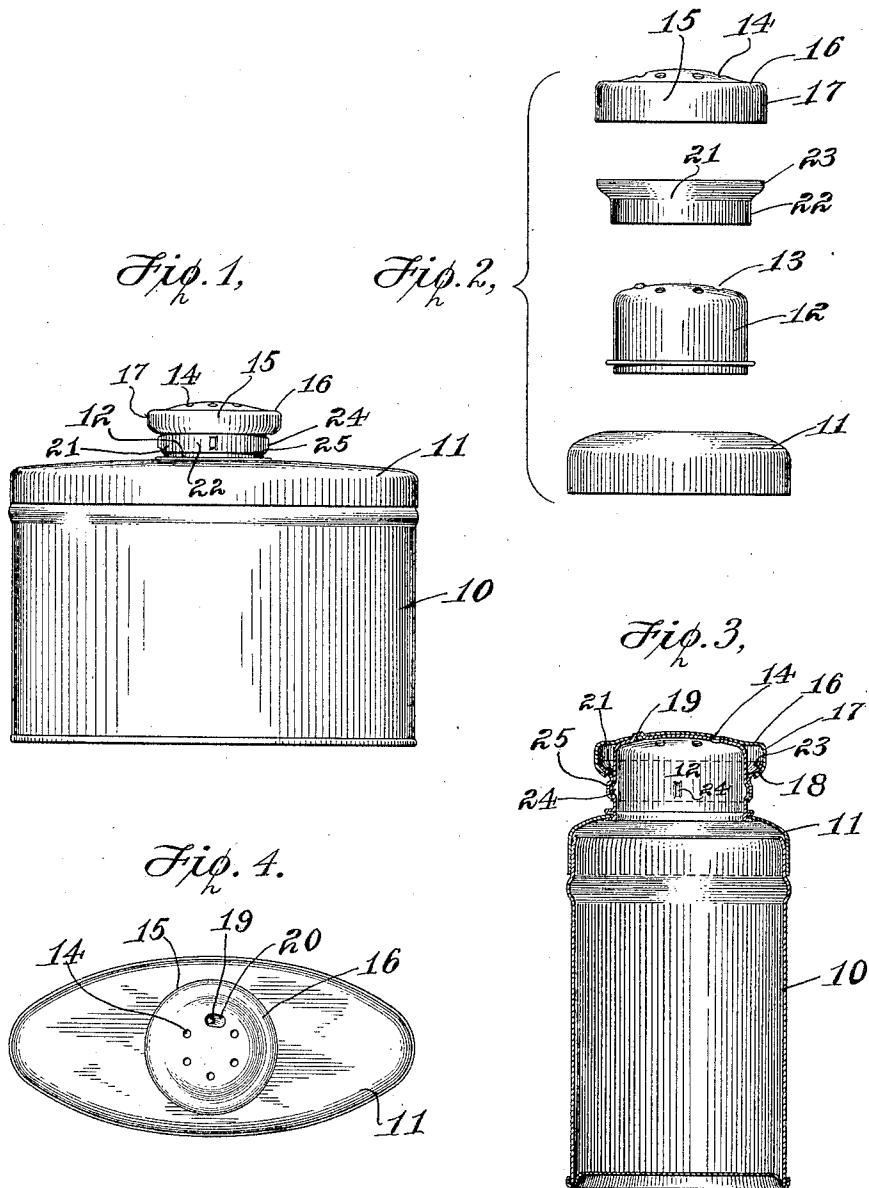


J. T. WILCOX.
SIFTER TOP FOR CONTAINERS.
APPLICATION FILED MAR. 15, 1920.

1,345,975.

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UNITED STATES PATENT OFFICE.

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SIFTER-TOP FOR CONTAINERS.

1,345,975.

Specification of Letters Patent.

Patented July 6, 1920.

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To all whom it may concern:

Be it known that I, JOSIAH T. WILCOX, a citizen of the United States, and a resident of Westfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Sifter-Tops for Containers, of which the following is a specification.

My invention relates to containers, and particularly to an improved sifter top therefor.

The sifter top type of container has come into practically universal use for packaging certain commodities, and its construction has assumed a standard form which can be produced rapidly and cheaply by automatic machines. Containers of this kind include a body, a breast engaging the top of the body, a neck rising from a central opening in the breast, and a cap rotatably mounted on the neck and provided with dispensing holes which may be brought into or out of register with corresponding holes in the neck by rotation of the cap. These parts are so designed that they may be readily cut and formed from sheet metal by automatic machines of the type now generally employed in manufacturing standard sifter tops.

In the ordinary course of business, manufacturers of these sifter top containers often find it necessary to vary the form and proportions of the sifter top, either to adapt it to the requirements of a particular commodity or to produce a distinctive design. Among other forms, it has been sought to produce a broad sifter top having a cap flared at its edges, thus providing ample dispensing space, and a large circumference readily grasped in revolving the cap, the flared contour adding to the attractiveness of appearance and to the facility with which the cap can be grasped.

In producing a cap for this type of top, however, it has been found that the return bend of the metal beneath the flaring edge of the top requires so great a distortion of the metal that it cannot be produced with the usual sheet metal material and standard machines.

An object of my invention is to avoid this difficulty and produce a sifter top having a broad flared cap simple in construction and

adapted to be readily manufactured, preferably being suitable for production by standard machines.

My invention also includes an improvement in the construction of the standard sifter top, regardless of the dimensions and proportions thereof. The closure of this type of container is produced by frictional engagement between the cap and the top of the neck. As containers with tops of this type are often used to dispense finely powdered substances, it is highly desirable that the cap should fit tightly against the perforated top of the neck to prevent the contents from sifting out between the neck and cap after the cap is rotated into closed position. A tight fit at this point is, furthermore, desirable to protect the contents of the container from moisture or other components of the atmosphere which might have a harmful effect upon such contents.

A further object of my invention, therefore, is to produce a cap which is maintained in close engagement with the perforated top of the neck. I also provide a construction in which such close engagement is maintained with a minimum of resistance to rotation of the cap. Specifically, I employ resilient means for holding the cap in such engagement, preferably of such a nature that the wear incident to repeated manipulation of the cap will not destroy its snug engagement with the top of the neck.

Another object is to produce a cap of this type which is composed of a minimum of parts, each of which is designed to be produced readily and rapidly, preferably by standard machines, and from ordinary sheet metal. In the preferred form disclosed, the sifter top is furthermore capable of assembly upon standard assembling machines used in the manufacture of the standard top heretofore described.

Other objects and advantages of my invention will be apparent from the following description taken in connection with the accompanying drawings, in which:

Figure 1 is a side elevation of a container having a sifter top embodying my invention,

Fig. 2 is a side elevation of the parts permanently connected to form a sifter top in accordance with my invention,

Fig. 3 is a median vertical cross-section through the container shown in Fig. 1, and Fig. 4 is a top plan view of Fig. 1.

While sifter tops made in accordance with my invention may be employed on a very great variety of articles, I have disclosed a common form of sifter top container, including the usual body 10 having a breast 11 adapted to telescopically engage the upper edge of the body. The usual neck 12 is mounted in an aperture in breast 11 in any desired way, as by crimping the lower edge of said neck into engagement with the edge of said aperture. Suitable dispensing openings 13 are formed in the upper surface of neck 12, and are adapted to register with similar openings 14 in cap 15, which is suitably contoured to fit snugly over the top of said neck 12 in the usual way. Cap 15 is relatively broad, being provided with a flared or extended edge portion 16 provided with a downwardly extending skirt 17 which, in the preferred form, is spaced from the sides of neck 12, thus facilitating the production of a top of extra width. The lower edge of skirt 17 is inturned, as at 18, into sliding engagement with the lower side of a suitable projection or projections carried by neck 12, serving to maintain cap 15 in snug engagement with the top of neck 12 and at the same time to permit its rotation, locating apertures 13 and 14 in or out of register at the will of the user. If desired, any suitable means for limiting the rotation of the cap may be employed, such as the usual tit 19 carried by neck 12 projecting into slot 20 in cap 15.

Various projecting elements engaging the inturned portion 18 of skirt 17 may be mounted or formed on neck 12. In the preferred form disclosed, I have employed a collar 21 having a skirt 22 adapted to fit snugly about the lower part of neck 12, and an annular shoulder 23 extending above and into engagement with the inwardly bent portion 18 of skirt 17, thus serving to maintain cap 15 in engagement with neck 12.

If desired, collar 21 may be permanently fixed in place on neck 12, as by striking up offsets 24 engaging corresponding recesses 25 in collar skirt 22, this interengagement being of a type ordinarily employed in standard sifter tops, and capable of being produced on the usual machines.

While the preferred form of my invention disclosed herein may be manufactured in various ways, it will be evident that it is susceptible of production on standard machines. Neck 12 may be crimped in position in breast 11 in the usual way, these parts being preferably of ordinary construction. Collar 21 and cap 15 may then be placed over neck 12, and the usual crimping mechanism employed to produce the inturned edge 18 of skirt 17, and at the same time to strike

up the offset portions 24. If desired, cap 15 may be placed over collar 21 and the lower edge of skirt 17 inturned about shoulder 23 prior to the location of said collar 21 on neck 12, this operation being also capable of being performed by standard apparatus. It will be noted that the distortion of the metal in the parts shown in Fig. 2 is well within the limits of distortion which may be safely produced by standard dies. Furthermore, such parts are strong, simple, and each is adapted to be produced by ordinary machinery.

It will be apparent that sifter tops constructed in accordance with my invention will possess the essential features of cheapness, durability, and positive action, and at the same time will solve the problems involved in the provision of a broad cap, as well as the difficulty in providing a snug cap whose fit will not be materially affected by wear. Furthermore, the top is readily rotated into dispensing or closed position, due to its large circumference, its flared construction rendering it readily grasped by the user, and the engagement thereof with collar 21 preventing the sticking which is a common defect in the standard type of sifter top.

While I have described the preferred form of my invention and have indicated certain variations therein, it will be apparent that numerous other changes may be made within the scope of my invention as set forth in this specification.

I claim:

1. A sifter top for containers, including an apertured neck, an apertured cap rotatable to bring the apertures in the cap and neck into and out of register, said cap including a downwardly projecting marginal skirt, a collar mounted on the neck, and means carried by the collar and slidably engaging the skirt for maintaining said cap in engagement with the upper part of the neck.

2. A sifter top for containers, including an apertured neck, an apertured cap rotatable to bring the apertures in the cap and neck into and out of register, said cap including a downwardly projecting marginal skirt, a collar mounted on the neck provided with an outwardly projecting circumferential flange, and means carried by said skirt engaging the lower surface of said flange to maintain the cap in engagement with the upper part of the neck.

3. A sifter top for containers, including an apertured neck, an apertured cap rotatable to bring the apertures in the cap and neck into and out of register, said cap including a downwardly projecting marginal skirt having an inturned lower edge, and a collar mounted on said neck having an outwardly flared upper edge overlying and

slidably engaging said inturned portion of the skirt to maintain the cap in engagement with the upper part of the neck.

4. A sifter top for containers, including
5 an apertured neck, an apertured cap rotatable to bring the apertures in the cap and neck into and out of register, said cap including a downwardly projecting marginal skirt having an inturned lower edge, a collar mounted on said neck having an out-

wardly flared upper edge overlying and slidably engaging said inturned portion of the skirt to maintain the cap in engagement with the upper part of the neck, and means for connecting said collar and neck to main- 15
tain them in fixed relation.

Signed at Baltimore and State of Maryland, this 10th day of March, A. D. 1920.

JOSIAH T. WILCOX.