacles employed for various purposes with equal efficiency.

A further object of my invention is the provision of a can cap having a plurality of discharge openings or perforations and a perforated plate supported and guided for reciprocatory movement against the inner face of the cap and movable to bring its perforations into and out of alinement with the perforations of the cap, means being also provided for normally holding the plate with its openings out of alinement with those of the cap.

In this connection, a still further object of my present invention consists in providing the cap with a down struck central portion forming a seat to receive a disk of cardboard or other material which will form an additional seal for the package during shipment, the seat also providing, in connection with flanges upon the sliding plate, a guide for the plate to insure its proper movement.

A still further object of my invention consists in the provision of a novel form of spring mechanism for holding the plate in what may be termed closed position and in the provision of means co-acting between the cap proper and plate for effectively sealing the package when the cap is closed.

With these and other objects in view, my invention will be more fully described, illustrated in the accompanying drawings, and then specifically pointed out in the claims which are attached to and form a part of this application.

In the drawings: Figure 1 is a perspective view of my improved cap applied to a conventional form of toilet powder can, the cap being shown in closed position; Fig. 2 is a similar view, showing the cap applied to a bottle, the cap in this figure being in open position; Fig. 3 is a fragmentary vertical sectional view taken through the cap at right angles to the line of movement of the sealing plate or closure; Fig. 4 is a bottom plan view of the cap in closed position; Fig. 5 is a vertical, central sectional view taken in the direction of movement of the sliding closure and showing the cap closed; Fig. 6 is a perspective view of the sliding closure plate removed from the body of the cap; Fig. 7 is a similar view of the spring which normally holds the plate in closed position.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In order to insure a clear and accurate understanding of my invention, I have illustrated the improved cap in connection with two forms of containers, namely, the can 10, shown in Fig. 1, and the bottle 11, shown in Fig. 2. Each of these containers is provided with a cylindrical, externally threaded discharge neck 12 and the cap is adapted for engagement with such neck, as will be later explained. It will, however, be understood that I do not wish to limit myself to any specific manner of attaching the cap to the neck of a container as the body portion of the cap may be constructed to fit any desired type of container, my invention residing in the means for opening and closing the cap rather than in the general cap construction.

The cap proper includes a cylindrical body portion 13 adapted to engage about the neck 12 and having a top 14. This body portion is instruck at diametrically opposite points, as shown at 15, to form beads which will engage in the threads of the neck 12 to hold the cap in place, it of course being understood that the body may, if desired, be pressed to provide a complete thread for engagement with the threads of the neck. The top 14 of the cap is instruck centrally to provide a circular seat 16 formed with a plurality of discharge openings or perforations 17 through which the powder or other contents of the container may pass.

Mounted within the cap 13 is the sliding plate or closure 18 which is substantially rectangular in shape and provided with perforations 19 adapted, in one position of the plate, to aline with the perforations 17 in the can top and in other positions of the

plate to be out of alinement therewith. This plate is provided along its side edges with upwardly bent guide flanges 20 which engage one at either side of the depressed seat portion 16, whereby the seat portion may serve as a guide for the plate during its movement and one end of the plate is provided with a downwardly bent tongue 21. The opposite end of the plate is down bent somewhat, as shown at 22 in Fig. 5, and said down bent portion is formed with a tongue 23, the free terminal of which is down bent to form a finger piece 24. The peripheral wall of the cap 13 is outstruck at one point to form an interior seat 25 which is formed with a horizontally disposed slot 26 to receive the tongue 23 when the sliding plate is in place. Surrounding the tongue and secured thereto in any suitable manner is a sealing ring 27 which, in the closed position of the plate 18, projects into the seat 25 to close it and thereby prevent any possibility of leakage of powder about the tongue 23 and through the slot 26.

A helical spring 28 of one or more convolutions surrounds the down bent tongue 21 of the plate and has its free ends extended tangentially, as shown at 29, at substantially right angles to each other and then rebent upon themselves, as shown at 30, to form V-shaped spring portions, the terminals of which are down bent slightly, as shown at 31, to engage in outstruck seats 32 formed in the peripheral wall of the cap body 13. It will of course be understood that the V-shaped terminals of the spring are so proportioned that when the spring is in place, it is properly tensioned to hold the closure plate in the position shown in Figs. 4 and 5 of the drawings. This spring construction is such that not only does it hold the plate in closed position, but also exerts a slight upward pressure against it to hold it in engagement with the down struck seat 16 of the cap. Furthermore, the fact that the finger piece 24 of the plate is located below the plane of the plate causes the plate to be forced into firm engagement with the seat while it is being moved by pressure against the finger piece 24. For this reason, there will be no leakage of powder or other contents of the can through the cap except when the plate is moved to open position.

The manner of operating the can will be apparent from an inspection of the drawings and it is only necessary, at this point, to state that when the can is to be shipped, a disk 33 of cardboard or other suitable material may be positioned in the depressed seat 16 of the can top to prevent any possible leakage of the contents of the can, but chiefly to prevent any possible entrance of impurities or dirt into the perforations 17. This disk may, of course, bear any desired advertising matter or inscriptions and may, if desired, be temporarily sealed in place.

Having thus described the invention, what is claimed as new is:

1. A sifter cap for containers including a cap body having a top formed with perforations and a wall outstruck to provide an interior seat formed with a slot, a sliding plate mounted in the cap and formed with perforations adapted, in one position of the plate, to aline with those of the cap, means normally holding the plate with its perforations out of alinement with those of the cap, a tongue extending from the plate through the slot, whereby the plate may be operated, and a ring secured around the tongue to engage in the seat when the plate is in normal position.

2. A sifter cap for containers including a cap body having a perforated top, a plate slidably mounted in the body and formed with perforations adapted, in one position of the plate, to aline with those of the top, a tongue extending from the plate through the body of the cap, a second tongue depending from the plate within the cap, the cap, at either side of the second tongue, being formed with interior depressions, and a helical spring surrounding the depending tongue and having opposed V-shaped spring arms, the free ends of which seat in the depressions, the spring holding the plate with its perforations out of alinement with those of the cap body.

3. A sifter cap for containers including a cap body having a perforated top, a plate slidably mounted in the body and formed with perforations adapted in one position of the plate to aline with those of the top, means extending through the body of the cap, whereby the plate may be reciprocated, a tongue depending from the plate within the cap, the cap at either side of the tongue being formed with interior depressions, and a helical spring surrounding the depending tongue and having opposed V-shaped arms, one side of each of which extends substantially tangential to the helix of the spring and the free terminals of which are bent to extend parallel to the axis of the helix and to seat in the depressions of the cap, whereby the spring will hold the plate in engagement with the inner face of the top of the cap and in a position such that its perforations are out of alinement with those of the cap.

In testimony whereof I affix my signature.

WILLIAM G. KENDALL. [L. S.]