Aug. 13, 1946. B. BOGOSLOWSKY 2,405,682

CONTAINER

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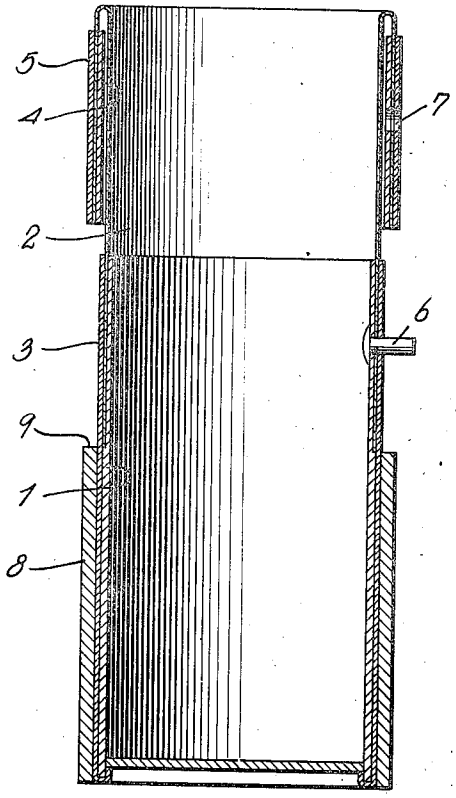


Fig. 1.

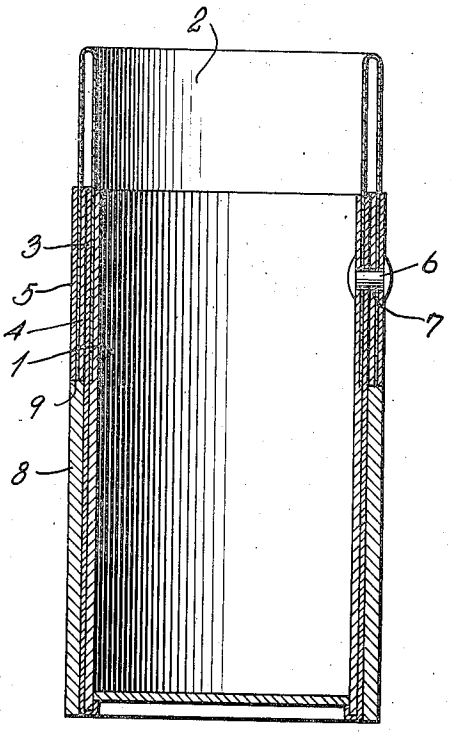


Fig. 2.

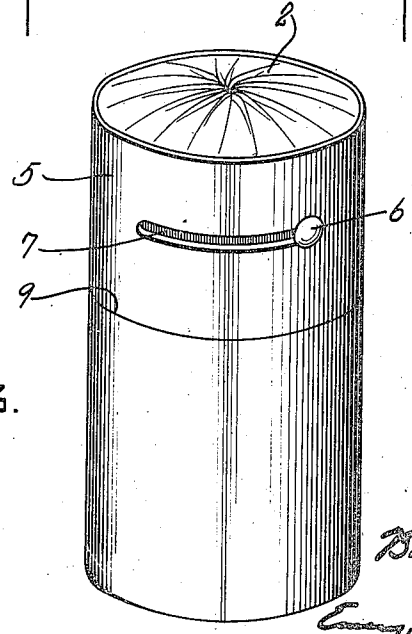


Fig. 3.

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CONTAINER

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2 Claims. (Cl. 222—548)

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This invention relates to containers and pertains more particularly to closures therefor.

It is an object of the invention to provide a container having a closure in the nature of a diaphragm which may be closed tightly to prevent leakage of the contents of the container and which may be opened more or less widely to permit the contents of the container to be dispensed.

It is a further object of the invention to provide such a container particularly adapted for holding and dispensing dry materials in more or less finely divided state, such for example as tooth powder, talcum powder, soap and cleanser compounds in the form of powder, granules or flakes, and other similar powdered, granular or flaked materials.

Other objects and advantages of the invention will appear hereinafter.

A preferred embodiment of the invention selected for purposes of illustration is shown in the accompanying drawing, in which,

Figure 1 is a vertical longitudinal section through the container, showing the parts in process of assembly.

Figure 2 is a similar view showing the parts assembled.

Figure 3 is a perspective view of the container showing the closure in closed position.

Referring to the drawing, the container comprises a tubular member 1, the lower end of which may be closed in any suitable manner. Surrounding the upper end of the tubular member 1 is one end of a tubular piece of flexible material 2 such as cloth, paper, rubber or plastic film for example, which said end is attached to the tubular member 1 around the periphery thereof in any suitable manner, as by adhesive, or otherwise. For example, a second tubular member 3 may be telescoped over or wrapped around the tubular member 1 with the end of the tubular flexible material inserted therebetween, using adhesive, if desired, to hold the end of the tubular flexible material firmly therebetween.

The tubular material 2 is then carried through the inside of a tubular collar 4 and is folded backwardly on itself. The free end is then attached to the collar 4 around the periphery thereof in any suitable manner, as by adhesive, or otherwise. For example, a second tubular collar 5 may be telescoped over or wrapped around the tubular collar 4 with the end of the tubular flexible material inserted therebetween, using adhesive, if desired, to hold the end of the tubular flexible material firmly therebetween. A loose unattached portion of the tubular flexible material

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is left between the end portions which are attached to the tubular member 1 and the collar 4, respectively, which said loose portion should be of a length at least equal to the diameter of the tubular member 1.

The inside diameter of the tubular collar 4 should be such as to permit said collar to telescope over the upper end of the tubular member 3, and after the various parts are assembled, as shown in Figure 1, the said collar is telescoped therewith as shown in Figure 2. By rotating the said collar with respect to the tubular member 3, the loose portion of the tubular flexible member is caused to pucker inwardly, forming itself meanwhile into a diaphragm of folds converging toward the center of the tubular member 3, which said folds gradually constrict the central opening as rotation continues until said opening is tightly closed as shown in Figure 3.

By reversing the direction of rotation the central opening may be reopened to any desired extent, up to the full diameter of the tubular member 3. For many purposes, however, it is desirable to limit the opening movement, and in such cases a pin 6 may be anchored in the wall of the tubular member 3 to extend through a slot 7 in the wall of the collars 4 and 5, the length of said slot determining the permissible rotating movement. The said pin also serves in such cases to prevent said collars from sliding longitudinally in either direction along the tubular member 3.

In cases where it may be desirable to provide a container in which the tubular body and collars are of uniform outside diameter, a third tubular member 8 may be telescoped over or wrapped around the tubular member 3, terminating in a shoulder 9 which abuts against the lower edge of the collars 4 and 5.

The tubular members 1 and 3 and the collars 4 and 5 may be made of any suitable materials, but I prefer to use spirally wound paper board tubing as commonly manufactured, as such material is cheap and plentiful, and possesses adequate structural strength and resistance for most purposes. If desired, however, the tubular member 3 or the collar 5 or both may be made of thin paper or plastic film such as Cellophane, for example. For some purposes the tubular members or collars, or both may be made of metal or molded plastic materials.

It will be understood that the invention may be variously modified and embodied within the scope of the subjoined claims.

I claim as my invention:

1. A container comprising a tubular member, a tubular collar telescoped over said tubular member and rotatable with respect thereto, the upper edge of said collar lying in substantially the same plane as the upper edge of said tubular member, a tubular piece of flexible material forming a closure for one end of said container, one end of said tubular piece of flexible material being attached to said tubular member, and the other end being attached to said collar with a loose, unattached portion between said attached ends, said loose, unattached portion being folded backwardly on itself and puckering inwardly on rotation of said collar relative to said tubular member to form a diaphragm consisting of folds converging toward the center of said tubular member, and means to prevent longitudinal movement of said collar relative to said tubular member when said collar is rotated thereon, which said means also serves to limit the rotating movement of said collar with respect to said tubular member.

2. A container comprising a tubular member, a tubular collar telescoped over said tubular

member and rotatable with respect thereto, the upper edge of said collar lying in substantially the same plane as the upper edge of said tubular member, a tubular piece of flexible material forming a closure for one end of said container, one end of said tubular piece of flexible material being attached to said tubular member, and the other end being attached to said collar with a loose, unattached portion between said attached ends, said loose, unattached portion being folded backwardly on itself and puckering inwardly on rotation of said collar relative to said tubular member to form a diaphragm consisting of folds converging toward the center of said tubular member, said collar having a slot in its wall, and a pin mounted in the wall of said tubular member and extending into said slot to limit the rotating movement of said collar with respect to said tubular member, and to prevent longitudinal movement of said collar relative to said tubular member when said collar is rotated thereon.

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