

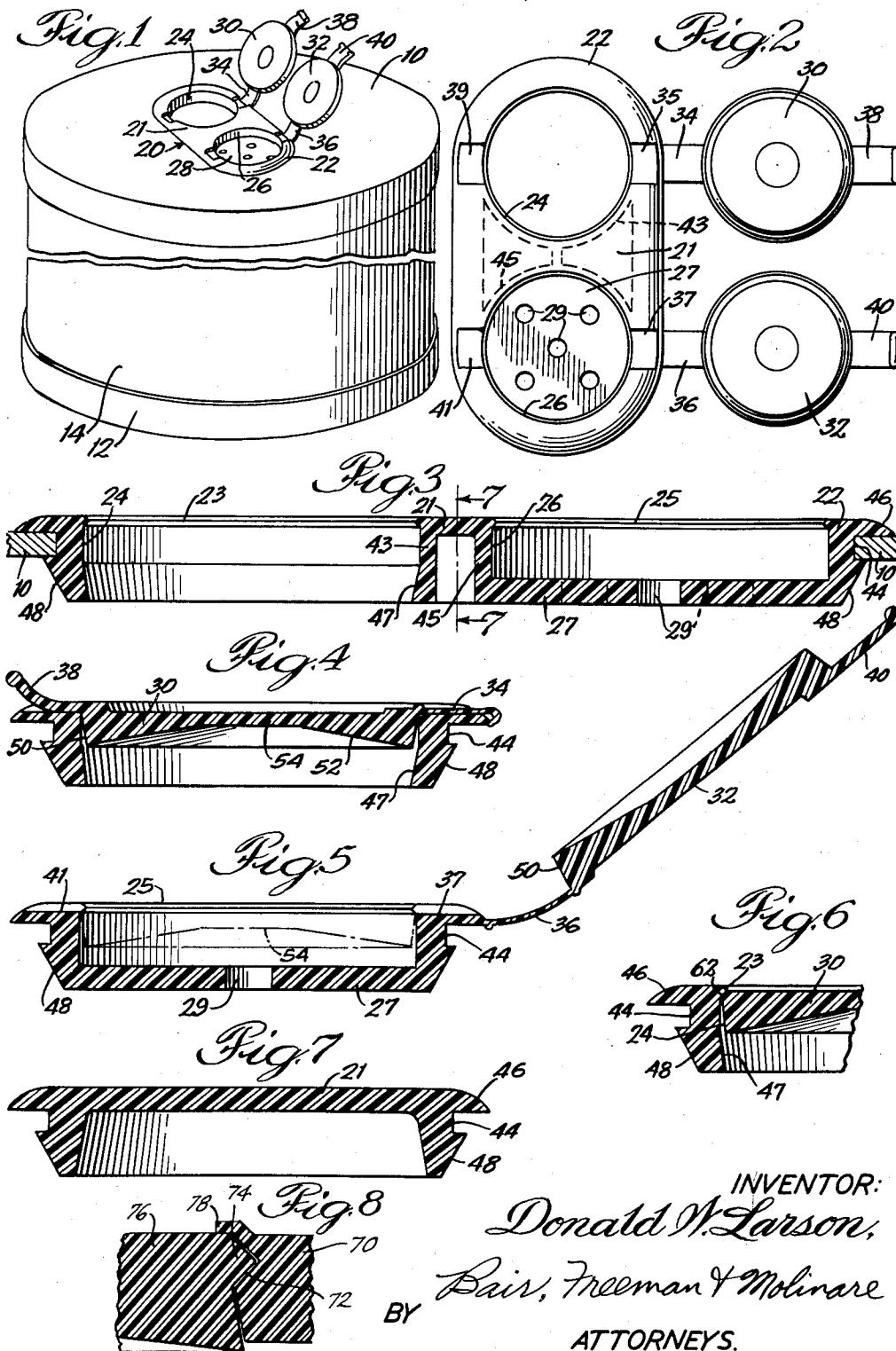
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DUAL DISPENSER AND SHAKER INSERT

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DUAL DISPENSER AND SHAKER INSERT

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This invention relates to a dispensing device for containers for particulate material.

A primary object of the invention is to provide an improved unitary molded plastic dispenser having an integral hinged cover. In one form of the invention the dispenser has a pair of openings, one permitting the pouring of relatively large quantities of granular or powdered material and the other having a perforated bottom therein for shaking lesser quantities of the material from the carton. Such a dispensing unit is adapted to be mounted in the wall of a container filled with particulate material and facilitates either pouring or shaking such material from the container.

Another object is to provide a dispensing device of this kind having integrally molded hinged covers for sealing the pouring and shaker openings.

In a preferred form of the invention the dispenser unit consists of an elongated frame divided into two separate openings by a transverse web or partition. Each opening has a bead at its upper edge and a hinged cover adapted to snap into the opening beneath the bead to seal the opening. The entire assembly is molded in one piece, preferably from polyethylene.

These and other objects and advantages of the invention will become apparent from the following description when read in conjunction with the accompanying drawings, wherein:

Figure 1 is a perspective view of a conventional cylindrical carton with a dispenser constructed in accordance with the invention mounted in a wall thereof. The central section of the carton is broken away.

Figure 2 is an enlarged plan view of the dispenser shown in Figure 1;

Figure 3 is a sectional view through the frame and dual openings of the unit shown in Figure 2;

Figure 4 is a sectional view through the pouring opening showing the cover in place;

Figure 5 is a view similar to Figure 4 through the shaker opening showing the cover removed; and

Figure 6 is a sectional view through frame 22 showing how the top edge of the cover 30 seats under bead 23;

Figure 7 is a sectional view taken along the line 7-7 of Figure 3; and

Figure 8 is a sectional view through an alternative form of the invention in which the cover is suspended within the frame by an outwardly extending flange.

Referring now to the drawing, the container 14 for holding particulate material such as soap, sugar, flour or other product has a bottom cap 12 and a top cap 10 which completely enclose the container. The dispensing unit of the invention, indicated generally by the numeral 20, is mounted in the top wall 10 of the container. Dispensing unit 20 consists of an elongated frame member 22 having rounded ends divided into a pair of openings by means of a web or partition 21 extending across the frame. The web has a pair of opposed depending semi-circular skirts 43, 45 (Figure 3) equal in depth to the frame which define the inner half of the openings 24, 26. These skirts, together with the rounded ends of the frame 22, form rims that define the entire openings 24, 26. The openings shown are round but may be of any desired shape. The outer peripheral side wall of the frame 22 has a slot 44 which is adapted to receive the marginal edge of the end wall 10 of the carton, which edge defines an opening in

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said wall. The lower portion 48 of the outer peripheral wall of the frame member is bevelled toward the center of the unit to facilitate pushing it through the opening in the top of the container. It will be understood that although an insert type of unit is shown in the drawing, the entire container top 10 may be molded with the dispensing unit. The rings 43, 45 are of the same thickness as the frame with which they are integrally molded and with which they cooperate to provide dual openings 24, 26.

The opening 24 is bevelled inwardly as indicated at 47 and both the openings 24 and 26 have a circumferential bead projecting thereinto near the top of the opening. These beads are designated as 23 and 25, respectively. It will be noted that the bead is triangular in cross section with the apex of the triangle extending into the opening. The cover 30 is bevelled at the top edge to complement the underside of the bead, Figure 6, to provide a flat peripheral contact area. This bead configuration also facilitates locating and inserting the cover or lid member.

The opening 26 has a perforated bottom 27 which is flush with the bottom of the frame. Perforations 29 in the bottom member 27 are provided to facilitate shaking material from the container. Both the openings 24 and 26 are fitted with covers 30 and 32 of identical construction. The covers are hinged to the side of the frame 22 by means of plastic strips 34, 36 which are molded integrally with the frame 22. The hinges are springy and tend to urge the cover upwardly against the bead. Each of the covers has a tab 38, 40 extending therefrom at a point directly opposite the hinge which facilitates lifting the cover from the opening when it is desired to pour material through that opening. Depressions 35 and 37 in the frame member provide a recess to receive the hinge members 34 and 36 when the covers are placed within the openings 24, 26.

The underside of each of the covers is dished as best shown in Figure 4. The cover 30 shown in this figure has a central depression 54 and a downwardly sloping wall 52 extending therefrom to the edge of the cover. The side walls of the cover are bevelled inwardly, as indicated at 50, to facilitate locating the cover within the opening and pushing it past the bead 23, 25. The smooth, dished interior configuration does not tend to pick up particulate material that might lie on the bottom 27 of the opening 26. At the same time any particulate material that may be lying on the perforate bottom 27 does not interfere with the closure of the cover 32, since the cover is spaced from the bottom when in fully closed position beneath bead 25.

It will be appreciated that this dispensing closure design permits pouring material through the opening 24 while the cover 32 is in place to cover the opening 26. When it is desired to use the shaker opening, the cover 32 is removed and the cover 30 is seated in the opening 24 so that no material will pass through the opening 24. The covers are easily seated in the openings to seal them off merely by pushing them down past the bead 23, 25. Since the entire unit is molded from flexible plastic material, the covers snap into place. The tabs 38, 40 extending from the covers will seat in recesses 39 and 41 so that they do not project above the top of the frame except for the outer gripping end thereof.

From Figure 6 it will be noted that the web 21 is flush with the top of the frame member 22 and extends from one side of the frame to the other, joining the rings which define the opening 24, 26.

From the foregoing it will be appreciated that the present invention provides a very simple and economical construction which is practical to use and to make. Although a preferred form of the invention is shown and described in this specification, it will be appreciated that various modifications may be made in the form of the

parts without departing from the true spirit and scope of my invention.

For example, in Figure 8 the cover 70 has a triangular groove 72 in its outer peripheral wall which is adapted to receive a complementary bead 74 extending from the inside of the frame 76. The bead is triangular in cross section and corresponds in contour to the grooved edge of the cover 70. Further, the cover 70 has a flange 78 which extends outwardly from the periphery thereof and bears on the top of the frame 76 to aid in suspending the cover within the opening of the frame. This construction also provides an improved seal for the opening. The cover snaps into place by applying pressure on the edges to seat the bead 74 in the groove 72.

Other modifications will occur to those skilled in the art.

It is, therefore, my intention to include within the scope of the appended claims any elements which are equivalent to those recited as well as modifications thereof which might reasonably be construed to be within the meaning of the claims.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A dispensing device for mounting in a single opening in an external wall of a single chamber in a container comprising an elongated flat frame, an outwardly directed groove around the perimeter of said frame for snapping into the opening of the chamber wall, a pair of openings through the flat frame, one of said openings having a perforated bottom therein, and a pair of covers hinged to said frame, each of said covers adapted to snap into said openings to provide a closure therefor, said covers and the hinges therefor being integrally molded with said frame from flexible plastic material.

2. A dispensing insert integrally molded from flexible plastic material for mounting in a single opening in an external wall of a single chamber in a container comprising an elongated frame divided into a pair of openings by means of a transverse partition and having a groove in the peripheral side wall thereof to receive the wall of said container, a perforated bottom in one of said openings flush with the bottom of said frame, a bead around each of said openings near the top thereof, and a cover for each of said openings hinged to said frame by means of an integrally molded plastic strip, said cover being adapted to effect a tight closure by snapping under said bead.

3. The device of claim 2 wherein said bead is triangular in cross section and terminates in a line around the inner periphery of said opening.

4. The device of claim 2 in which each of said covers has a pull tab molded on the edge thereof opposite said hinge.

5. The device of claim 2 in which said openings are round.

6. A dispensing device molded from a unitary piece of polyethylene for mounting in a single opening in an external wall of a single chamber in a container comprising an elongated frame having a groove in the peripheral side wall thereof to receive the wall of said container for mounting therein, a pair of rings disposed within said frame and of equal thickness thereto, a central web extending between the opposed inner surfaces of said rings and said frame and flush with the top surface of said frame and rings, one of said rings having a perforated bottom therein flush with the bottom thereof, a bead on the inner surface of each of said rings lying generally in the plane of said web, and a pair of covers, one for each ring, hinged to said frame and adapted to snap into said rings beneath said bead.

7. The device of claim 6 wherein said covers have side walls that are bevelled downwardly and inwardly to facilitate movement past said bead during closure.

8. A dispensing device for mounting in a single opening in an external wall of a single chamber in a container

comprising an elongated frame having a transverse partition to form a pair of openings through said frame, one of said openings having a perforated bottom therein, means around the periphery of the frame for engaging the periphery of the hole in the wall of the chamber, a bead triangular in cross section, projecting from each of said openings near the top thereof, and a pair of covers hinged to said frame and having a bevelled edge complementing the underside of said triangular bead for providing face contact between said edge and said bead when said covers are disposed within said openings, said covers and the hinges therefor being integrally molded with said frame from flexible plastic material.

9. A dispensing closure for the wall of a container comprising a flat ring of elastic material, a concentric circular outwardly facing groove around said ring, one wall of said groove being radially narrow to facilitate snapping the closure into an opening of the size of the bed of the groove in a container wall, a lid having a thickness less than the axial thickness of the ring and seatable in the ring in the plane of the groove, and a hinge holding the lid to the ring.

10. The closure of claim 9 wherein means are provided between the ring and the lid for snap-holding the lid in closed position.

11. A dispensing closure for the wall of a container comprising a flat frame of elastic material having an opening therethrough, a groove facing outwardly around the peripheral edge of said frame, one wall of said groove being radially narrow to facilitate snapping the closure into an opening of the size of the bed of the groove in a container wall, a lid having a thickness less than the axial thickness of the frame and seatable in the opening in the frame substantially in the plane of the peripheral groove, and a hinge holding the lid to the frame.

12. A dispensing closure for the wall of a container comprising a flat frame having an opening therethrough, a groove facing outwardly around the peripheral edge of said frame, one wall of said groove being radially narrow to facilitate snapping the closure into an opening of the size of the bed of the groove in a container wall, a bead on the internal periphery of the opening adjacent the outside surface of the flat frame, a lid having a thickness less than the axial thickness of the frame and seatable in said opening, the peripheral dimensions of the lid being slightly greater than the inside dimensions of the bead, and a hinge holding the lid to the frame adjacent that side carrying the bead, said frame and lid being formed of an elastic material such that the lid may seat beneath the bead and when seated lie substantially in the plane of the groove.

13. A dispensing closure for the wall of a container comprising a flat frame of elastic material having an opening therethrough, a groove facing outwardly around the peripheral edge of said frame, one wall of said groove being radially narrow, a frustoconical external wall having its larger diameter adjacent said narrow wall of the groove to facilitate snapping the closure into an opening of the size of the bed of the groove in a container wall, a lid having a thickness less than the axial thickness of the frame and seatable in the opening of the frame substantially in the plane of the peripheral groove, and a hinge holding the lid to the frame.

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