



US 20100163558A1

(19) **United States**(12) **Patent Application Publication**  
**Karam**(10) **Pub. No.: US 2010/0163558 A1**(43) **Pub. Date: Jul. 1, 2010**(54) **BEVERAGE CONTAINER CLOSURE**(30) **Foreign Application Priority Data**(75) Inventor: **Carl Karam**, New South Wales  
(AU)

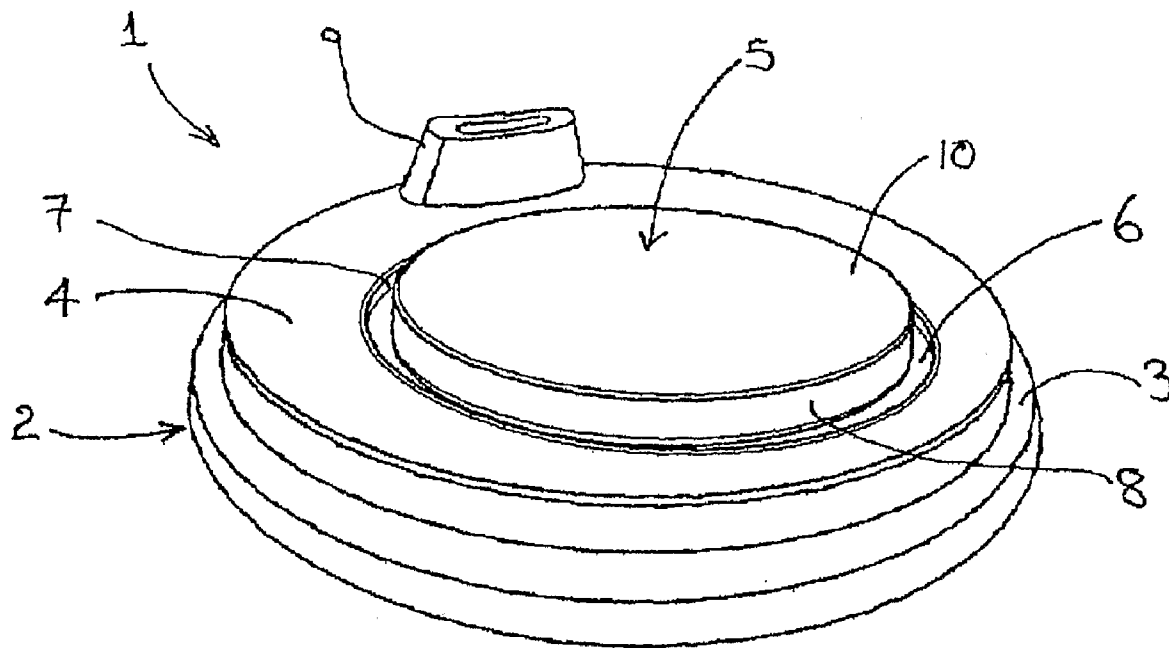
Jun. 6, 2007 (AU) ..... 2007903029

**Publication Classification**

Correspondence Address:

**PILLSBURY WINTHROP SHAW PITTMAN,**  
**LLP****P.O. BOX 10500****MCLEAN, VA 22102 (US)**(51) **Int. Cl.**  
**B65D 51/00** (2006.01)(52) **U.S. Cl.** ..... **220/200; 220/713**(57) **ABSTRACT**(73) Assignee: **CARL-LOUIS PTY LTD,**  
Granville, NSW (AU)(21) Appl. No.: **12/663,379**(22) PCT Filed: **Jun. 6, 2008**(86) PCT No.: **PCT/AU08/00809**§ 371 (c)(1),  
(2), (4) Date:**Mar. 4, 2010**

There is provided a beverage container closure which comprises a circumferentially disposed cup engagement means configured for releasable engagement about a beverage container opening. The closure further comprises an upper closure surface disposed intermediate the cup engagement means and a beverage container support extending from the closure surface a pre-determined height thereabove. The container support is surrounded at a bottom end by a gutter being disposed a pre-determined depth below the upper closure surface and the gutter is configured to support a bottom end of the beverage container. The beverage container support is configured to support and releasably engage the base of the beverage container.



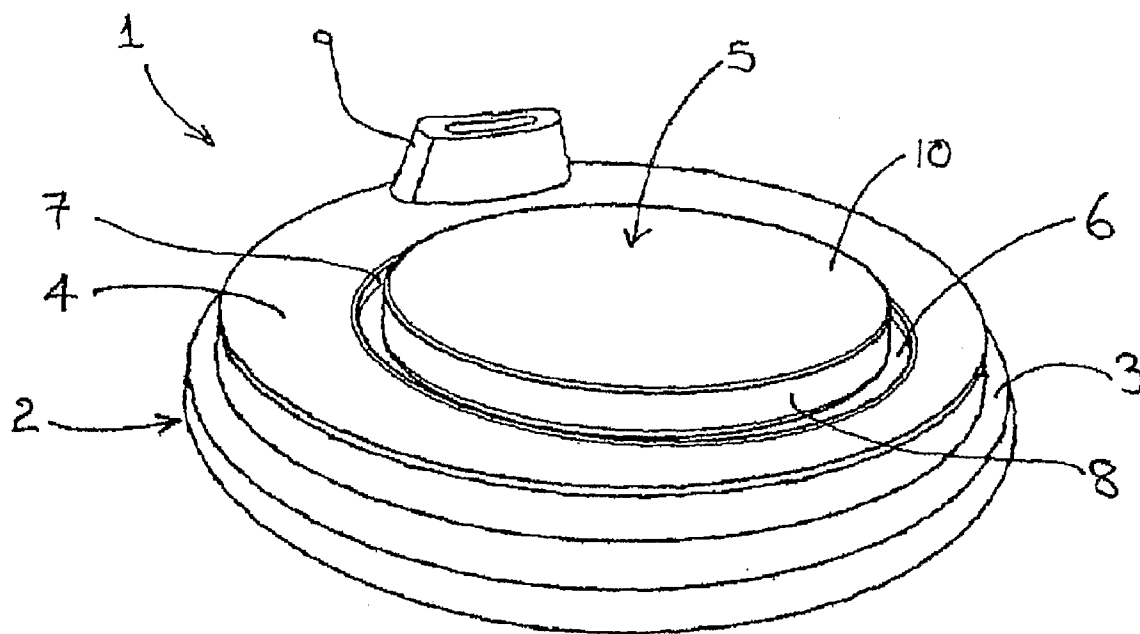


FIG. 1

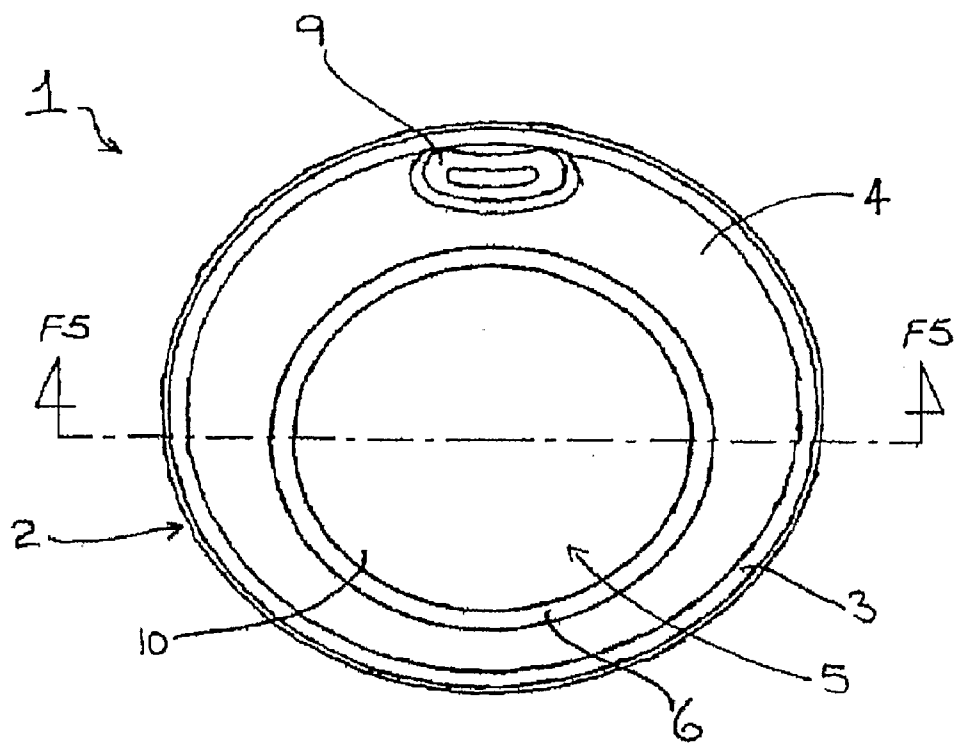


FIG. 2

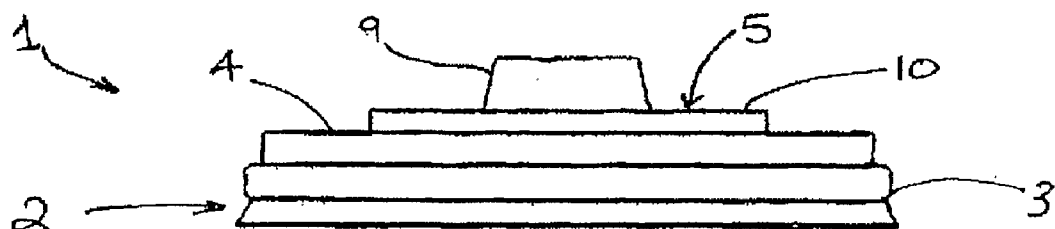


FIG. 3

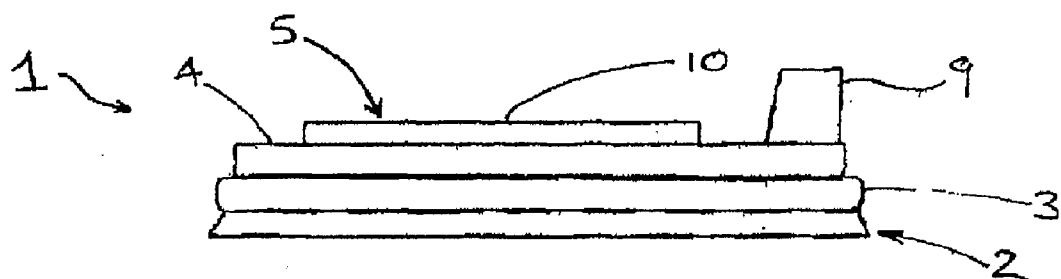


FIG. 4

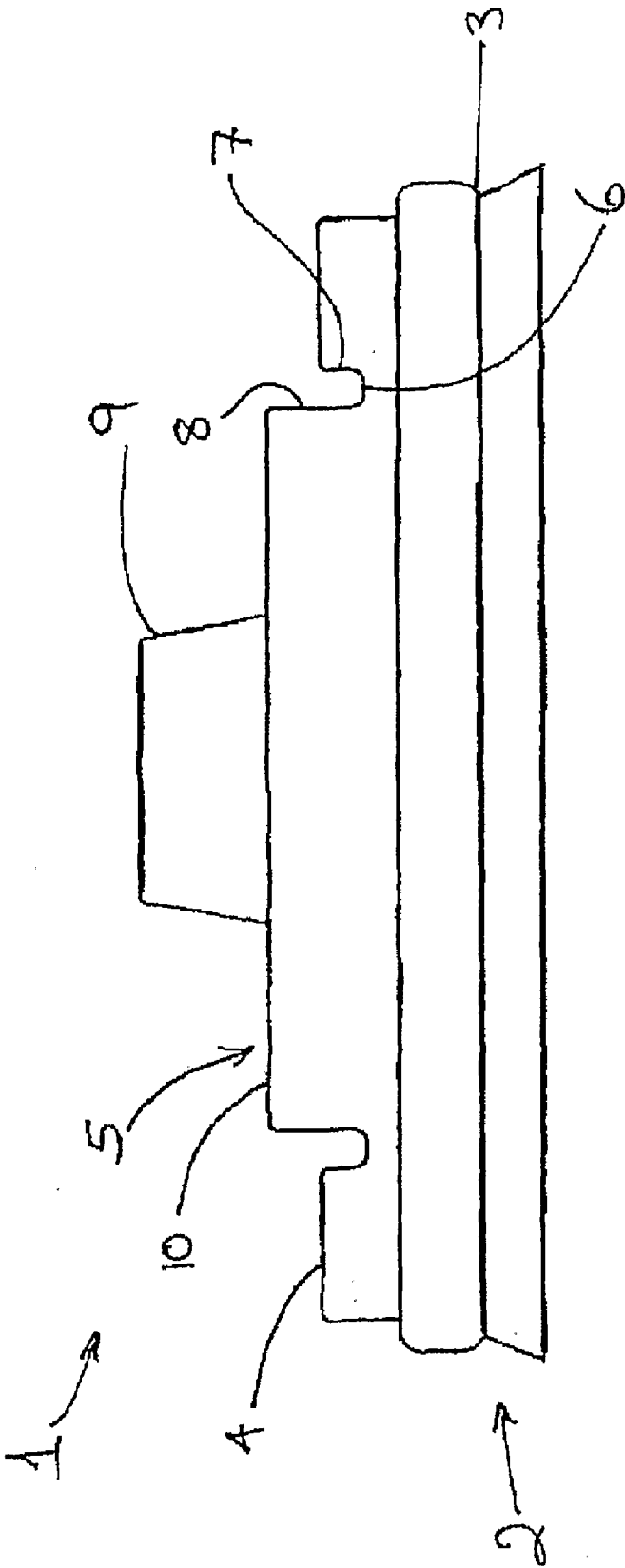


FIG. 5

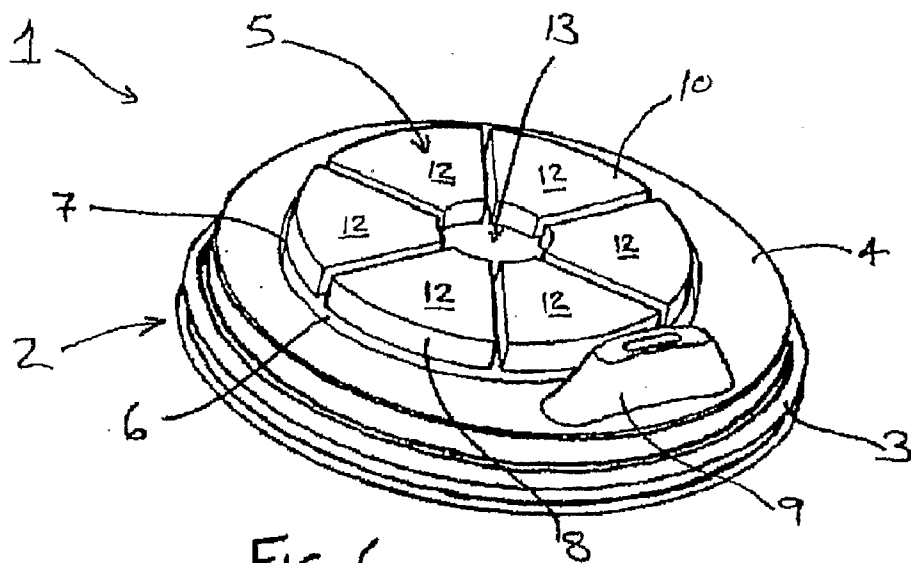


FIG. 6

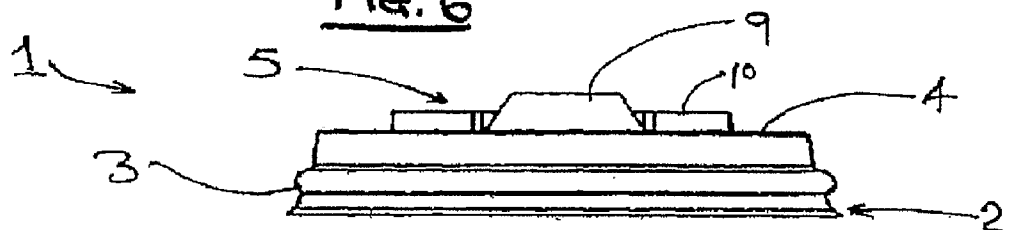


FIG. 7

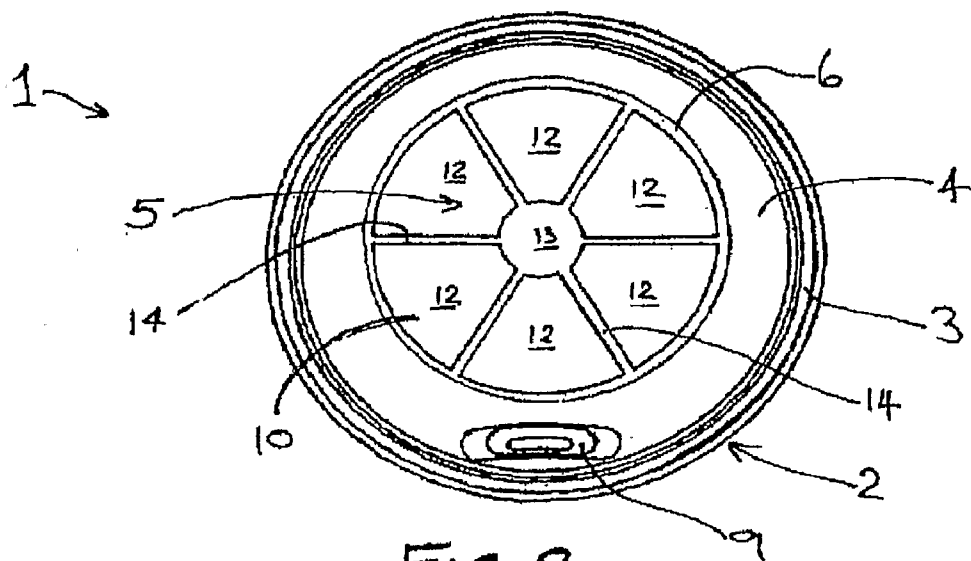


FIG. 8

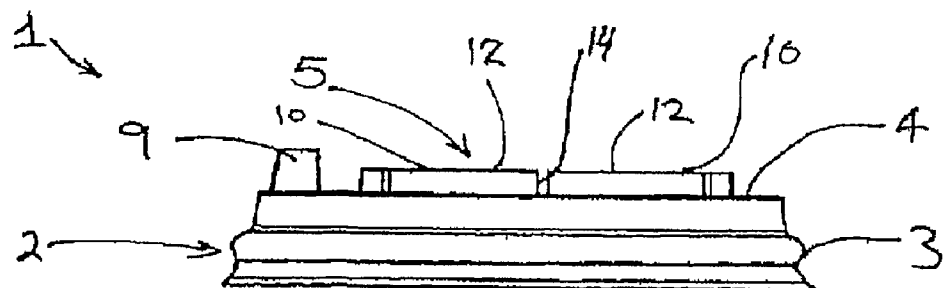


FIG. 9 (LEFT SIDE = MIRROR)

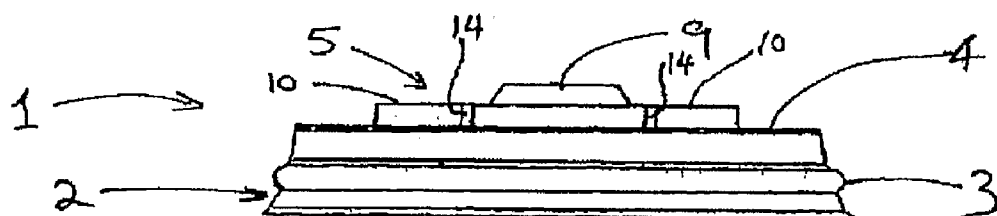


FIG. 10

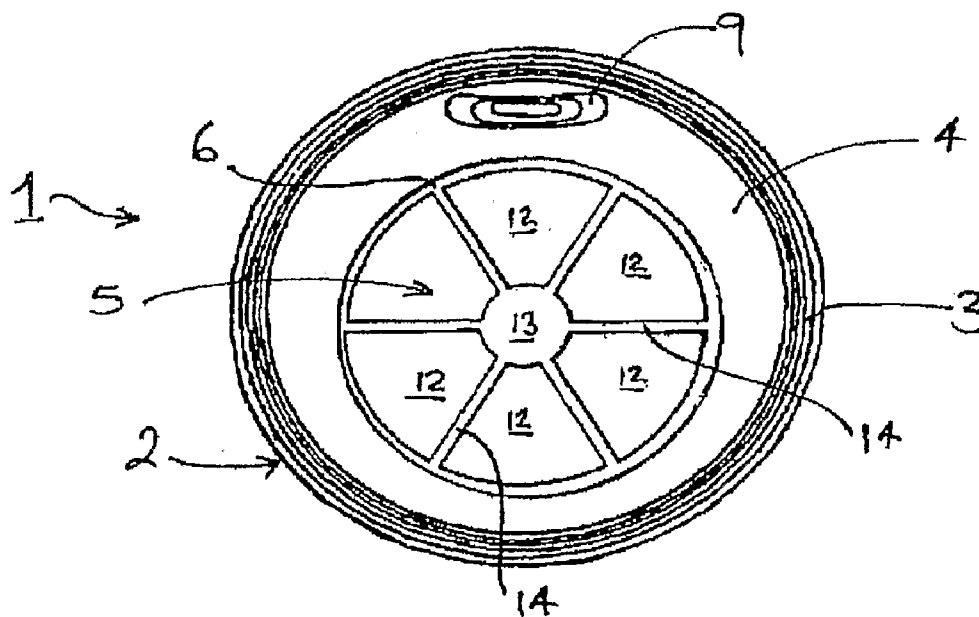


FIG. 11

## BEVERAGE CONTAINER CLOSURE

### FIELD OF THE INVENTION

[0001] The present invention relates to beverage container closures.

[0002] The invention has been developed primarily for use as a closure for beverage containers sold to a consumer for consumption away from the point of sale of the beverage and will be described hereinafter with reference to this application. However, it will be appreciated that the invention is not limited to this particular field of use.

### BACKGROUND ART

[0003] Take away coffee, tea, hot chocolate or other beverages such as carbonated non-alcoholic drinks are regularly said by street vendors or shops for a consumer to take the beverage away and consume it away from the point of sale. For example, on a given city block in the city of Sydney, Australia, it is typical to find coffee vendors in cafes or shops disposed usually on the ground floor of buildings, or dispensing carts or vans disposed on a street corner or adjacent an office building. Although cafes and some shops often provide a limited number of seats for consumers, it is quite typical for the consumers to purchase a coffee or other beverage from one of these vendors to be taken away and consumed elsewhere, for example, in an office or whilst in transit.

[0004] The vendors or coffee shops, for example, typically dispense a large number of take away beverages. Some vendors dispense sugar and other additives into the take away coffees whilst others leave it to the consumer to add these to their taste. Typically, take away coffees are dispensed to consumers in paper or Styrofoam cup containers and lids are disposed over the top to prevent spillage. Sometimes the lids include an aperture for drinking the coffee without removing the lid, or to receive a drinking straw.

[0005] It is regularly known that some consumers will purchase take away coffees on behalf of one or more people often to save those other people the inconvenience of a trip to the coffee vendor. To assist a consumer in transporting two or more take away coffee containers to avoid spillage, trays are often used. For example, cup container holders having four apertures spaced apart in a plane. A most common form resembles a paper or fibreboard egg carton with only four apertures and the cups are simply received within the apertures and the walls can form an interference fit with a cup container to retain it in the holder.

[0006] Purchasers require a stable carrying platform when transporting a plurality of disposable beverages in the course of normal carrying events, such as looking at traffic whilst walking, traversing stairs or driving a motor vehicle. In the latter case, it is normal to purchase take away coffees, for example, from a drive-thru equipped retailer. As such, any container holders desirably firmly retain the container against vehicle acceleration, deceleration and in cornering. However, the use of such holders can undesirably add expense to the beverage vendor by having to dispense essentially another product, but also in time required for staff to locate and/or load the plurality of beverages. It also provides additional material to be disposed of by the purchaser.

[0007] So far as take away coffees, and many other beverages, are typically dispensed to the consumer with lids it is known to stack one or more beverage containers having lids upon each other.

[0008] Typically, such known lids have a circumferentially disposed raised annular rim around an uppermost surface of the lid. A beverage container base is supported by the upper lid surface and is laterally supported by the raised rim. The lateral support is ideally provided in an interference fit between an inner diameter of the ring and the outer diameter of the bottom end of the beverage container. Such interference fit rarely occurs at least because of manufacturing tolerances, however, limitations are also placed on variations of the outer diameter or outside surface of the beverage containers. For example, the addition of vertical corrugations, use of sleeves or different wall thicknesses on the beverage containers, will vary the outer diameter making it typically too large or too small for an interference fit with the inside of the rim. As a result, support provided to a stacked beverage container is substantially provided by the upper most surface of the lid and lateral support is not as strong as in conventional holders disadvantageously resulting in stacked containers easily falling.

### GENESIS OF THE INVENTION

[0009] The genesis of the invention is to provide a beverage container closure that will more stably support one or more stacked beverage containers, or to provide a useful alternative.

### SUMMARY OF THE INVENTION

[0010] In accordance with an aspect of the invention there is provided a beverage container closure comprising:

[0011] a circumferentially disposed cup engagement means configured for releasable engagement about a beverage container opening;

[0012] an upper closure surface disposed intermediate said cup engagement means; and

[0013] a beverage container support extending from said closure surface a pre-determined height thereabove, said container support surrounded at a bottom end by a gutter being disposed a pre-determined depth below said upper closure surface, said gutter configured to support a bottom end of said beverage container;

[0014] wherein said beverage container support is configured to support and releasably engage the base of said beverage container.

[0015] It can therefore be seen that the beverage container support advantageously laterally supports the inner diameter of the lower end of a beverage container and the gutter advantageously provides additional lateral support whilst the upper closure surface can also advantageously provide vertical support.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0016] Preferred embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:

[0017] FIG. 1 is a perspective view of a beverage container closure according to a first preferred embodiment;

[0018] FIG. 2 is a top view of the closure of FIG. 1;

[0019] FIG. 3 is a rear view of the closure of FIG. 1;

[0020] FIG. 4 is a right-hand side view of the closure of FIG. 1;

[0021] FIG. 5 is a cutaway view through the line F5-F5 the closure of FIG. 2;

[0022] FIG. 6 is a perspective view of a beverage container closure according to another preferred embodiment.

[0023] FIG. 7 is a front view of the closure of FIG. 6;

[0024] FIG. 8 is a plan view of the closure of FIG. 6;

[0025] FIG. 9 is a right hand side view of the closure of FIG. 6;

[0026] FIG. 10 is a rear view of the closure of FIG. 6; and

[0027] FIG. 11 is an inverted plan view of the closure of FIG. 6.

#### DETAILED DESCRIPTION

[0028] It will be appreciated that throughout the drawings of the preferred embodiments of the invention, like reference numerals have been used to denote like components.

[0029] Referring to FIGS. 1-5 generally, there is shown a perspective view of a beverage container closure 1 according to a first preferred embodiment of the invention. The closure 1 includes a circumferentially disposed cup engagement means 2 configured for releasable engagement with a beverage container opening (not illustrated). As would commonly be understood by those skilled in the art, the cup engagement means 2 typically fits over a beverage container opening rim (not illustrated) so as to form an interference fit and typically a seal. The beverage container opening rim is configured to abut a cup engagement means shoulder 3 of the closure 1 when in use.

[0030] The beverage container closure 1 includes an upper closure surface 4 disposed intermediate the cup engagement means 2. A beverage container support 5 extends from the upper closure surface 4 a pre-determined height above it.

[0031] The beverage container support 5 is surrounded at a lower end by a gutter 6. This is best seen in FIG. 5. The gutter 6 is disposed a pre-determined depth below the upper closure surface 4. The gutter 6 is configured to support the lower end of a beverage container (not illustrated), and gutter sidewall 7 is configured to laterally support the outer diameter of the lower end of the beverage container.

[0032] The beverage container support 5 has a maximum diameter that is less than or about equal to the inner diameter of a base of a beverage container (not illustrated). The beverage container support 5 is configured to support and releasably engage the base of a beverage container to allow stacking. It can therefore be seen that the container closure 1 advantageously provides engagement between the inner diameter of the bottom end of a beverage container and/or the outer diameter of the bottom end of the beverage container by projection sidewall 8 or gutter sidewall 7 respectively, and the beverage container can also be vertically supported by the gutter 6.

[0033] The beverage container support 5 of the first preferred embodiment is substantially cylindrical and un-tapered. The beverage container support 5 is disposed slightly off-centre relative to the circumferentially disposed cup engagement means 2. As is conventionally the case with closures for such use, a dispenser or outlet 9 is disposed at or adjacent an edge of the upper closure surface 4. So far as the beverages would unlikely to be consumed whilst in a stacked configuration, the closure outlet 9 can be spaced apart from an intermediate edge of the upper closure surface 4 and the gutter 6.

[0034] The beverage container closure 1 is formed from a moulded plastic. It will be appreciated that the closure 1 can be formed from any preferred plastics material, for example, polyvinyl chloride; polystyrene; polyethylene; polypropy-

lene; polyamides; acrylics, silicones, celluloid or synthetic rubber. Of course, the closure 1 can be formed from any preferred materials such as metals or alloys thereof, papers or fibreboards or cardboards, or a combination of these materials with or without plastics material. It will be appreciated that the closure 1 can be formed from glass.

[0035] It will also be appreciated by those skilled in the art that the beverage container closure 1 can include a support 5 which is tapered from an end at the gutter 6 to reduce in diameter toward a top end 10 of the support 1. It will be appreciated, for example, that the diameter at the top surface 10 of the projection 5 can be any preferred amount less than the diameter of the gutter 6 so as to accommodate beverage containers having different inner diameters at their lower end.

[0036] The beverage container 1 of the first preferred embodiment is configured so that the maximum height of the projection 5 from the gutter 6 to the projection upper surface 10 is less than or substantially equal to a distance between a lowermost sidewall end of a beverage container and a base disposed across the sidewall a pre-determined height above the lowermost end (not illustrated). In other words, the height of the support 5 from the gutter 6 to the top 10 is configured to be substantially the same or less than a height between a beverage container base and a lowermost end of the beverage container sidewall.

[0037] Referring to FIGS. 6 to 11, there is shown another preferred embodiment of a beverage container closure 1. In this embodiment, where it is again noted that like reference numerals are used to denote like components, the beverage container support 5 is not formed from a single cylindrical projection extending from the gutter 6 but is instead formed by a plurality of cylindrical segments 12, or wedges, disposed in a side-by-side arrangement. It can be seen that the individual wedges have the effect of forming projection sidewalls 8 and the container support upper surface 10 is also provided by the wedges.

[0038] In this preferred embodiment, the hollow central portion 13 formed by the wedges 12 is at the same height or level as the gutter 6. However, the central portion 13 is preferably any height between that of the gutter 6 and the support upper surface 10. Furthermore, gaps 14 disposed intermediate the wedges 12 are preferably at the same height as the central portion 14.

[0039] It will be appreciated by those skilled in the art, however, that in other embodiments of the invention (not illustrated) the beverage container support 5 can be formed from a hollow cylinder or annulus extending from the gutter 6 a pre-determined height above the closure upper surface 4, or could be composed of portions thereof so as to in essence provide projection sidewalls 8 to allow the inner diameter at the bottom end of a beverage container to be retained in an interference fit therewith.

[0040] Of course, any preferred shape or configuration of the beverage container support 5 can be used provided the projection 5 extends a pre-determined height above the closure upper surface 4 and terminates below the level of the upper closure surface 4 at a gutter 6. For example, triangular or polygonal or other cross-sectionally shaped regular or irregular container support projections 5 can be used as preferred, and a single projection 5 can be formed from a combination of these or other shapes.

[0041] It will be further, appreciated by those skilled in the art that the upper lid surface 4 extending from the gutter sidewall 7 can be flat as shown in the preferred embodiments



or it can modulate in height or slope as preferred. Further, the upper lid surface **4** can be formed from a continuous surface, as illustrated, or it can be alternatively formed from shaped segments so that the surface **4** can, in parts thereof, be at a height comparable to the gutter **6**. That is, the gutter sidewall **7** does not need to be continuous.

**[0042]** The foregoing describes only one embodiment of the present invention and modifications, obvious to those skilled in the art, can be made thereto without departing from the scope of the present invention.

**[0043]** The term “comprising” (and its grammatical variations) as used herein is used in the inclusive sense of “including” or “having” and not in the exclusive sense of “consisting only of”.

**1.** A beverage container closure comprising:

a circumferentially disposed cup engagement means configured for releasable engagement about a beverage container opening;

an upper closure surface disposed intermediate said cup engagement means; and

a beverage container support extending from said closure surface a pre-determined height thereabove, said container support surrounded at a bottom end by a gutter being disposed a pre-determined depth below said upper closure surface, said gutter configured to support a bottom end of said beverage container;

wherein said beverage container support as configured to support and releasably engage the base of said beverage container.

**2.** A beverage container closure according to claim **1** wherein said container support has a maximum diameter less than or about equal to the inner diameter of a base of said beverage container.

**3.** A beverage container closure according to claim **1** wherein said beverage container support is substantially cylindrical, polygonal or triangular.

**4.** A beverage container closure according to claim **1** wherein said beverage container support is tapered in maximum diameter from a maximum diameter at or adjacent said container support bottom end to a minimum container support diameter at said pre-determined height above said closure surface.

**5.** A beverage container closure according to claim **4** wherein said maximum diameter at the bottom of said beverage

container support is less than said diameter of said container support at said pre-determined height above said closure surface and is greater or substantially equal to a diameter across an inner sidewall at a lowermost sidewall end of said beverage container.

**6.** A beverage container closure according to claim **1** wherein said beverage container support is substantially cylindrical and substantially centred intermediate said circumferential cup engagement means.

**7.** A beverage container closure according to claim **1** wherein said beverage container support is cylindrical and not centred on said closure surface with respect to said circumferentially disposed cup engagement means.

**8.** A beverage container closure according to claim **7** wherein said off centred beverage container support is off centred by less than or equal to half a diameter of said beverage container support.

**9.** A beverage container closure according to claim **1** wherein said beverage container support comprises a plurality of wedges or segments disposed in a side-by-side arrangement.

**10.** A beverage container closure according to claim **1** wherein said beverage container support is an annulus or ring.

**11.** A beverage container closure according to claim **1** wherein said beverage container support extends a maximum height from said gutter to an uppermost point of said beverage container support distal from said closure surface, said maximum height being less than or equal to a distance between a lowermost sidewall end of said beverage container and a base disposed across said sidewall a pre-determined height above said lowermost point of said sidewall.

**12.** A beverage container closure according to claim **1** formed from plastics.

**13.** A beverage container closure according to claim **12** wherein said plastics are selected from the group consisting of comprise polyvinyl chloride; polystyrene; polyethylene; polypropylene; polyamides; acrylics, silicones, celluloid and synthetic rubber.

**14.** A beverage container closure according to claim **12** being moulded from plastics.

**15.** A beverage container closure according to claim **1** including a dispensing aperture disposed in or adjacent said closure surface.

\* \* \* \* \*