

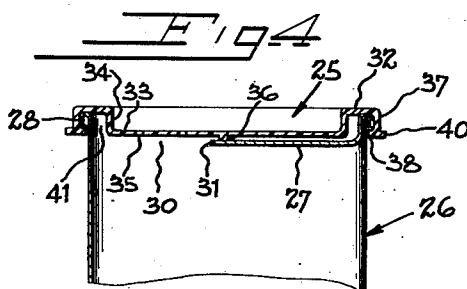
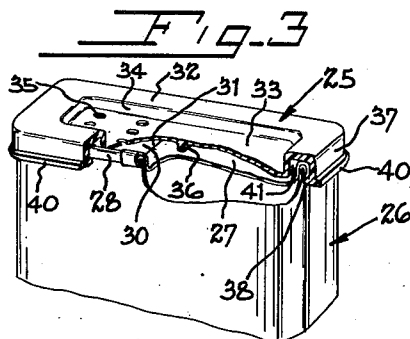
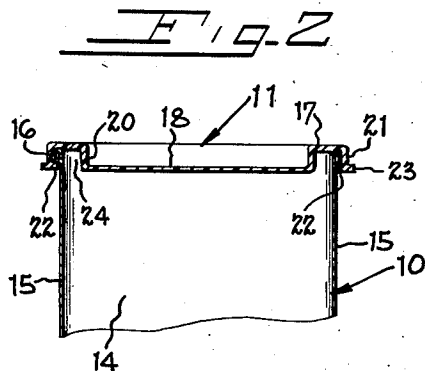
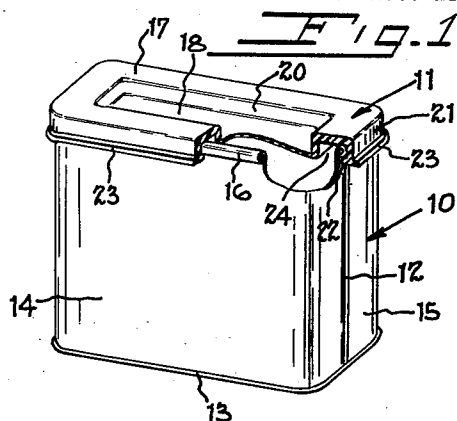
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E. FRANK

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PLASTIC SNAP-ON CLOSURE FOR SPICE CANS AND THE LIKE

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INVENTOR.
Emil Frank.
BY
Wood, Herrow & Evans.
ATTORNEYS.

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PLASTIC SNAP-ON CLOSURE FOR SPICE CANS AND THE LIKE

Emil Frank, Cincinnati, Ohio, assignor to The Frank Tea & Spice Company, Inc., Cincinnati, Ohio, a corporation of Ohio

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1 Claim. (Cl. 222—480)

This invention relates to closures and is particularly directed to a plastic snap-on lid for a metal spice can.

At the present time large quantities of spices intended for home consumption are packaged in small metal cans. These cans are usually provided with an apertured top panel and a slidable plate mounted over the top panel. The slidable plate is provided with a series of apertures adapted to be brought into registry with a single large opening in the top panel to permit spices to be sifted from the can. The apertures in the plate cover only a limited area of that member so that when the plate is shifted to a second position the apertures are moved from registry with the opening in the main top panel and the solid portion of the slidable plate is effective to seal off the top of the can.

Spice cans of this type are unsatisfactory for several reasons, the most important of which is that such cans do not provide an air tight closure for the spices contained. It will readily be appreciated that spices are relatively unique among packaged food items, since spices are usually not consumed at once, but rather are used gradually over a period of many months or even years. In presently available cans, spices are not adequately sealed, and often lose their flavor and aroma after relatively short periods of time.

Another disadvantage of slidable metal tops is that they are difficult to manipulate. The slidable plates and top panels are stamped from sheet metal and the edges of the parts frequently tend to bind. Also during use one of the members often becomes bent so that opening and closing the lid is made extremely difficult.

The present invention is predicated on the concept of providing a can having a snap-on plastic lid which can readily be snapped into place to provide an extremely effective seal for the can during periods of storage. More particularly in a preferred embodiment, a can is formed having an open mouth, surrounded by a rim, or outwardly extending rolled bead formed on the upper edge of the can walls. A cooperating lid is formed of a plastic material of relatively limited elasticity such as polyethylene or the like. The lid is of substantially the same shape as the mouth of the can and includes an annular top wall extending around the periphery of the lid and a central recessed portion connected to the top wall by means of an inner wall. The lid is also provided with a depending peripheral flange configured to form inwardly and outwardly extending beads disposed at the lower edge of the flange.

When the lid is placed over the top of the can, the rim of the can is received within a channel defined by the inner wall and peripheral flange. In a preferred embodiment, this channel is appreciably wider than the thickness of the rim so that the inner wall of the lid is spaced inwardly from the can walls. These walls are, however, embraced by the outer flange and inner bead of the lid, the inner bead snapping under the rim to hold the lid firmly in place.

In order to remove spices from the can, the lid is

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removed by pressing upwardly along the bead of the lid to force a portion of the bead up over the rim after which the lid is easily lifted completely free from the can. Once the lid has been removed, the spices are poured from the can or withdrawn by means of a spoon. When the housewife has removed all of the spices desired, the lid is again snapped over the top of the can to provide a substantially air tight seal.

One of the principal advantages of the present can and lid construction is that the lid provides an effective seal which preserves the full flavor and aroma of spices throughout long periods of storage. Furthermore, the present lid provides an effective seal even though the top dimensions of the cans vary over an appreciable range. With the present lid and can, sealing contact between the rim and lid can be obtained against any one of three surfaces, e. g., the top wall of the lid, the inner edge of the depending flange, or the inner bead. Consequently a satisfactory seal is secured even when the top dimensions of a can vary from standard because of variations in the temper of the sheet metal, etc.

Another advantage of this lid is that it is extremely easy to remove and replace. In the preferred form of lid the inner wall is spaced from the depending flange a distance appreciably in excess of the thickness of the can rim. Consequently when placing the lid on the can, the housewife first inserts the rim extending along one wall of the can in the corresponding channel of the lid. The lid and rim are held in engagement by the cooperation of the beaded flange of the lid and rim, while the remaining portion of the lid is snapped down over the rim.

In the second form of can and lid constructed in accordance with the present invention the upper end of the can is provided with a top panel extending a little over half of the length of the can. The lid, formed of polyethylene or the like, is configured generally as in the embodiment described above, except that one end of the lid is provided with a plurality of sifting apertures. A transverse rib is formed along the lower surface of the can when the lid is snapped over the end of the can. This particular lid and can construction is particularly adapted for use with ground spices which are adapted to be sifted from the can.

In order to remove the spices from the can the lid is placed over the can so that the sifting apertures are positioned in registry with the open area at the end of the top panel of the can and the can is inverted so that spices pass outwardly through the openings. The spices can also be removed from the can by lifting the lid completely free and inserting a spoon or the like through the opening provided in the top panel. To seal off the can to prepare it for storage after the spices have been removed, the lid is turned 180 degrees relative to its former position and it is again snapped over the end of the can. In this position the solid portion of the lid covers the top opening in the can and the transverse rib is pressed against the top panel so that a substantially air tight seal is provided.

This latter form of lid is advantageous in that it not only provides a good seal but also because it provides readily adjustable means for sifting the spices or removing them with a spoon as desired. Furthermore, the removal of spices by means of a spoon is greatly facilitated since approximately half the can top is open in contrast with the very small openings provided in conventional metal containers.

These and other objects and advantages of the present invention will be more readily apparent from a further consideration of the following detailed description of the drawings illustrating two preferred embodiments of the invention.

As shown in the drawings:

Figure 1 is a perspective view of a spice can provided with one form of lid constructed in accordance with the present invention, the lid and can being partially broken away to show details of construction.

Figure 2 is a longitudinal cross sectional view taken through the can and lid of Figure 1.

Figure 3 is a perspective view of a second form of lid constructed in accordance with the present invention, the lid and can being partially broken away to show details of construction.

Figure 4 is a longitudinal cross sectional view of the can and lid shown in Figure 3.

One form of spice can 10 adapted to receive a lid 11 of the present invention is shown in Figure 1. As there shown, can 10 is formed from a single sheet of metal which is bent into shape, the two ends of the sheet being joined at a longitudinal seam 12 formed in an end wall of the container. The bottom wall of the can is joined to the side and end walls by over-turning peripheral portions of the bottom panel and the lower edge of the side and end walls to form a lower bead as at 13. The upper edges of the side walls 14 and end walls 15 is also rolled along the outer surface of the walls to form an upper bead 16 extending around the top rim of the can. The can shown in Figure 1 is particularly adapted to contain whole spices, such as cloves, which are removed from the can by means of a spoon or by pouring. To facilitate the removal of such spices, the entire upper end of the can is open; that is the metal can does not include any form of top panel which is permanently secured to the side walls.

In accordance with the present invention the spice can is provided with a removable plastic lid 11 adapted to be placed over the open end of the can for providing a substantially airtight seal during periods of storage. Such a lid is effective to preserve the full flavor and aroma of the spices contained in the can until the spices are removed for use. As explained below, however, the lid can readily be removed by the housewife whenever she desires to remove spices from the can and a spoon can be inserted through the open end of the can to withdraw a measured amount of spices; or alternatively after the lid has been removed the spices can be poured from the can into another receptacle.

More particularly lid 11 is formed of a plastic material of relatively limited elasticity. One particularly advantageous form of plastic is polyethylene which in addition to having the desired mechanical properties is relatively inert chemically. It will be appreciated of course that other plastics such as polystyrene or one of the polyvinylchloride compounds could be used in place of polyethylene if desired. Lid 11 is configured to form a top wall 17 which extends in a relatively narrow strip around the periphery of the lid. A central recessed portion 18 is formed in lid 11 and is connected to top wall 17 by means of inner wall 20. It will be noted that when lid 11 is mounted on the end of can 10, inner wall 20 is spaced an appreciable distance from side and end walls 14 and 15 of the can. The outer periphery of lid 11 is provided with a depending flange 21. The lower end of this flange carries both inwardly and outwardly extending beads 22 and 23 so that the flange in cross section is substantially in the shape of an inverted T. When the lid is fitted over the can as shown in Figures 1 and 2, the side and end walls of the can and rim 16 are received within channel 24 formed between inner wall 20 and flange 21. A sealing contact between the lid and can is established between rim 16 of the can and the adjacent surfaces of top wall 17, and flange 21.

In order to remove lid 11 from the can to withdraw the spices, the housewife places a finger under outer bead 23 and presses upwardly, disengaging a portion of inner bead 22 from rim 16. Thereafter the entire lid can be

lifted free from the can. When the lid is removed the depressed panel 18, walls 20, flange 21 and beads 22 and 23 all function as stiffening members so that lid 11 remains relatively rigid. After the spices have been removed and the housewife desires to return the lid to the can she preferably slips a side wall of the can within a corresponding portion of channel 24 formed in the lid until inner bead 22 engages the under portion of rim 16. The cooperation of these members is effective to hold the lid in engagement with the can while the free end of the lid is pivoted downwardly into its closed position shown in Figure 1.

Figures 3 and 4 show a modified form of lid 25 which is adapted to function both as a sifting lid and as a sealing cap for a can containing ground spices such as pepper. Can 26 shown in Figure 3 is identical, with can 10 shown in Figure 1 except that the upper portion of can 26 is provided with a top metal panel 27 which extends from one end of the can slightly more than half way to the opposite end. This panel 27 is secured in place by rolling its edges over the upper bead 28 formed along the upper edge of the walls of the can. An opening 30 extends from the transverse edge 31 of top panel 27 to the opposite end wall of the can 26; this opening is preferably large enough to permit the insertion of a spoon or other measuring device into the spice can.

Lid 25 like lid 11 of the first embodiment described, is formed from a plastic of relatively limited elasticity such as polyethylene or the like. Lid 25 is configured to form a top wall 32 extending around the marginal area of lid 25. The lid also includes a central recessed portion 33 which is connected to top wall 32 by means of an inner wall 34. One end of recessed portion 33 is provided with a plurality of small apertures 35 adapted to permit the passage of a small amount of ground spice from the interior of the can through the lid. The under surface of recessed panel 33 carries a transverse rib 36 which extends laterally of the lid along a line substantially halfway between the ends of the lid. The length of rib 36 is such that it preferably extends completely across top panel 27 of the can and is disposed in engagement with that panel when the lid is snapped over rim 28.

Lid 25 also includes a depending flange 37 extending along the periphery of the lid; and as in the previous embodiment, this flange is configured to form an inwardly extending bead 38 adapted to embrace rim 28 and an outwardly extending stiffening bead 40.

When the lid is placed over the top of the can, as shown in Figures 3 and 4, the side and end walls of the can and rim 28 are disposed within a channel 41 defined by inner wall 34 and flange 37. With the lid in the sifting position shown in these figures, apertures 35 are in registry with opening 30 so that when the can is inverted spices can be sifted from the can through the apertures. It will be noted that with the lid in this position, rib 36 is in engagement with panel 27 and is effective to prevent ground spices from accumulating between the panel and under surface of the lid.

If it is desired to withdraw a large quantity of the spice, lid 25 is removed by pressing upwardly on outer bead 40 to disengage bead 38 from rim 28 as in the previous embodiment. After the lid has been removed a spoon or other measuring device can be inserted through opening 30 to withdraw spices from the can.

When the required amount of spices have been withdrawn from the can either by sifting or by means of a spoon, the can can be sealed by replacing lid 25 on the can in a position turned 180 degrees from the position shown in Figures 3 and 4; so that the solid end of recessed portion 33 is in registry with opening 30 and apertures 35 are disposed over panel 27. With the lid in this position rib 36 resides in engagement with top panel 27 of the can so that the can is sealed by the engagement of the rib and panel, and the engagement of rim 28 and outer flange 40.

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Having described my invention, I claim:

A spice can and lid adapted to seal the top of said can, said can having side walls and end walls, the upper edge of said walls being rolled outwardly to form a rim defining a generally rectangular top opening, a top panel extending across the top panel from one end wall slightly over one half the distance to the opposite end wall, a lid adapted to seal said lid, said lid being formed of polyethylene or a plastic material having similar properties and comprising an annular top wall of substantially the same outline configuration as the can top, a depressed central portion disposed within said annular wall, one end of said central portion being provided with a plurality of small apertures, inner walls connecting the depressed central portion and the top annular wall, a rib formed on the undersurface of

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said central portion and extending transversely of said lid at substantially the center thereof, a depending peripheral flange joined to the top wall at the periphery thereof, said depending flange being configured to form an inwardly extending bead disposed at the lower end of said flange and being adapted to engage the can rim.

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