United States Patent

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[72] Inventor **Walter E. Hidding**
505 Banbury Road, Arlington Heights, Illinois 60005

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[54] **SPICE CAN COVER**
5 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** **220/29,** 220/60, 220/31, 220/38.5, 222/153

[51] **Int. Cl.** **B65d 51/18,** B65d 43/10, B65d 51/00

[50] **Field of Search** 220/29, 60, 31SR, 38.5; 222/153, 480, 563; 150/5

[56] **References Cited**

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Primary Examiner—George T. Hall
Attorney—Olson, Trexler, Wolters & Bushnell

ABSTRACT: A container structure comprises a cover base that is adapted to be assembled to a container body and a cap for the cover base which includes a closure plug. The cover base is fashioned with a dispensing orifice surrounded by a collar which acts as a first seal upon fitted assembly of the closure plug, and the cover base is provided with a lip adjacent the lower end of the collar, this lip normally projecting into the orifice and resiliently deforming about the closure plug to act as a second seal.

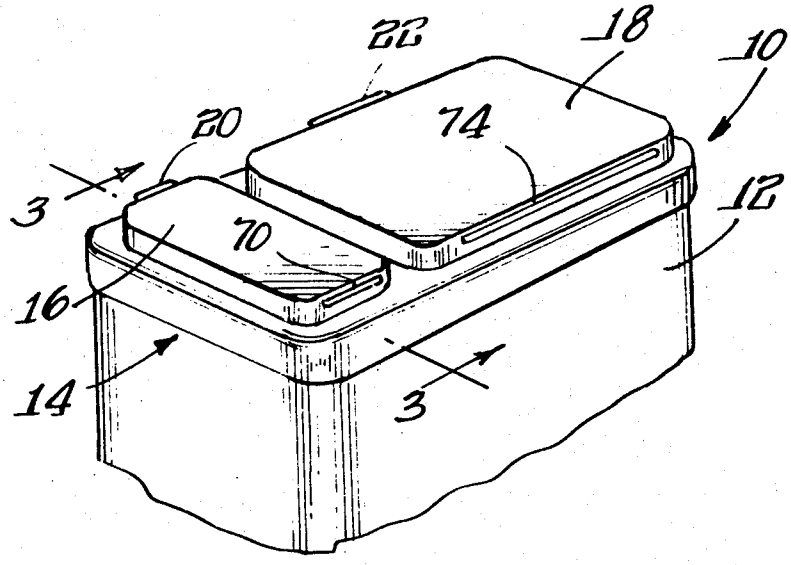


Fig. 1

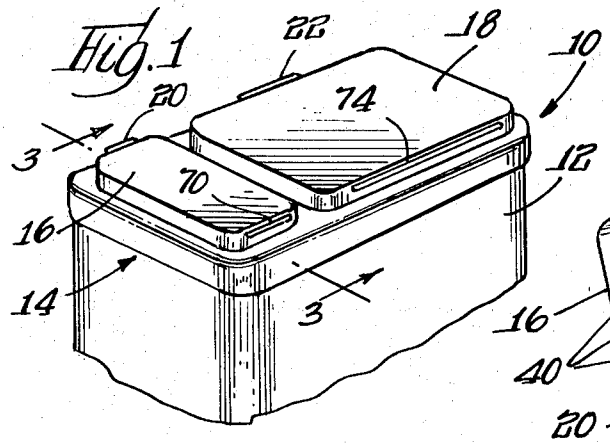


Fig. 2.

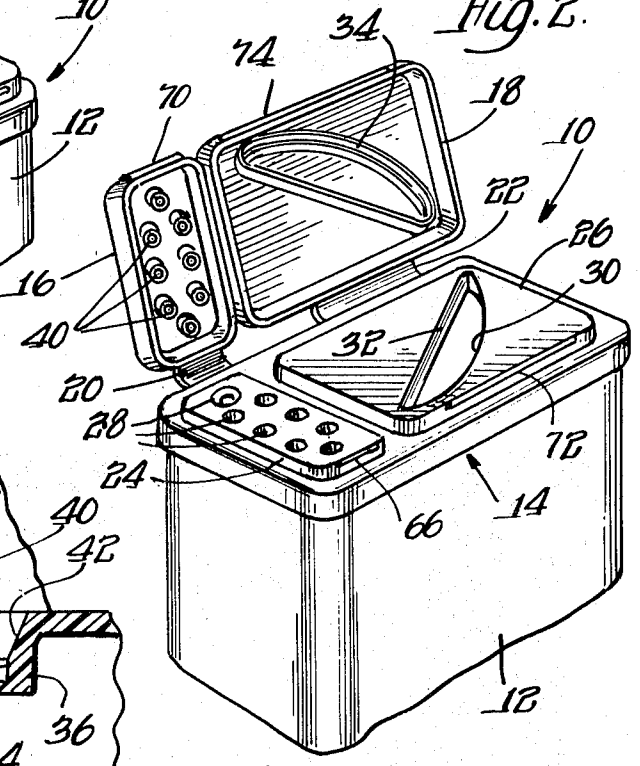


Fig. 4.

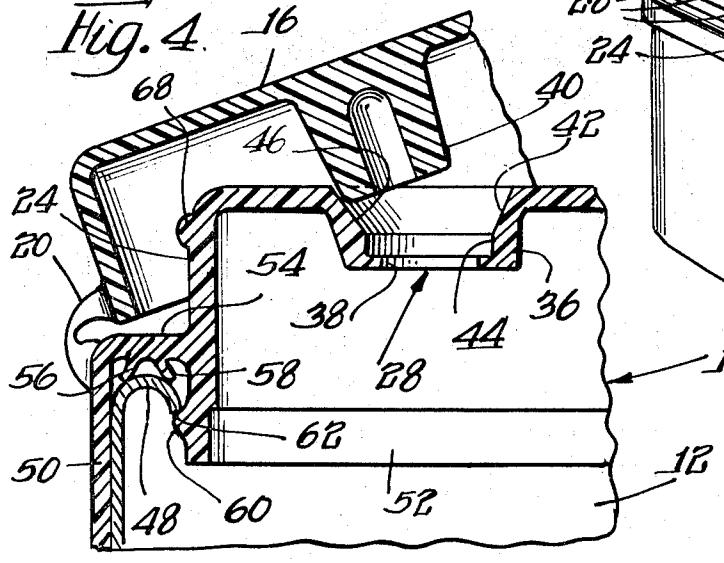
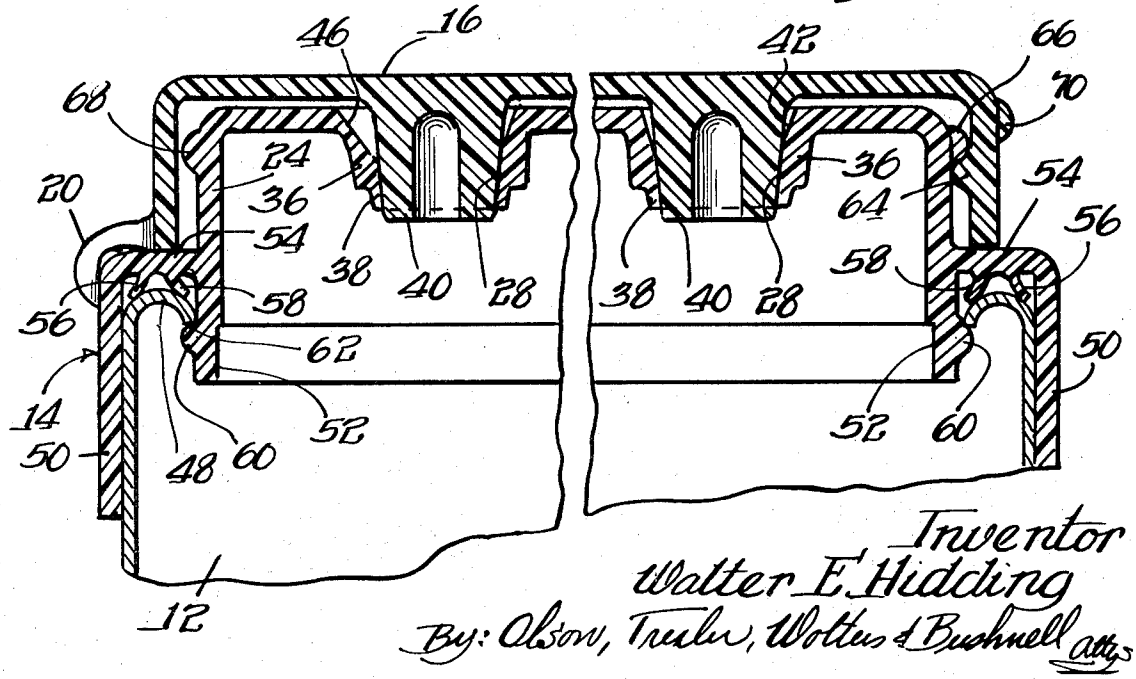


Fig. 3.



Inventor
Walter E. Hidding
By: Olson, Trexler, Wolters & Bushnell Attys

SPICE CAN COVER

This invention relates generally to packaging and more particularly to containers for pulverulent products such as dry powdered condiments.

Consumers prefer to purchase dry powdered condiments such as pepper, cinnamon, nutmeg and the like in small containers that are adapted for extraction of the product by either shaking or spooning as the consumer desires. However, many of these products are ordinarily ground to extreme fineness therefore have a substantial propensity to leak from the container.

Therefore, an important object of the present invention is to provide a novel container structure which is highly resistant to leakage of pulverulent products.

Another object of the invention is to provide a container cover that can be easily molded from resinous plastic materials.

Still another object of the invention is to provide a container reclosure that is characterized by its effectiveness.

These and other objects and features of the invention will become more apparent from a consideration of the following descriptions.

In the drawing:

FIG. 1 is a perspective view of a container structure in accord with the invention;

FIG. 2 is a view similar to the showing of FIG. 1 but with the cover caps shown in raised position;

FIG. 3 is an enlarged cross-sectional view taken substantially along the line 3–3 of FIG. 1; and

FIG. 4 is a view similar to the showing of FIG. 3 but illustrating the cap being urged from open to closed position.

Referring now in detail to the drawings, specifically to FIGS. 1 and 2, a container structure indicated generally by the reference numeral 10 includes a metal container body 12 having an open top for assembly with a cover base 14 and having a closed bottom, not shown. The cover base 14 is associated with a shaker cap 16 and a spooning cap 18, the caps 16 and 18 being connected to the cover base by means of flexible straps 20 and 22 respectively as is shown in FIG. 2. Advantageously, the cover base 14, the caps 16 and 18 and the straps 20 and 22 are formed integrally from a suitable resinous plastics material in a molding operation.

Continuing with reference to FIG. 2, the cover base 14 includes a pair of raised, rectangular decks 24 and 26 and dispensing orifices comprising a number of shaker orifices 28 located in deck 24 and a single spooning orifice 30 located in the deck 26. The spooning orifice 30 is shaped like the cross-sectional outline of a teaspoon and is surrounded by a depending collar 32 of like shape. The cap 18 is fashioned in the shape of an inverted tub and, for use in closing the spooning orifice 30, is provided with a projecting closure formation or plug 34 which is intended to be urged into snugly fitting engagement with the collar 32.

Turning to FIG. 4, each of the shaker orifices 28 is surrounded by a depending annular collar 36 which acts as a first seal. In accordance with the features of the present invention, an annular lip 38 is disposed adjacent the lower end of collar 36, lip 38 normally projecting radially into the orifice 28 as is shown in FIG. 4 and being resiliently deformed about a closure plug 40, as is shown in FIG. 3, to act as a second seal when the plug 40 is forced into the shaker orifice. So that it may properly engage the collar 36 and lip 38, the closure plug 40 is arranged to depend from the top plate of the cap 16; and for convenience in molding, the closure plug 40 is fashioned in tubular shape. As is shown in FIG. 4, the collar 36 is provided with an upwardly and outwardly flaring wall 42 and a cylindrical wall 44 between the flaring wall 42 and the lip 38. The wall 44 serves the primary sealing function, and the flaring wall 42 acts to lead the closure plug 40 into the dispensing orifice 28 upon closure of the cap 16. As is shown in FIG. 3, it is desirable to provide a sharply flaring wall 46 at the dispensing orifice nearest the hinge provided by the strap 20. As will be appreciated, the degree of flare need not be so abrupt away from this location.

As is shown in FIGS. 3 and 4, the metal at the top edge of container body 12 is curled inwardly to form an upwardly convex rim 48; and for assembly to the rim 48, the cover base 14 includes a downwardly opening peripheral channel that is defined by an outer skirt 50, an inner skirt 52 and a top panel 54. In compliance with the features of the present invention, rib means are provided for sealing against the top surface of rim 48, specifically, spaced, endless flexible ribs 56 and 58. Ribs 56 and 58 are connected to the top panel 54 and depend generally from this latter element in laterally spaced relation, rib 56 being a relatively outwardly placed element and rib 58 being a relatively inwardly placed element. In order to lock the rim 48 in position deforming the ribs 56 and 58, a laterally outwardly extending bead 60 encircles inner skirt 52. As is shown in FIGS. 3 and 4, the bead 60 seats beneath a cut edge 62 of the rim 48 for positioning of the parts.

In order to lock the cap 16 in place over the cover base 14, confronting lineal beads 64 and 66 are raised horizontally from the cap 16 and the deck 24 as is shown in FIG. 3. These beads interact at the edge opposite the hinge of strap 20; and the parts are so dimensioned that, when the bead 64 is snapped over the bead 66, the rear sidewall of cap 16 is urged snugly against a hinge edge horizontal bead 68. A front edge bead 70 is desirably raised from the outer surface of the front sidewall of cap 16 vertically offset from the bead 64 to act as a fulcrum for lifting the cap 16 when dispensing of the container contents is desired.

Considering FIG. 2 for the moment, it will be observed that the cap 18 and the deck 26 are provided with locking beads similar to those provided on cap 16 and deck 24, specifically the beads 72 and 74 shown in that figure.

In compliance with the features of the present invention, the various lineal beads incorporated in the container structure of the invention are arranged in vertically offset pairs whereby to facilitate extraction of the integrally molded caps and cover base from the molding die. Specifically, bead 60 is paired with bead 66 on the front surface of the cover base, bead 60 is paired with bead 68 on the rear surface, and bead 64 is paired with bead 70 on the front surface of the cap 16.

Assembly of the cover base 14 to the container body 12 is accomplished by urging the cover base downwardly over the top edge of the container body. Upon application of sufficient force, the bead 60 will snap over the cut edge 62 and position the rim 48 in sealing engagement with the ribs 56 and 58. Such assembly may be conveniently accomplished after container body 12 has been filled with the desired product. It is also advantageous to have the caps 16 and 18 in place when this assembly takes place, the upper surfaces of cap 16 and 18 presenting a broad planar surface for contact by a platen in the filling and closing equipment.

For a consumer to open the cap 16 for a shaking type of dispensing, it is only necessary that the bead 70 be engaged with a fingernail or some appropriate implement to apply sufficient force to cause bead 64 to snap over bead 66 whereupon the cap 16 is easily raised and the contents shaken through the orifices 28. To reclose the cap, it is, of course, closed over the deck 24, the free ends of closure plugs 40 being lead into engagement with the cylindrical wall 44 and the lips 38 by the flaring walls 42 and 46. Finally, the bead 64 is snapped over the bead 66 and closure is completed.

The dual sealing of the cylindrical wall portions 44 and the lips 38 effectively prevents leakage of the contents around the plugs 40. Similarly, the cooperation of the bead 60 and the flexible ribs 56 and 58 prevents leakage of the juncture at the cover base and the container body.

The drawings and the foregoing descriptions are not intended to represent the only forms of my invention in regard to the details of its construction and manner of operation. Changes in form and in the proportion of parts, as well as the substitution of equivalents, are contemplated as circumstances may suggest or render expedient; and although specific terms have been employed, they are intended in a generic and descriptive sense only and not for the purposes of limitation, the scope of the invention being delineated in the following claims.

I claim:

1. A container structure comprising: a cover base adapted to be assembled to a container body and having a dispensing orifice surrounded by a collar which acts as a first seal, said cover base including a lip adjacent the lower end of said collar normally projecting into said orifice and resiliently deforming about a closure plug to act as a second seal; a cap including a closure plug for fitted assembly in said collar; and said cover base further including a downwardly opening peripheral channel and projecting flexible rib means in the bottom of said channel for sealing against the top edge of a container body.

2. A container structure according to claim 1 wherein said cover base further includes a bead on one sidewall of said channel for locking said top edge snugly against said rib means.

3. A container structure comprising: a cover base adapted to be assembled to a container body and having a dispensing orifice surrounded by a collar which acts as a first seal, said cover base including a lip adjacent the lower end of said collar normally projecting into said orifice and resiliently deforming about a closure plug to act as a second seal; a cap including a closure plug for fitted assembly in said collar; and a flexible strap hingedly connecting said cap to said cover base adjacent one edge and wherein said cap and cover base have confronting beads adjacent the opposite edge, forcing of said cap bead passed said cover base bead latching said cap on said cover base.

4. A container structure according to claim 3 wherein said cover base further includes a downwardly opening peripheral channel and a bead on one sidewall of said channel and wherein said channel bead and said base bead project in a laterally outward direction.

5. A container structure comprising: a cover base adapted to be assembled to a container body and having a dispensing orifice surrounded by a collar which acts as a first seal, said cover base including a lip adjacent the lower end of said collar normally projecting into said orifice and resiliently deforming about a closure plug to act as a second seal; a cap including a closure plug for fitted assembly in said collar; and said cover base and said cap have cooperating pairs of vertically offset lineal beads.