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Publication number:

0 094 235
A2

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EUROPEAN PATENT APPLICATION

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Application number: 83302604.0

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Int. Cl.³: **A 47 G 19/22**

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Date of filing: 09.05.83

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Priority: 10.05.82 US 376722

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Date of publication of application: 16.11.83
 Bulletin 83/46

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Designated Contracting States: **AT BE CH DE FR GB IT**
LI LU NL SE

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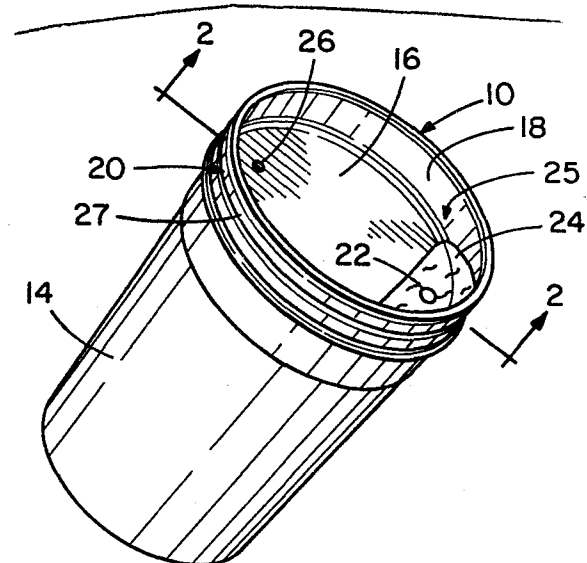
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Beverage dispensing lid for a cup.

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The lid includes an upstanding annular wall and a bottom connected to the lower part of the wall to define a reservoir. A mechanism is provided for mounting the lid to the edge of the cup to prevent leakage of beverage therebetween. The bottom has at least one hole therein adjacent its periphery so that the beverage contained within the cup will flow through the hole into the reservoir when the cup is tipped generally towards the hole thereby permitting the beverage to be readily consumed from the reservoir.



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BEVERAGE DISPENSING LID FOR A CUPBackground of the Invention

5 This invention relates generally to lids for enclosing cups containing a beverage such as coffee, hot chocolate, or the like. More specifically, this invention relates to a lid which permits a person to consume the beverage contained within the cup without removing the lid.

10 It is known to use a lid to completely seal a cup to prevent the beverage contained therein from being accidentally spilled. Other types of lids, such as commonly used to enclose a cup containing a soft drink, have a slit or a perforated area to permit the insertion of a
15 straw therethrough. However, it is not desireable, or convenient at all times to drink certain beverages through a straw. But it is desireable to provide a means permitting the consumption of a beverage and at the same time
20 controlling the flow of the beverage. Thus, lids with straw insertion openings do not permit the direct consumption of beverages from a container while providing protection against spillage.

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It is an object of the present invention to solve this problem by providing a new and novel lid which permits the direct consumption of beverages therefrom while providing protection
5 against spillage due to normal handling.

Summary of the Invention

A lid embodying this invention includes an upstanding wall and a bottom connected to the lower part of the wall to define the reservoir. A
10 means is provided for sealing the lid to the edge of a cup to prevent the leakage of beverage therebetween. The bottom has at least one hole therein so that when the cup is tipped the beverage will flow through the hole into the
15 reservoir permitting the consumer to drink the beverage from the reservoir.

Brief Description of the Drawings

The structure and function of embodiments of the present invention may be
20 understood by reference to the detailed description taken in conjunction with the drawings in which:

Figure 1 is a perspective view of a lid embodying the present invention seated upon a cup;

25 Figure 2 is a partial cross-sectional view taken about line 2-2 in Figure 1;

Figure 3 is a perspective view of

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another lid embodying the present invention seated upon a cup; and

Figure 4 is a partial cross-sectional view along line 4-4 of Figure 3.

5

Detailed Description

Figures 1 and 2 illustrate a lid 10 according to the present invention seated upon the upper edge or periphery 12 of a cup 14. The lid includes a bottom 16 and an annular inverted U-shaped flange 17 having an annular upstanding wall 18 and spaced apart outside wall 20. The lid is preferably molded as a unitary structure from a resilient plastic material.

The lid is dimensioned to be utilized with a specific size of cup 14 so that the walls 18 and 20 engage the upper edge of the cups to provide a water-tight seal. Preferably, walls 18 and 20 immediately below edge 12 are dimensioned so that they are slightly spread apart when seated upon cup 14. The cup may be made of a reasonably soft styrene foam and dimensioned so that its wall is slightly compressed when the lid is seated thereon to obtain a good seal. It will be noted that the seal is enhanced if wall 18 is contiguous with the inside surface of the wall of cup 14.

The bottom 16 includes a hole or opening 22 at its periphery so as to permit beverage 24 to flow into the reservoir 25 defined by the bottom and wall 18 when the cup is tipped or tilted toward the hole as shown in Figure 1. Preferably

a second hole 26 is located opposite hole 22 near the periphery of the bottom and serves as an inlet permitting air to enter the cup as the beverage exits through hole 22 thereby preventing a vacuum from being formed which would inhibit the beverage flow. It is important that the wall 18 extend a sufficient distance above the bottom 16 so that the consumer can engage the walls 18, 20 between his lips so as to sip a hot beverage from the reservoir 25 without getting burned. A wall 18 should extend beyond the bottom 16 by at least 0.25 inches and preferably 0.5 inches. The diameter of hole 22 is preferably substantial, such as 0.25 inches, so that the beverage within the cup encounters only a limited resistance in flowing from the cup into the reservoir. It will be noted that the exterior surface 27 of the wall 20 immediately adjacent upper edge 12 of the cup is substantially parallel to wall 18 to present a comfortable structure for engagement with one's lips.

Lid 10 is preferably dimensioned so that a plurality of lids can be nested one on top of another to form a stack of lids. The remote portion 28 of wall 20 is spaced apart from wall 18 so as to provide clearance for the upper edge 12 of another lid to enter between the remote portion 28 and wall 18. A reentrant indentation 30 intermediate of remote portion 28 and the juncture of walls 18 and 20 is spaced apart from wall 18 so as to apply a force against the external surface of the wall 20 of another lid as the latter is slid beyond indentation 30. Thus, each of the

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lids in a nested stack interlock with adjacent lids for stability and compact storage.

5 The lid and cup combination illustrated in Figure 1 is suited for containing an individual serving of coffee which is to be consumed at a location other than the point of purchase. For example, commuters may purchase coffee in such a container for consumption during their travel by car or train to work. The lid 10 prevents the
10 coffee from being spilled due to normal handling or typical ride variations while allowing the coffee to be directly consumed.

Figures 3 and 4 illustrate lid 32 which comprises another embodiment of the present
15 invention in combination with a plastic mug or cup 34. The lid 32 includes a reservoir 35 defined by a bottom 36, an upstanding annular wall 40 and an inwardly inclined wall 38 connecting the bottom 36, with the wall 40. The bottom includes a
20 beverage dispensing hole 42 adjacent the periphery of the bottom and an air inlet hole 44 opposite hole 42. The bottom 36, which is preferably planar, is disposed at an angle with respect to a horizontal plane with hole 44 adjacent the
25 uppermost portion of the bottom and with hole 42 adjacent the lower-most portion of the bottom. This construction permits a greater volume of beverage 46 to be held within the reservoir when tipped generally toward hole 42 than if the bottom
30 were disposed horizontally at the level of hole 44. This construction provides an additional advantage in that most of the beverage contained

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within the reservoir will drain via hole 42 back into the mug when the mug is held in a vertically upright (horizontal) position as shown in Figure 4. This prevents any undesired accumulation of beverage in the reservoir.

The dimensions permit the lid to be seated on the upper-edge of a mug which may have an externally flared peripheral rim 48 so that the entirety of the bottom 36 is below the level of the rim. This permits the upstanding wall 40 to extend above the cup by a lesser distance than if the bottom were located at a higher level. The inwardly sloping wall 38 enables the reservoir of lid 32 to be easily cleaned since neither 90° nor acute angles are present.

The lid 32 includes a means for tightly engaging the rim 48 of the mug such as by an angular downwardly-turned flange 50. Preferably the lid 32 is integrally molded as a unitary structure from a somewhat resilient plastic material. The diameter of the flange 50 is dimensioned slightly smaller than the diameter of rim 48 so that the lid "snap-locks" onto the mug. A horizontal tab 52 may be provided to extend from the remote end of flange 50 and provide a means for grasping lid 32 so that it can be easily removed, that is unseated, from mug 34 by applying a generally upward force to the tab.

Mug 34 may include a handle 54 and is preferably formed from a plastic thermally-insulating material in accordance with the

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which is assigned to the assignee of the present invention.

5 The materials from which lids according to the invention may be made are numerous and include both styrene and propylene. The thickness of the bottoms and walls can be selected by the designer. For instance, a lid according to the invention may be designed to be relatively thick so as to provide thermal insulation if desired.

10 Although embodiments of the present invention have been described above and illustrated in the drawings, the scope of the present invention is defined by the claims appended hereto.

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WHAT IS CLAIMED IS:

1. A beverage dispensing lid for mounting to a cup with an annular wall for holding a beverage, said lid comprising:

a bottom;

5 an annular upstanding wall about the periphery of said bottom extending at least 0.25 inches above said bottom to define a reservoir; said bottom having at least one opening adjacent its periphery permitting a beverage
10 contained within the cup to flow therethrough into said reservoir when the cup is tipped in a direction generally towards said one opening; and means for removable mounting said lid tightly to the wall of said cup, thereby
15 permitting the beverage to flow from said cup into said reservoir from which the beverage can be directly consumed.

2. The apparatus according to claim 1 wherein said bottom is planar whereby
20 substantially all of the beverage contained in the reservoir can be accumulated at a desired location at the periphery of the bottom by tilting the bottom with respect to a horizontal plane.

3. The apparatus according the claim 1
25 further comprising another opening in said bottom adjacent its perimeter and disposed in opposition to said one opening wherein said another opening provides an air inlet into the cup when beverage is flowing from the cup into the reservoir through
30 said one opening.

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4. The apparatus according to claim 1 wherein said bottom, said flange and said mounting means are molded as a single piece and made of a resilient plastic material.

5 5. The apparatus according to claim 1 further comprising a inverted U-shaped flange about the periphery of said bottom, said upstanding wall defining the inner wall of said flange and a spaced-apart second wall defining the
10 outer wall of said flange, said upstanding wall and said second wall dimensioned to engage the wall of said cup therebetween to define said mounting means.

15 6. The apparatus according to claim 5 wherein a remote portion of said second wall is outwardly flared to receive the juncture of an upstanding wall and second wall of another lid between said upstanding wall and said remote
20 portion of said second wall whereby said lids can be nested one on top of another to form a stack.

7. The apparatus according to claim 1 wherein said upstanding wall makes contiguous contact with the inside surface of the wall of said cup thereby providing a secure seal
25 therebetween.

8. The apparatus according to claim 1 wherein said upstanding wall terminates at the edge of the wall of said cup whereby said

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reservoir is contained within said cup to facilitate handling of the cup.

9. The apparatus according to claim 1 wherein said bottom is disposed at an incline with respect to a horizontal plane and said one opening disposed in the lowest-most portion of said bottom adjacent its periphery, whereby a beverage in the cup will flow into the lid through said one opening when the cup is tilted at an angle generally towards said one opening and wherein substantially all of the beverage contained in said reservoir will flow back into the cup through the one opening when the cup is held in a horizontal position due to the incline of the bottom.

10. The apparatus according to claim 9 further comprising an outwardly-tilted wall which connects the periphery of said bottom to said upstanding wall.

11. The apparatus according to claim 1 further comprising a tab extending from said mounting means wherein the tab provides a portion which is grasped to remove the lid from the cup.

12. The apparatus according to claim 9 wherein said lid is molded as a unitary structure and made from a resilient plastic material.

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13. The apparatus according to claim 9
further comprising another opening in said bottom
at the upper-most periphery of said bottom for
allowing air to enter said cup as the beverage
5 flows into said reservoir via said one opening
when the cup is tilted towards said one opening.

14. The apparatus according to claim 1
or 9 wherein said bottom is disposed entirely
below a plane defined by the edge of the wall of
10 said cup to minimize the distance said upstanding
wall extends above said bottom.

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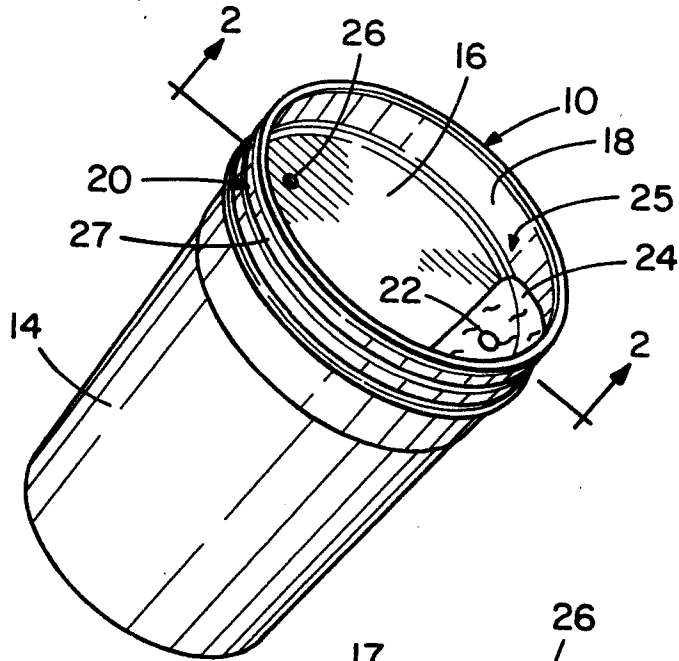


FIG. 1

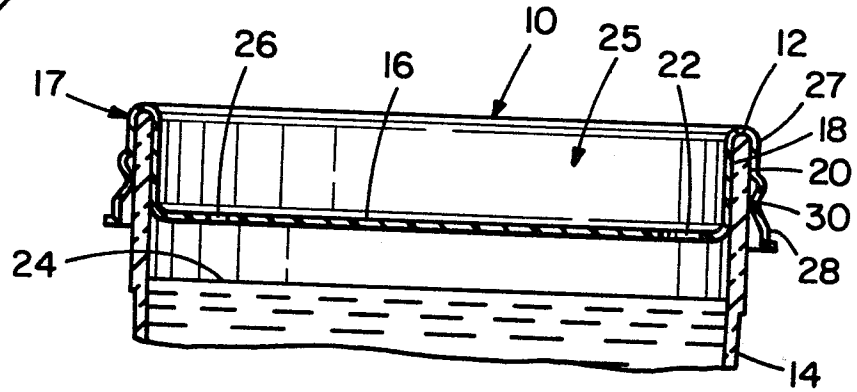


FIG. 2

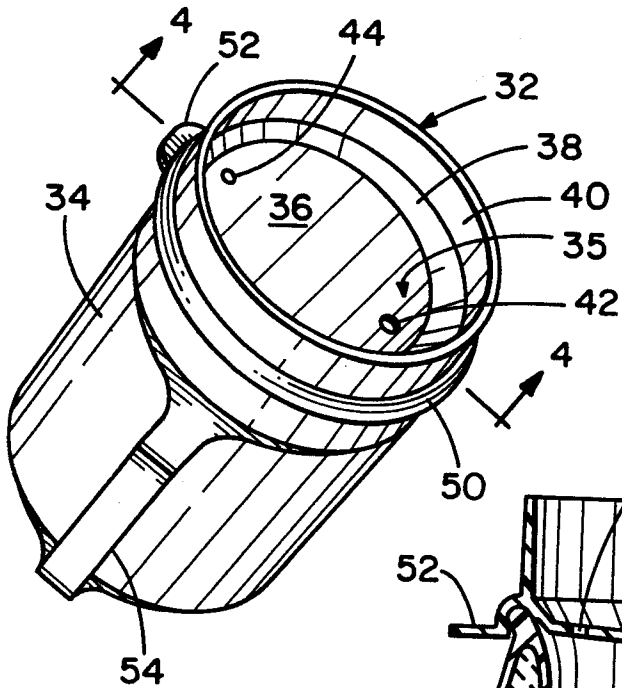


FIG. 3

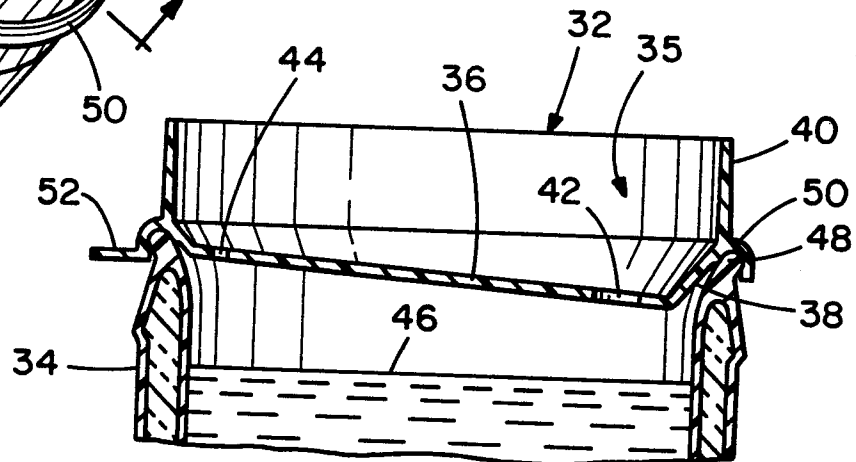


FIG. 4