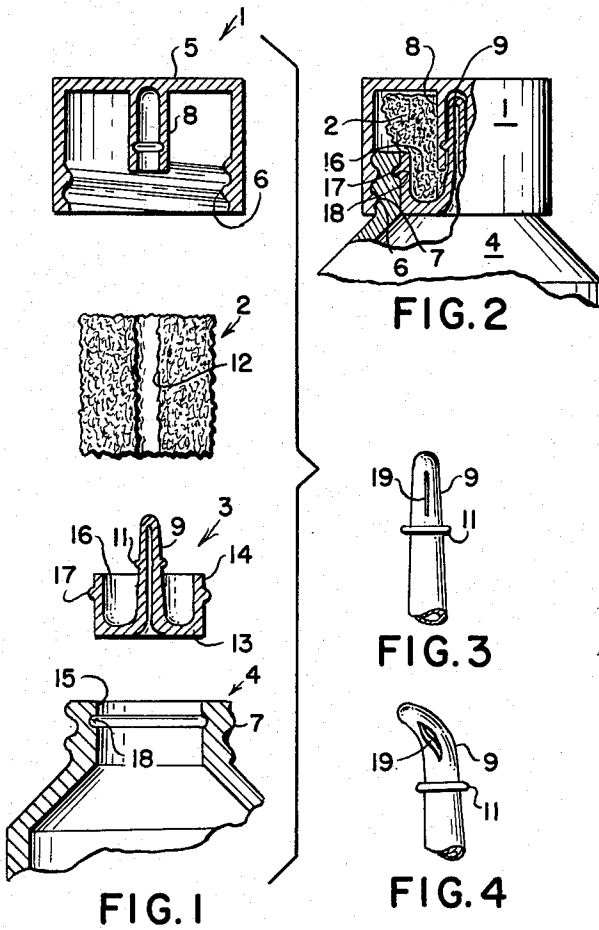
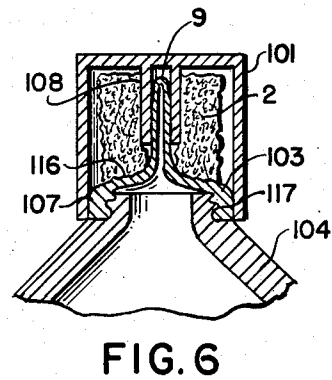
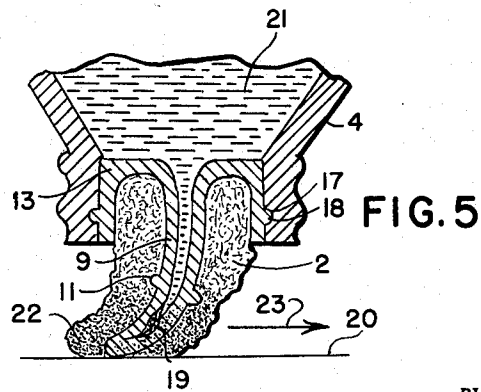


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SHOE POLISH DISPENSER
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SHOE POLISH DISPENSER

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5 Claims. (Cl. 15—566)

This invention relates to a shoe polish dispenser. More particularly it relates to a dispenser for liquid shoe polish and similar liquids which are distributed on surfaces in limited amounts, said dispenser being adapted to be applied to a glass or plastic container and to serve as a closure therefor and to be manipulated to open it to permit distribution of liquid from said container, said dispenser comprising a deformable member having a flange and an elongated nipple closed at its outer end, a longitudinal slit in the side of the nipple designed to remain closed when the nipple is unflexed and to open when the nipple is flexed, a spongy member surrounding the nipple, means on the flange to secure it liquid-tight to said container, and a cap adapted to surround the nipple and spongy member, to be removably secured to the container, and to seal the nipple against leakage when in place on the container.

It is an object of this invention to provide a dispenser of this type which is economical to make and effective and convenient to use.

The following description and accompanying drawing are intended to be illustrative only of a preferred embodiment and not to limit the invention, the scope of which is defined in the appended claims.

In the drawing:

FIG. 1 is an exploded view in section of the elements of the dispenser;

FIG. 2 is a view partly in section of the dispenser mounted on a container in closed position;

FIG. 3 is a view of the unflexed nipple;

FIG. 4 is a view of the flexed nipple;

FIG. 5 is a sectional view of the dispenser in use; and

FIG. 6 is a sectional view of a modified form of the dispenser.

In FIG. 1 a closure cap 1, a spongy member 2, a deformable member 3, and a container 4 are shown in section.

Cap 1 is cylindrical, with a solid top 5 and an internal screw thread 6 at its open end. This screw thread is adapted to mate with an external screw thread 7 on the neck of container 4. Depending from the top 5 of cap 1 is an axial tubular projection 8 adapted to surround the nipple 9 of member 3. An external fillet 11 may advantageously be provided on nipple 9 to ensure a tight closure when the dispenser is closed, but this is not essential when projection 8 provides a close fit on nipple 9.

Cap 1 is advantageously made of molded plastic, but other materials such as metal may be used.

Spongy member 2 is cylindrical in form and has a central bore 12 of a diameter such as to receive projection 8 when the dispenser is closed but to fit closely around nipple 9 at its lower end when compressed into position in member 3, to which it may be cemented, as shown in FIG. 2. The spongy member 2 may be made of various expanded elastomers known to the art, such as foam rubber, but a polyurethane has been found a very satisfactory material.

Deformable member 3 comprises the upstanding hollow nipple 9 molded integral with a flange 13. This flange is provided with an upstanding rim 14 adapted to fit snugly in the bore 15 of the neck of container 4. Rim 14 forms an annular recess 16 around nipple 9, which receives the compressed lower end of spongy member 2 when the dispenser is assembled as shown in FIG. 2. Rim

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14 is provided with an external fillet 17 mating with annular groove 18 in the neck of container 4 when the dispenser is assembled on a container.

Nipple 9 is provided with a longitudinal slit 19 in its side; this slit remains closed in the relaxed or unflexed nipple as shown in FIG. 3, but opens when the nipple is flexed as shown in FIG. 4.

Deformable member 3 may be made of any one of a number of deformable or elastomeric substances known to the art, such as rubber, neoprene, polypropylene, or the like, but a polyethylene plastic has been found a very satisfactory material for it.

Container 4 may be made of glass or of a rigid molded plastic or of a flexible plastic such as polyethylene. The dispenser works equally well with rigid and flexible bottles or tubes.

Commercially, the containers 4 are filled with the liquid to be dispensed (e.g. shoe polish, automobile polish, cosmetic lotion or the like); deformable units 3 are forced into bores 15 of the container necks, fillets 17 being seated in annular grooves 18; spongy members 2 are forced over nipples 9, the lower ends being compressed into recess 16 and cemented thereto; and caps 1 are applied and screwed home on container necks and nipples by means of thread 6. The resulting assembly is illustrated in FIG. 2. There it will be seen that in the closed position tubular projection 8 closely surrounds nipple 9 and prevents any chance seepage through slit 19.

In use, cap 1 is removed from the dispenser, the container is inverted and the spongy element 2 is pressed on the surface 20 to be treated with a natural sidewise wiping motion as indicated by arrow 23 in FIG. 5. The resulting flexure of nipple 9 opens slot 19 and permits the liquid 21 in the container to seep through and saturate the end of spongy element 2 as indicated at 22. Further manipulation of element 2 on surface 20 spreads liquid 21 as desired, the amount of liquid delivered being readily controlled by the amount of pressure and flexing applied to nipple 9.

A modification of the dispenser is shown in FIG. 6. In principle this operates in the same way as the previously described dispenser, but structurally it is somewhat different. Deformable member 103, instead of being inserted in the neck of container 4 like number 3, is attached to container 104 by internal screw thread 117 mating with a complementary external thread on the container neck. Member 103 lacks the upstanding flange 14 of member 3, and spongy element 2 is cemented to it at 116 to retain it in position. Member 103 lacks a fillet corresponding to fillet 11, and cap 101 a thread corresponding to thread 6. Closure is effected by a close friction fit of cap 101 around member 103 at 107 and a close sliding fit of tubular projection 108 around nipple 9.

From this description it is thought obvious that, once cap 101 has been removed, this form of dispenser will function in use exactly like the previously described form.

I claim:

1. In a dispenser for liquid shoe polish and similar liquids, said dispenser being adapted to be applied to a glass or plastic container to serve as a closure therefor and to be manipulated to open to permit distribution of liquid from said container, the improvement which comprises, in combination:

(1) a deformable member having an elongated flexible nipple, said nipple being provided with an axial bore closed at its outer end and also with a slit in its side surface, which slit is limited in extent to said side surface and is designed to remain closed when said nipple is unflexed and to open when said nipple is flexed, a first flange attached to the inner end of said nipple and disposed perpendicularly to the axis thereof, said flange having an aperture in alignment

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with said bore of said nipple, and a second flange, said second flange being of generally annular configuration and secured to the edge of the first flange, said second flange having means thereon for securing it liquid-tight to a container;

(2) a fixedly secured spongy member surrounding said nipple and normally extending adjacent thereto for the entire length thereof, whereby flexure of said spongy member results in flexure of said nipple and opening of the slit in the side surface thereof, said spongy member being unattached to said nipple at least from the region just below said slit therein to the outer end of said nipple;

(3) a cap adapted to surround said nipple and said spongy member and to be removably secured to the container on which said nipple and spongy member are to be mounted, said cap having an elongate axial tubular projection depending therefrom, said tubular projection having an axial bore therein;

(4) the dimensions of said elongate axial tubular projection and said axial bore therein being so related to those of said nipple and said spongy member whereby said cap is adapted to be positioned with respect to said nipple for closing the container with which said dispenser may be operatively associated, at which time said elongate axial tubular projection is adapted to be positioned frictionally over said nipple while it extends between said nipple and said spongy member at least to said region just below said slit in said side surface of said nipple to retain the latter in unflexed position and to seal the slit against leakage into said spongy member.

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2. The improvement defined in claim 1 in which the elongated nipple is provided with an external fillet adapted to form a tight closure by contact with the bore of the tubular projection when the cap is in position.

3. The improvement as defined in claim 1 in which the second flange constitutes an upstanding rim around the first flange and is provided with an exterior fillet adapted to mate with an interior annular groove in the neck of a container whereby said deformable member may be secured liquid-tight to a container.

4. The improvement defined in claim 1 in which the second flange constitutes a downturned rim having an internal securing means adapted to mate with an external securing means on the neck of a container.

5. As an article of commerce a container having attached thereto a dispenser incorporating the invention defined in claim 1.

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