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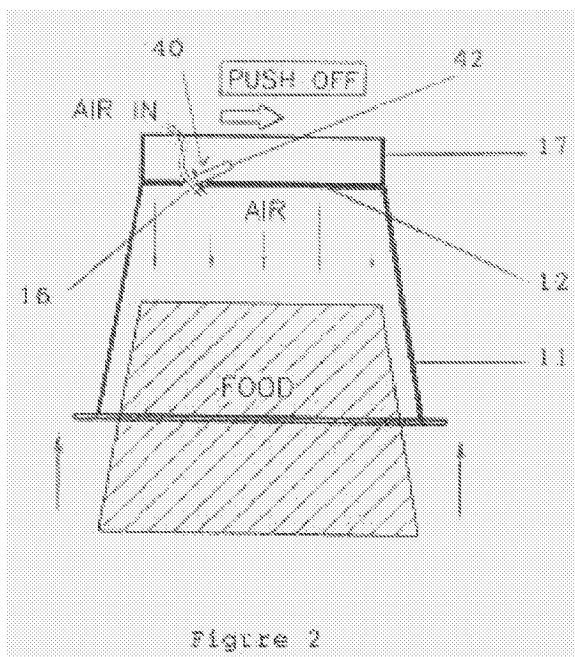
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(54) **Easy to empty food container**

(57) A food container (1) for easily releasing food contents having a receptacle constituted by a bottom wall (12) and a side wall (11), whereby said side wall is provided with an opening (30) which serves as a pour opening. The bottom wall has at least one vent opening (40) which is covered by a vent seal tab (41) to allow air to enter the food container for easily releasing purposes. Said tab can be a depressible or reclosable vent seal tab and is protected from being accidentally dislodged by a recess area formed by a support means (17) ex-

tending downwardly from the entire perimeter of said bottom wall. A food container of a further embodiment has a receptacle constituted by a side wall (11), a support means (17) extending downwardly from said side wall and a detachable bottom wall closure (12) to detachably attach to said support means. The said bottom wall has its perimeter measurements slightly smaller than the top opening to form an inclined interior receptacle for easily sliding out food contents when the said container is in inverted position.



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Description

Field of Invention

[0001] This invention relates generally to containers for storing food products. The present invention relates more particularly to food containers having features by which semi solid or solid food can be easy taken but without spoiling the shape.

Background of the Invention

[0002] A variety of containers are known for storing various types of food products. Typically, these containers do not readily allow one to easily remove the content of the container especially for pasty food with stickiness or jelly form food. Traditionally, the containers tend to be complicated and difficult to use. In addition some of these containers are inefficient in operation and do not provide for recycling purposes.

[0003] Therefore desirable that such containers having depressible release vent tab for easy removal of solid or semi solid foods and which also are exceedingly efficient in its intended function. Furthermore this invention is designed to overcome the drawback of removing the food content of the container by using a spoon or other implement.

[0004] It is a further object of the invention having a recess area within which the tab is located at the bottom of the food container to enable the containers to be stored and put in an usual stacked manners which are customary in the food industry without the fear of the tab being accidentally dislodged.

[0005] Still another object of the invention is to provide a food container of this character from which the container having reclosable means so as to form a reusable food container.

[0006] Yet another object of the invention is to provide a food container designed for easily sliding out its content to retain the shape of the formed food in one piece.

Summary of the Invention

[0007] According to the present embodiment of the invention, the food container for solid and semi solid foods is provide having a body which includes a bottom wall and at least one sidewall, whereby the bottom wall together with the at least one sidewall define an interior of the container. The sidewall includes an opening which serves as a pour opening opposite to the bottom wall of the container. A vent opening covered by a vent seal tab is bonded to the bottom surface of the container and separable from the said end to expose the opening for simultaneously discharge of container contents and admission of air into the container.

[0008] Preferably, said food container having closure for covering said pour opening, whereby said closure can be a hand operable easy opening closure such as

flexible tape to removably seal the food container, snap-on, snap-off reclosable closure or twist-on, twist-off closure.

[0009] Preferably, said the interior of the container is formed with a slight acute angle such that the top pour opening is larger than the bottom wall to allow the food contents to easily slide out from the walls of the container once the vent seal tab is removed and the container is in the inverted position.

[0010] Preferably, the vent seal tab is made of flexible material which is depressible.

[0011] Preferably, for reusable food container having cap means which is detachably engaged with stopper means mounted over the vent opening.

[0012] Preferably, for food container storing high stickiness food products having a detachably connected bottom wall which can be hand operable easy opening bottom wall, snap-on and snap-off bottom wall or twist on and twist-off bottom wall.

[0013] These and further objects, features and advantages of the present invention will become apparent from the following description when taken in connection with the accompanying drawings which, for purposes of illustration only, show several embodiments in accordance with the present invention.

Brief Description of the Drawings

[0014]

Figure 1 is a perspective view of the preferred embodiment having a depressible vent seal tab and constructed in accordance with the invention.

Figure 2 is a side view of the preferred embodiment showing the method by which the contents of the container are easily removed in one piece.

Figure 3 is a side view of the second embodiment with reclosable vent seal tab showing the method by which the contents of the container are easily removed in one piece.

Figure 4 is a side view of the third embodiment with detachable bottom wall closure in unsealed condition.

Detailed Description of the Preferred Embodiments

[0015] The invention is shown herein as embodied in a food container (1) of the type used for solid and semi solid food. The food container (1) as shown in figure 1, is comprises of a receptacle (10) having a single side wall (11) which can be in the shape of a cylinder, rectangular or any other suitable shapes to embodied various shapes of the food products, and a bottom wall (12) in the form of a disk. The side wall (11) extends perpendicularly from the bottom wall (12). Together the interior

surface (21) of the side wall (11) and the interior surface (22) of the bottom wall (12) define an interior receptacle (10) of the container (1) for holding food stuffs. The side wall (11) includes an edge (13) opposite to the bottom wall (12). The said edge (13) defines an opening (30) which serves as pour opening to the food container (1).

[0016] The perimeter of the bottom wall (12) is designed slightly smaller in measurement than the perimeter of the edge (13) to form the container (1) having slight acute angled inclined interior receptacle (10) which is enough to allow the food contents to free itself from the said interior receptacle (10) when the container (1) is in the inverted position.

[0017] A container lip (14) extending horizontally outwardly from the edge (13) of the receptacle (10) for engaging a closure (15) to cover the content of the container (1), whereby said closure (15) can be hand operable easy opening closure which is made of a sheet of material having additionally adhesive coated at the entire area where the said sheet material is contacting the container lip (14). The coupling of the closure to the container (1) could also be a snap-on, snap-off reclosable closure, or twist-on, twist-off reclosable closure. For the said snap-on, snap-off reclosable closure, said closure may be need a projecting protrusion on the inner skirt portion of the closure (not shown) to form a recess area for receiving the end of the container lip when the closure is in snapped-on position.

[0018] The container (1) further comprises of a vent opening (16) at the bottom wall (12) as shown in figure 2, which is closed by a depressible tab type integral with the said bottom wall (12). The said vent seal tab (40) is formed by cutting the line (41) in the bottom wall (12) and a depressible strip (42) extending downwardly from the exterior surface of the bottom wall (12) which can be used to expose the vent opening (16) in the bottom wall (12) for purposes of expediting contents removal through venting. The shape of the vent opening (16) is not critical. The preferred vent opening (16) is circular, although other shapes may also be satisfactory. The area of the vent opening (16) could also be any size which permits ventability operation.

[0019] As illustrated in figure 1, the bottom wall (12) is connected to the side wall (11). A support means (17) extending downwardly from the entire perimeter edge of the bottom wall (12) to form a recess area within where the vent seal tab (40) is located. The height of the said support means (17) is formed equal or higher than the height of the depressible strip (42) of the vent seal tab (40) to protect said depressible strip (42) being accidentally dislodged or damaged.

[0020] Figure 2 shown the preferred embodiment and the method by which the contents of the container (1) can be easily released out from the said container (1). After the top closure (15) has been opened, removed or peeled, the container (1) is placed on a flat tray in inverted position so that the bottom wall (12) is facing upward. Said flat tray is to receive the food contents once

it is out from the container (1). The depressible strip (42) of the vent seal tab (40) is then depressed manually to expose the overlying vent opening (16) to allow air to enter the said container (1) for equalizing the pressure within the container (1) with the external thereto. This air pressure and the force due to gravity by overcoming the friction force between the contents and the side wall of the container then force the contents of the container (1) to start move downward towards the pour opening (30) of the container (1). With these forces which loosen the contact of the contents to the side wall (11) and the inclined surface of the side wall (11) will urge the contents to be removed easily by pulling up the container (1) away from the said contents.

[0021] A second embodiment of the present invention is shown in figure 3. In this embodiment, the vent seal tab (40) is a reclosable tab which consists of a stopper means (50) and a cap means (51). The stopper means is fixedly mounted over the vent opening (16) having a central aperture (52) in a counter-sunk channel like which is aligned with the said vent opening (16). The cap means (51) is dimensioned to be closely received within the central aperture (52), whereby said cap means (51) can be detached from the said stopper means (50) to allow air enter the container (1) and can be re-affixed to seal back the vent opening (16).

[0022] Referring now to figure 4, the food container of the third embodiment of this invention includes a detachable bottom wall closure (60) having additional flange (61) extending vertically from the entire perimeter edge of the bottom wall (12). The food receptacle (10) with the container lip (14) and the support means (17) are similar to those of the first embodiment in construction. The bottom wall closure (60) is closely fixed onto the support means (17) of the container (1) and the closure (60) is unlocked from the said container (1) when said closure is rotated or twisted anti-clockwise as shown in figure 4. This embodiment provides a larger air-ventilating opening to allow air to enter the container more easily and for user to alternatively push the food product towards the pour opening (30) more particularly for high stickiness food products. The coupling of the bottom wall closure can be varied in snap-on, snap-off closure, twist-on, twist-off closure or any other suitable closure in providing a proper sealing to the bottom of the container (1).

[0023] It is to be understood that the present invention may be embodied in other specific forms and is not limited to the sole embodiment described above. However modification and equivalents of the disclosed concepts such as those which readily occur to one skilled in the art are intended to be included within the scope of the claims which are appended thereto.

Claims

1. A food container comprising of:

- a receptacle constituted by a bottom wall and a side wall extending upwardly from said bottom wall, whereby the said side wall having an opening opposite the said bottom wall which serves as a pour opening and said opening defining a top edge;
- at least one vent opening at the said bottom wall, said vent opening being covered by a depressible vent seal tab, whereby said depressible vent seal tab is depressible by manually applied pressure to expose said vent opening for easily releasing food contents therein;
- a closure to cover said pour opening of the said food container; and
- a support means extending downwardly from the entire perimeter of said bottom wall to form a recess area within where the vent seal tab is located.
2. The food container in accordance to claim 1, wherein said container further comprising of a container lip extending horizontally outwardly from the said top edge of said container for engaging said closure.
3. The food container in accordance to any claim 1 to 2, wherein said closure can be hand peelable sheet of material having adhesive coated, snap-on, snap-off closure or twist-on, twist-off closure.
4. The food container as claimed in claim 1, wherein said depressible vent seal tab comprising of a flexible strip which can be depressed to expose said vent opening.
5. The food container as claimed in claim 1, wherein said support means height is equal or greater to the height of said flexible strip.
6. The food container in accordance to any of claim 1 to 5, wherein said bottom wall having its perimeter measurement slightly smaller than the perimeter of said top edge of the said receptacle to form an inclined interior receptacle for easily releasing purposes.
7. A food container comprising of:
- a receptacle constituted by a bottom wall and a side wall extending upwardly from said bottom wall, whereby the said side wall having an opening opposite the said bottom wall which serves as a pour opening and said opening defining a top edge;
- at least one vent opening at the said bottom wall, said vent opening being covered by a reclosable vent seal tab which can be opened to expose said vent opening for easily releasing food contents;
- a closure to cover said pour opening of the said food container; and
- a support means extending downwardly from the entire perimeter of said bottom wall to form a recess area within where the vent seal tab is located.
8. The food container in accordance to claim 7, wherein said container further comprising of a container lip extending horizontally outwardly from the said top edge of said container for engaging said closure.
9. The food container in accordance to any claim 7 to 8, wherein said closure can be hand peelable sheet of material having adhesive coated, snap-on, snap-off closure or twist-on, twist-off closure.
10. The food container as claimed in claim 7, wherein said reclosable vent seal tab comprising of:
- stopper means having a central aperture which is aligned and fixedly mounted over the said vent opening; and
- cap means which is dimensioned to be closely received within said central aperture, whereby said cap means can be detached from said stopper means to allow air to enter said container and to re-affixed to seal back said vent opening.
11. The food container in accordance to any of claim 7 to 10, wherein said bottom wall having its perimeter measurement slightly smaller than the perimeter of said top edge of the said receptacle to form an inclined interior receptacle for easily releasing purposes.
12. A food container comprising of:
- a receptacle constituted by a side wall having an up opening to serves as a pour opening, whereby said opening defining the top edge, and a support means extending downwardly from said side wall to form a bottom opening to said food container;
- a closure to cover said pour opening of the said food container; and
- a detachable bottom wall closure to attach to said support means opening.
13. The food container as claimed in claim 12, wherein said container further comprising of a container lip extending horizontally outwardly from the said top edge of said container for engaging said closure.
14. The food container in accordance to any claim 12

to 13, wherein said closure can be hand peelable sheet of material having adhesive coated, snap-on, snap-off closure or twist-on, twist-off closure.

15. The food container as claimed in claim 12, wherein said detachable bottom wall closure further comprising of an additional flange extending vertically from the entire perimeter edge of said bottom wall for gripping to said support means to close said bottom opening of said food container. 5 10
16. The food container as claimed in claim 15, wherein said detachable bottom wall closure can be varied in snap-on, snap-off closure, twist-on, twist-off closure or any other suitable closure in providing a proper sealing to the said bottom opening of said food container and to allow air to enter to the said food container for easily releasing food contents. 15
17. The food container in accordance to any of claim 12 to 16, wherein said support means having its perimeter measurement slightly smaller than the perimeter of said top edge of the said receptacle to form an inclined interior receptacle for easily releasing purposes. 20 25

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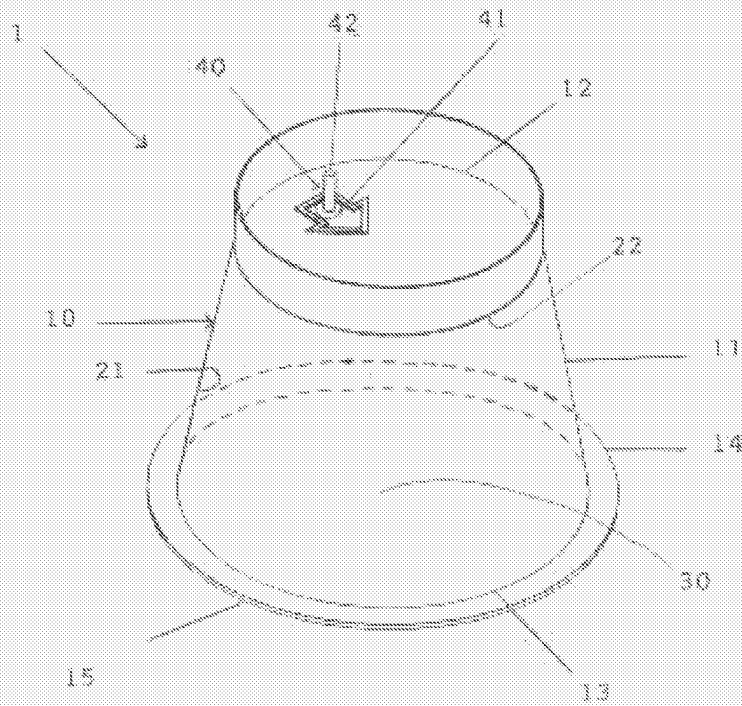


Figure 1

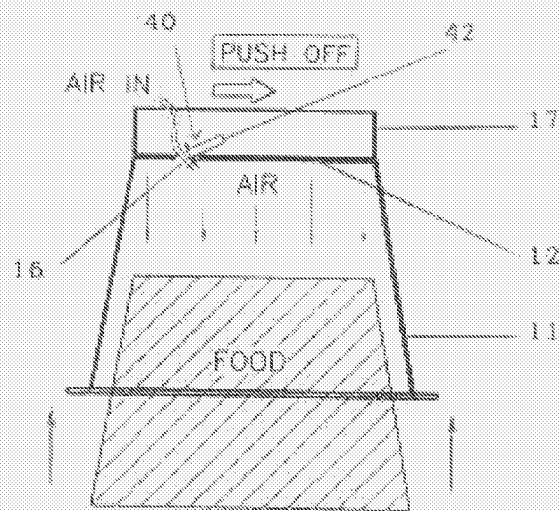


Figure 2

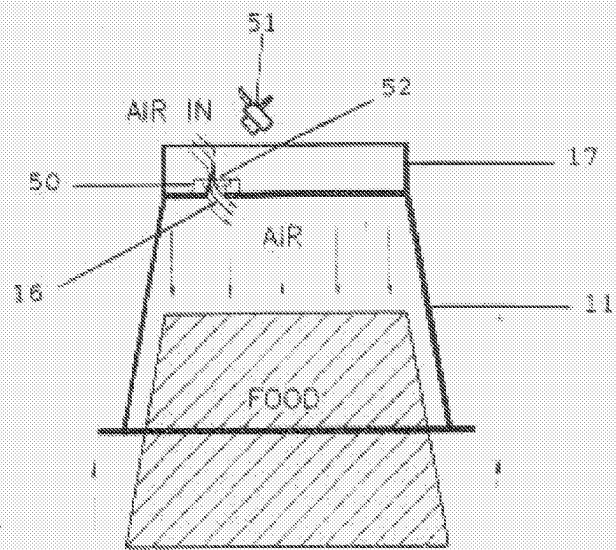


Figure 3

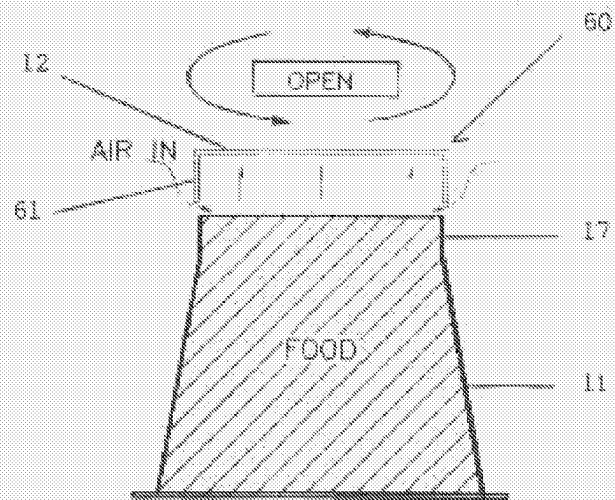


Figure 4



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Application Number
EP 03 10 1068

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Place of search THE HAGUE		Date of completion of the search 18 July 2003	Examiner Bridault, A
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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