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DISPENSER CONTAINER WITH SLIDABLE DISPENSING MEMBER

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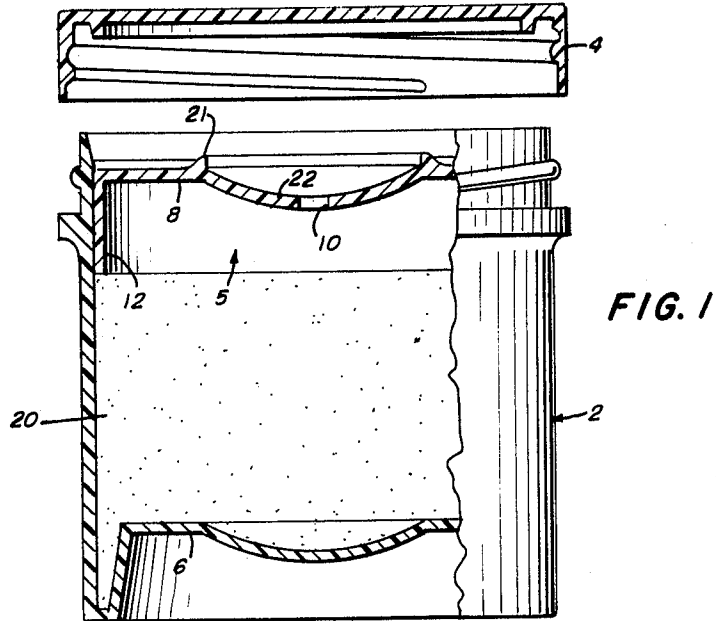


FIG. 1

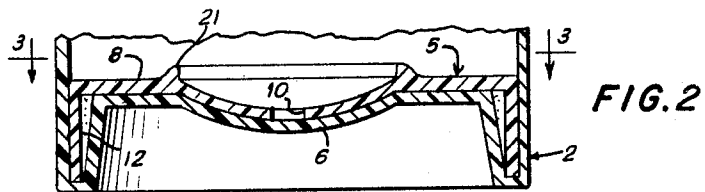


FIG. 2

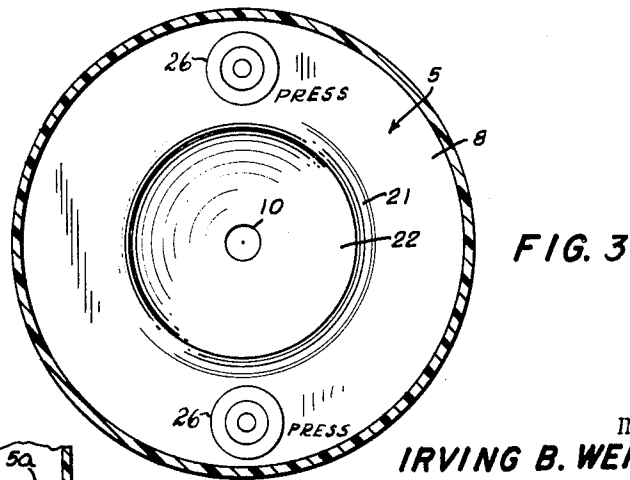


FIG. 3

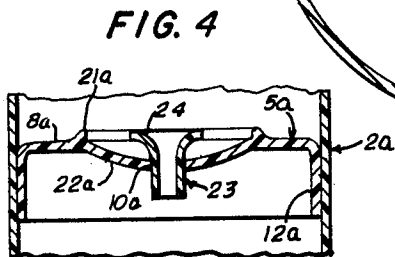


FIG. 4

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**DISPENSER CONTAINER WITH SLIDABLE  
DISPENSING MEMBER**

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This invention is concerned with a novel dispensing container and, more particularly, with a simple and practical dispenser for creams, lotions, salves, pastes, and the like, which substantially prevents contamination of the contained material.

Substances in the form of creams, pastes, lotions, salves, etc., are commonly packaged in relatively wide mouthed jars having tops removable to provide access to the interior. The contents may be scooped out with the fingers, by an instrument, or by dipping a swab or a piece of cloth or cotton thereinto. In this manner of dispensing, it is relatively difficult, if not impossible, to obtain only the amount desired without waste. In the case of medicinal salves and the like, the problem is further complicated by the likelihood of contamination of the remaining contents by the fingers or swabs. A further problem presented by packaging of certain of the aforementioned materials in conventional containers is that of atmospheric oxidation or other deleterious effects resulting from the exposure of a relatively large surface of the material to the atmosphere whenever the top of the container is removed. Such oxidation can render the material unfit for use.

The principal object of this invention is to provide a novel dispenser for creams, lotions, and the like which is simple, practical and economical in construction and from which controlled quantities of the material may be readily removed while providing protection against contamination of the remaining contents.

A further object is to provide a novel sanitary and convenient dispenser for creams, lotions, and the like which does not require inverting the dispenser or contacting any substantial portion of the contents other than that which is dispensed. An additional object is to provide a dispenser which is strong and durable, attractive in appearance, easy to operate, and otherwise well adapted for the purposes described.

The dispenser of the present invention includes a generally cylindrical cup-shaped container for the substance to be dispensed, and an apertured cup-shaped push-down dispensing member which telescopes within the container, the transverse wall of the dispensing member and the bottom of the container preferably being of complementary configuration, and said dispensing member being adapted to overlie or "float" on the surface of the contained substance to be dispensed. A central dispensing orifice is provided in the transverse wall or disc portion of the dispensing member, and the construction is such that application of pressure on said member sufficient to cause downward movement thereof causes the contained substance to be dispensed through said orifice. The dispensing member includes a cylindrical peripheral wall or flange for engaging the inner surface of the container to insure that the dispensing member at all times remains coaxially aligned with the container, even when pressure is applied unevenly, said flange also affording sealing means preventing the contained material from escaping except through the dispensing orifice when the pressure is applied.

The dispensing member, in the preferred form of the invention, is provided with a dispensing well structure. In another form of the invention a tubular snap-in type removable well member is mounted in an orifice in the

disc portion of the dispensing member, said well member being formed with an outwardly flared upper end portion affording a reduced size dispensing well.

The invention can be best understood from the following description taken in connection with the accompanying drawings. Referring now to the drawings wherein corresponding parts of the illustrated embodiments have been designated by the same numerals in the several views, letter suffixes being applied where appropriate:

FIGURE 1 is a side view partly in section illustrating one embodiment of this invention;

FIGURE 2 is a fragmentary vertical sectional view of the dispenser shown in FIGURE 1 illustrating the substantial conformity of the disc portion with the bottom of the container;

FIGURE 3 is a sectional plan view taken on line 3—3 of FIGURE 2; and

FIGURE 4 is a fragmentary vertical sectional view of another form of the invention wherein the push-down dispensing member is provided with a removable snap-in well member.

Referring now to FIGURES 1, 2 and 3 in detail, the dispenser comprises a cup-shaped container 2, shown for illustrative purposes as cylindrical in form. The container 2 has a bottom wall 6, and at its open upper end is externally threaded to receive a cup-shaped internally threaded closure 4. It is readily understood that the size of container 2 may be varied to accommodate the type and quantity of substance to be dispensed. Telescopically slidably within the container 2 is an inverted cup-shaped dispensing member 5 which "floats" on the surface of the material 20 within the container. The dispensing member 5 includes a flat transverse wall or disc portion 8 which is provided with a peripheral flange 12 which extends downwardly from disc portion 8, affording sealing engagement with the cylindrical container wall. The flange 12 also functions to reduce any tendency of the dispensing member to become cocked as a result of the application of unequal downward forces thereon. In this embodiment, the planar upper surface of disc portion 8 is provided with a centrally located downwardly-offset concave portion 22 of generally lenticular shape, at the bottom of which is located dispensing orifice 10. The concave portion 22 is bounded on the upper surface of the disc portion 8 with an integral annular ridge 21 defining the periphery of said concave portion. The ridge 21 is provided in order that, when the desired amount of material 20 has been extruded through orifice 10 as a result of downward actuation of the member 5, the extruded material may be removed by simply drawing a finger, swab or the like across and in wiping contact with the arcuate upper surface of the concave portion 22. The flat area of the upper surface of disc portion 8 may be provided with diametrically oppositely disposed circular indicia 26, as shown in FIGURE 3, affording a target for the application of pressure by the fingers of the user.

It is readily seen in FIGURES 1 and 2 that the under surface of the dispensing member and the upper surface of the bottom of the container are of complementary configuration to the the end that when the dispensing member reaches the bottom of the container, substantially all of the material will have been dispensed, thereby avoiding waste.

FIGURE 4 illustrates another form of the invention wherein the dispensing member 5a is provided with a tubular well member 23 which preferably has a snap-in type frictional mounting within the orifice 10a as shown. The member 23 has its upper end outwardly flared, as at 24, to provide a smaller version of the well provided by the concavities 22 and 22a. The illustrated mounting of the member 23 permits said member to be readily removed and cleaned. If desired, of course, the dispenser

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of FIGURE 4 may be used with the well member 23 removed, when such use is desired.

It is apparent that the dispenser of this invention may be manufactured from any one of the many rigid and semi-rigid molding materials available on the market today, for example plastic, glass, and the like, and combinations thereof. It is preferred, however, to have the containers 2 and 2a and lid 4 manufactured of linear polyethylene, and to have the dispensing members 5 and 5a molded of regular polyethylene.

It will also be apparent that the construction of this invention may be modified to accommodate many different viscous materials, for example, greases, tooth pastes, medicinal salves, and lotions, as well as food products. In addition, changes in form, size, arrangement of parts, operation and mechanical details may be made without departing from the spirit and scope of this invention. Accordingly, only such limitations should be imposed as are specifically set forth in the appended claims.

What is claimed is:

1. A dispensing device comprising a cup-shaped container having a cylindrical wall, and an inverted cup-shaped dispensing member having a cylindrical wall in telescopic sliding contact with the inner surface of said cylindrical container wall and having a transverse disc portion adapted to engage the contained material to be dispensed, said disc portion having a substantially planar upper surface formed with a centrally located generally lenticular concavity and with an annular upstanding ridge defining the periphery of said concavity, said disc portion also being formed with a dispensing orifice at the bottom of said concavity, the contained material being dispensed through said orifice upon telescopic movement of said dispensing member in one direction within said container.

2. A dispensing device comprising a cup-shaped container having a cylindrical wall, and a cup-shaped dispensing member having a cylindrical wall in telescopic sliding contact with the inner surface of said cylindrical container wall and having a transverse disc portion adapted to engage the contained material to be dispensed, said disc portion having substantially planar upper and lower surfaces and being formed with a centrally located concave upper surface portion of generally lenticular shape offset inwardly beyond the plane of said lower surface, there being an annular ridge defining the periphery of said concave portion, said disc portion also being formed with a dispensing orifice at the bottom of said concave portion, the contained material being dispensed through said orifice upon telescopic movement of said dispensing member in one direction within said container.

3. A dispensing device comprising a cup-shaped container having a cylindrical wall, and an inverted cup-shaped dispensing member having a cylindrical wall in telescopic sliding contact with the inner surface of said cylindrical container wall and having a transverse disc portion adapted to engage the contained material to be dispensed, said disc portion having a substantially planar upper surface formed with a centrally located generally lenticular concavity and with an annular upstanding ridge defining the periphery of said concavity, said disc portion also being formed with a dispensing orifice located

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centrally at the bottom of said concavity, the contained material being dispensed through said orifice upon telescopic movement of said dispensing member in one direction within said container.

4. A dispensing device comprising a cup-shaped container having a cylindrical wall, and an inverted cup-shaped dispensing member having a cylindrical wall in telescopic sliding contact with the inner surface of said cylindrical container wall and having a unitary transverse disc portion adapted to engage the contained material to be dispensed, said disc portion having a substantially planar upper surface formed with a centrally located generally lenticular concavity and with an annular upstanding ridge defining the periphery of said concavity, said disc portion also being formed with a dispensing orifice centrally of said concave portion and through which the contained material is dispensed upon telescopic movement of said dispensing member in one direction within said container, the lower surface of the disc portion of said dispensing member and the upper surface of the bottom wall of said container being of complementary configuration.

5. A dispensing device according to claim 1 wherein a tubular member is removably frictionally mounted in said dispensing orifice, whereby the contained material is dispensed through said tubular member upon telescopic movement of said dispensing member in one direction within said container.

6. A dispensing device comprising a cup-shaped container having a cylindrical wall, an inverted cup-shaped dispensing member having a cylindrical wall in telescopic sliding contact with the inner surface of said cylindrical container wall and having a transverse disc portion adapted to engage the contained material to be dispensed, said disc portion having a substantially planar upper surface formed with a centrally located generally lenticular concavity, there being a dispensing orifice formed in said disc portion at the bottom of said concavity, and a tubular member removably frictionally mounted in said dispensing orifice and formed with a radially outwardly flared upper end portion defining a dispensing well, whereby the contained material is dispensed through said tubular member upon telescopic movement of said dispensing member in one direction within said container.

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