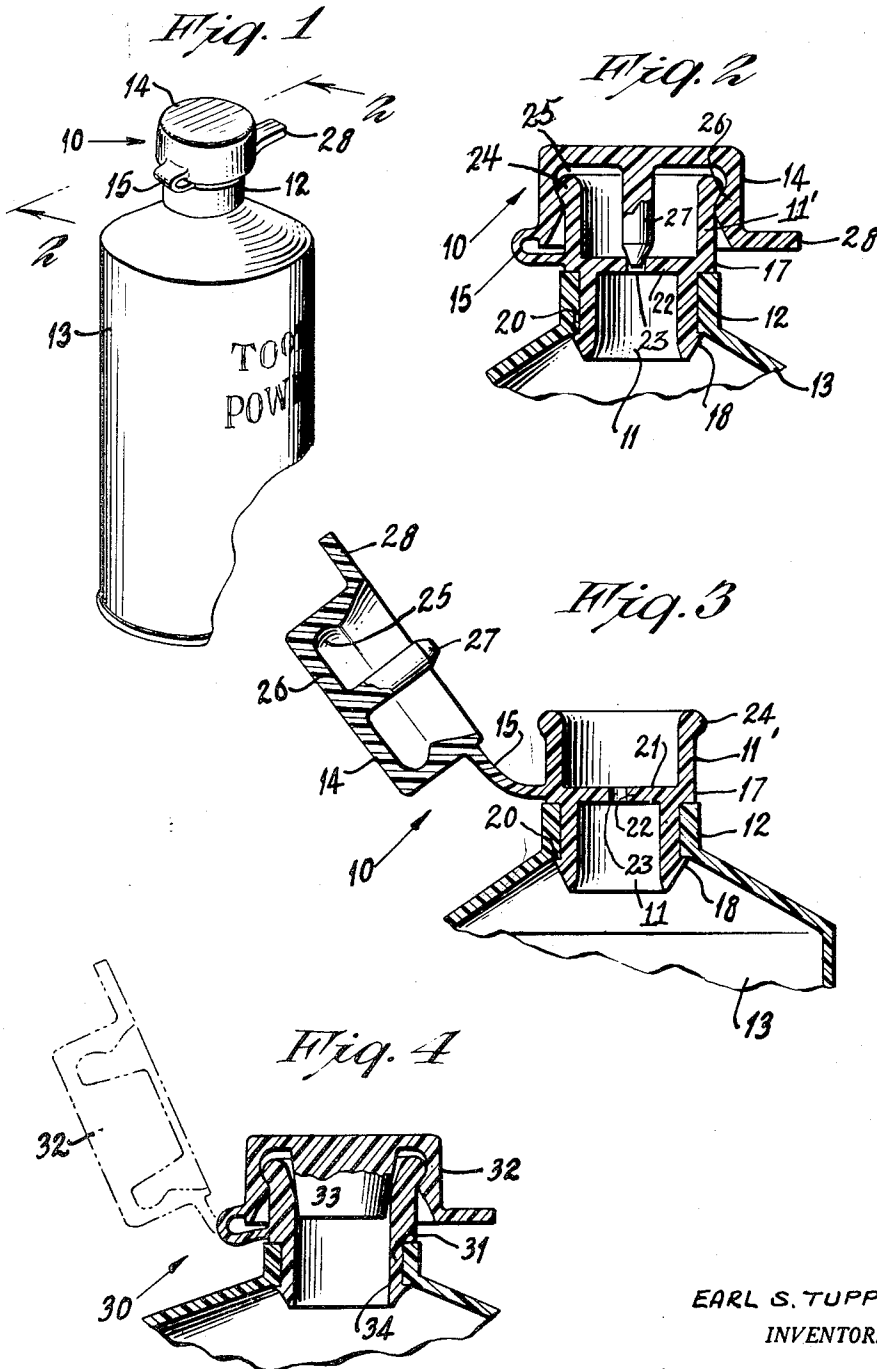


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E. S. TUPPER
DISPENSING CLOSURE
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EARL S. TUPPER
INVENTOR.

BY *Alexander Leuchter*
ATTORNEY

UNITED STATES PATENT OFFICE

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DISPENSING CLOSURE

Earl S. Tupper, Upton, Mass.

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4 Claims. (Cl. 222-498)

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This invention relates to dispensing closures for containers such as bottles, cans and the like.

An object of this invention is to provide a dispensing closure comprising a stopper cap which is integrally connected by a flexible member to a tubular insert, the flexible connecting member holding the stopper cap in operative position on the container or in inoperative position outside the container.

Another object of this invention is to provide a dispensing closure comprising an insert member insertable into the neck of a container, the said insert member having an abutment collar which limits its movement into the container, and the said closure comprising a connecting member extending from the abutment collar and being of a length to align the stopper cap with the insert member when the stopper cap is brought down into closing position on the container.

Another object of this invention is to provide a modified stopper cap having a tapering plug adapted to seat inside the neck of the closure to provide sealing contact with the container when the stopper is brought down into operative relation with the tubular insert.

Another object of this invention is to make the outlet end of the closure in the form of a circular rib and to make the stopper cap with a circular cavity so that sealing contact is provided between the stopper cap and the closure when the said rib and circular surface come into engagement.

With the above and other objects in view, the invention will be hereinafter more particularly described, and the combination and arrangement of parts will be shown in the accompanying drawings and pointed out in the claims which form part of this specification.

Reference will now be had to the drawings, wherein like numerals of reference designate corresponding parts throughout the several views, in which:

Figure 1 is a perspective view of a container having the dispensing closure applied thereto.

Figure 2 is a central cross-sectional view taken on line 2-2 in Figure 1, with the stopper cap in closed position.

Figure 3 is a central cross-sectional view similar to Figure 2, with the stopper cap in open position.

Figure 4 is a central cross-sectional view similar to Figure 3, and showing a modified stopper cap.

In the illustrated embodiment of the invention,

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the numeral 10 generally indicates a moulded, one piece dispensing closure for bottles and the like and comprises a tubular insert member 11 insertable into the neck 12 of the container 13.

The dispensing closure 10 also comprises a stopper cap 14 which is integrally connected by an elongated flexible connecting member 15 to the tubular insert member 11. The connecting member 15 is made of a length to align the stopper cap 14 with the insert member 11 when the stopper cap is brought down into closing position on the container 13.

The tubular insert member 11 is formed with peripheral or circular abutment collars 17 and 18 which grip the upper and lower faces respectively of the neck 12 of the container 13 in fluid-tight sealing relation. It will be noted that the neck 12 is of smaller diameter than the diameter of the body member 13 which results in a peripheral or circular shoulder 20 at the junction of the neck 12 and the body 13 and against which the collar 18 abuts. In practice, the container 13 may be made of glass, metal and like rigid materials.

In the disclosure shown in Figures 2 and 3, the tubular insert member 11 has a disk-like partition wall 22 having a central through opening 23, the said wall 22 having a circular upwardly projecting side wall 11' extending from abutment collar 17.

The tubular insert wall portion 11' has a radially outwardly extending rib 24 at its upper edge while the stopper cap 14 has a circular cavity 25 adjoining the lateral wall 26 thereof. In closed position, with the stopper cap 14 on the tubular insert wall portion 11', the rib 24 is seated in the cavity 25 in fluid-tight sealing engagement.

The stopper cap 14 has an integral tapering plug 27 centrally thereof and of a length to seat in the opening 23 in the disk-like partition wall 22 of the tubular insert member 11 and augments the sealing effect of the stopper cap 14 in closed position. The stopper cap 14 is provided with a handle 28.

It will thus be noted that the dispensing closure 10 provides dual sealing effects when in closed position on the container 13, both of the sealing effects acting simultaneously.

Figure 4 is a central cross-sectional view, similar to Figure 3, and showing a modified dual sealing effect dispensing closure 30 moulded in one piece and comprising a tubular insert member 31 and a stopper cap 32.

The tubular insert 31 is the same as the tubu-

lar insert member 11, but without any partition wall.

The stopper cap 32 has a tapering plug 33 of a size to contact the entire inner wall 34 of the tubular insert 31 in fluid-tight sealing relation.

Thus it will be seen that I have provided a dispensing closure or dispensing cap having a dual sealing effect in connection with a tubular insert within a container.

The insert within the container is also provided with a dual sealing effect as at collars 17 and 18, collar 18 being squeezed in order to be fitted within the neck 12 of body or container 13. The resiliency of insert 11 brings about engagement of collar 18 with shoulder 20.

It is to be noted that the insert and the dispensing closure or cap is made of a single piece of flexible plastic material such as polyethylene or other plastic and that insert and closure may be easily and quickly applied to the neck of a container, such as a bottle, and when so applied is ornamental in appearance. The dispensing cap has an opening or orifice of predetermined size and a plug arrangement for closing or opening the orifice, and is so arranged that a slight pressure applied to the handle 28 on the cap 14 will pry the cap supported on hinge 15 from rib 24 and permit the material in the container to be dispensed therefrom. Rib 24 and the cavity 25 serve as the latching means for cap 14.

I wish it understood that minor changes and variations in the integration, location, material and size of parts may all be resorted to without departing from the spirit of the invention and the scope of the appended claims.

I claim:

1. A dispensing closure for a container having a neck of small diameter and a body of larger diameter and a shoulder inwardly of and at the junction of said neck and body, said dispensing closure comprising an integral and tubular member insertable in and fitting said neck and extending beyond the edge thereof and having upper and lower abutment shoulders adapted for engagement with the upper and lower faces of said neck, and a hollow stopper cap yieldably and integrally connected with said tubular insert member and adapted to be brought in sealing engagement with the upper part of said insert member, said insert member having an opening and said stopper cap having a tapering plug seating in said opening under pressure for augmenting the sealing effect of said stopper cap.

2. A dispensing closure for a container having a neck of small diameter and a body of larger diameter and a shoulder inwardly of and at the junction of said neck and body, said dispensing closure comprising an integral and tubular member insertable in and fitting said neck and extending beyond the edge thereof and having upper

and lower abutment shoulders adapted for engagement with the upper and lower faces of said neck, and a hollow stopper cap yieldably and integrally connected with said tubular insert member and adapted to be brought in sealing engagement with the upper part of said insert member, said insert member having a partition having an opening and said stopper cap having a tapering plug adapted to be urged in said opening under pressure for augmenting the sealing effect of said stopper cap in closed position.

3. A dispensing closure for a container having a body, a neck and a shoulder inwardly thereof and at the junction of said neck and body, said dispensing closure comprising a tubular member insertable in said neck and having upper and lower abutment shoulders adapted for engagement with the upper and lower faces of said neck, and a hollow stopper cap yieldably connected with said tubular insert member, said tubular insert member having a radially outwardly extending rib and said stopper cap having a circular cavity engageable with said rib in fluid-tight sealing relation, said insert member having a partition wall with an opening therethrough and said stopper cap having a tapering plug adapted to seat in said opening for augmenting the sealing effect of said stopper cap in closed position.

4. A dual sealing effect dispensing closure for a container having a body, a neck and a shoulder inwardly thereof and at the junction of said neck and body, said dispensing closure comprising a tubular member insertable in said neck and having upper and lower abutment shoulder collars adapted for engagement with the upper and lower faces of said neck, and a hollow stopper cap yieldably connected with said tubular insert member, said tubular insert member having a radially outwardly extending rib and said stopper cap having a circular cavity engageable with said rib in fluid-tight sealing relation, said insert member having an opening therethrough and said stopper cap having a tapering plug adapted to seat in said opening for augmenting the sealing effect of said stopper cap in closed position.

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