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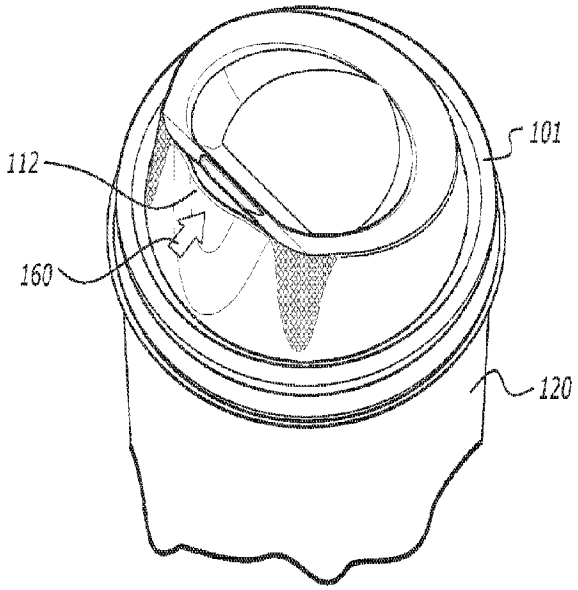

FIGURE 9

(57) Abrégé/Abstract:
Disclosed is a lid (101) for covering the open end of a container. A base (102) of the lid is adapted to detachably and sealably engage with the rim of a container. An elevated portion (103) of the lid projects upwardly from the base and a spout (107) extends from or proximal to a lid top to or towards a base (102) with material egress opening (108) facing towards the lid top. In use with a container (120) containing liquid, the lid is securely fitted to the container (120) and a user can move the spout (107) between a closed condition such that liquid is substantially prevented from escaping from the container and an open condition to allow material egress from the material egress opening. A user can squeeze the elevated portion (103) to cause the spout (103) moving from a closed condition to an open condition.

ABSTRACT

Disclosed is a lid (101) for covering the open end of a container. A base (102) of the lid (101) is adapted to detachably and sealably engage with the rim of a container. An elevated portion (103) of the lid projects upwardly from the base (102) and a spout (107) extends from or proximal to a lid top to or towards a base (102) with material egress opening (108) facing towards the lid top. In use with a container (120) containing liquid, the lid (101) is securely fitted to the container (120) and a user can move the spout (107) between a closed condition such that liquid is substantially prevented from escaping from the container and an open condition to allow material egress from the material egress opening (102). A user can squeeze the elevated portion (103) to cause the spout (103) moving from a closed condition to an open condition.

A LID FOR A CONTAINER

FIELD OF INVENTION

The invention generally relates to a lid for a container. More particularly but not exclusively the invention relates to a lid for a beverage container.

BACKGROUND

Beverages such as takeaway coffee or hot chocolate are usually sold in takeaway cups or containers which have a separate lid applied to them. These lids typically have an open drinking aperture in them. This may pose a risk of the liquid spilling (or even injury in the case of hot beverages) through the aperture. Another known problem with these lids is that heat can escape through the drinking aperture and in some instances the lids can come off easily as they do not fit securely to the cups they are applied to. Even if the beverage is a cold beverage such as soft drink or cold coffee, liquid spillage through the aperture while drinking is still not desirable because such spill can not only create mess but can also cause stains in clothes, carpets etc.

Various types of lids are previously known in the art.

For example, US Patent No. 1049415B2 discloses a re-closable cup lid having a tab that can be moved between an open and closed position. One of the problems with the lid disclosed in the prior art is that the lid contains multiple pieces of material which are not advantageous from the manufacturing point of view. Further, the tab can accidentally come out or break during use. Additionally, since there is no spout in the lid of US Patent No. 1049415B2, the contents can easily spill out from the opening and therefore the lid is convenient from the user's perspective. Also, it can be difficult to move the tab between open and closed configuration especially when trying to perform such action with the same hand that is used to carry the container.

US Patent No. 5390810A discloses a closure device with a squeeze to open capabilities. It discloses corrugations on the lid that allow the lid to open when the cup is squeezed and return closed when the squeeze is released. However, the closure device returns to the closed position when the initial squeezing action is released and therefore requires constant squeezing force for the lid to remain open, which can be inconvenient. Also, since the spout is oriented horizontally, the container to be tilted more to pull the contents/liquids out from the container

through the opening of the spout. Also, releasing the contents of the container through the opening of such horizontally oriented spout can be difficult especially if the contents are thicker and more viscous liquids such as smoothies or milkshakes.

US4333583A discloses a drinking spout cover for a liquid container. The spout is an upwardly extending spout which can be opened but does not have any re-closeable functionality. The upper cover of the spout is held in place by a perforated connection which, once broken, cannot be reattached.

Also, the presence of non-uniform upper surface of the lid and/or location and orientation of spout on the upper surface of the lid would mean the lid disclosed in the prior art documents referred above cannot facilitate stacking of another cup/container onto the lid for pre-use transportation and storage purposes. The inability to be stacked in such a manner can be a major drawback when it comes to packaging, storage and/or transporting of the containers with such lids.

OBJECT OF THE INVENTION

It is an object of a preferred form of the present invention to go at least some way towards addressing one or some of the above problems. While this is an object of a preferred embodiment, it should not be seen as a limitation on the scope of the invention as claimed. The object of the invention *per se* is simply to provide the public with a useful choice.

As used herein the term "and/or" means "and" or "or", or both. As used herein "(s)" following a noun means the plural and/or singular forms of the noun. The term "comprising" as used in this specification and claims means "consisting at least in part of". When interpreting statements in this specification and claims which include that term, the features, prefaced by that term in each statement, all need to be present but other features can also be present. Related terms such as "comprise" and "comprised" are to be interpreted in the same manner.

SUMMARY OF THE INVENTION

In one aspect, the invention may be said to reside in a lid for closing an opening of a container that is adapted to contain a flowable material, the lid comprising a peripheral region engaging, or able to engage, about, within, or both about and within, the container, and

a non-peripheral region inwardly of the peripheral region;

wherein the non-peripheral region has a formation, the formation being

i. able to be pressed or already pressed, to a closed condition that at least substantially closes a flowable material egress opening of the non-peripheral region, and

ii. able to be released from the closed condition to an open condition to allow material egress from the container via the material egress opening,

wherein the formation extends from or proximal to a lid top to or towards a base of the lid with the material egress opening facing towards the lid top or upwardly.

Preferably, the base is an annular base adapted to detachably engage the rim of the container.

Preferably, the lid further comprises an elevated portion that is an elevated wall portion projecting upwardly from the annular base.

Preferably the material egress opening faces towards the lid top or upwardly and not peripherally outwardly.

Preferably, the formation is a spout.

Preferably, the spout defines part of the material egress opening, the spout being formed on the elevated portion of the lid with the spout extends along a first region of the elevated portion and upwardly relative the base.

Preferably, the formation is live hinged save for where it is to define part of the material egress opening.

Preferably, the live hinging (live hinged formation) is in a depression of the non-peripheral region preferably thereby to enable retention of part of the formation inwardly of the peripheral region.

Preferably, wherein when not retained, the formation assumes a stable condition above the peripheral region.

Preferably, the peripheral region is annular or substantially annular.

Preferably, the formation is biased to the open condition.

Preferably, the lid comprises a catch that is adapted to capture part of the formation for retaining the formation in its closed condition.

Preferably, the material egress opening is in part arcuate.

Preferably, the lid comprises an annular internal extension projecting downwardly from or relative to the base, the annular internal extension being configured to fit at least partially inside the container during use.

Preferably, the lid further comprises a first gripping portion formed at one side of the formation and a second gripping portion formed on at another side of the spout, wherein squeezing of or pushing on at least one of the first and second gripping portions is adapted to cause the formation to transition from the closed condition to the open condition.

Preferably, each of the first and second gripping portions comprises a textured profile to facilitate gripping using user's finger(s).

Preferably, wherein applying the force on the formation towards the peripheral region is adapted to cause the formation to transition from the open condition to the closed condition.

Preferably, the lid further comprises an air circulation hole for improving the fluid flow.

Preferably, the lid further comprises a horizontal surface to allow stacking of the container onto the lid.

Preferably, the lid is arranged and formed such that when in use, with a container containing a flowable material and the lid is fitted to the container, a user is able to move the spout between the closed condition which closes the open end of the container such that the material is substantially prevented from escaping from the container and an open condition which allows a user to pour the material contained within the container and also wherein in use the lid is adapted such that a user can squeeze the container or the lid which results in the spout moving from the closed condition to the open condition.

Preferably, the spout is hinged.

Preferably, the spout has a tab adapted such that a user can pull the tab to move the spout to the open condition or push the tab to move the spout to a closed condition.

Preferably, the elevated portion is greater in height above the base in a first side wall portion than a diametrically opposed second side wall portion.

Preferably, the first side wall portion is about 10mm in height and the second side wall portion is about 8mm in height above the base.

Preferably, the lid has an inner annular wall adapted to engage with the inside wall of a container.

Preferably, the elevated portion (preferably an inward facing wall thereof) is adapted and configured to releasably engage with the spout when the spout is in the closed condition.

Preferably, the lid comprises a catch which is adapted to releasably receive part of the spout when it is in a closed condition.

Preferably, the catch is located at the lid top.

Preferably, the catch is located at the elevated portion.

Preferably, the catch is adapted to releasably receive part of the spout when the spout is in a closed condition, the spout being biased by the hinge to the open condition but prevented to moving to the open condition when the spout is received by the catch.

Preferably, the lid made from material(s) which is/are biodegradable.

Preferably, the lid is made substantially from biodegradable plastic.

Preferably, the lid is adapted to be in use with a container.

Preferably, the container is a disposable hot beverage container.

Preferably, when in a closed condition, application of force to the container and/or lid by the squeezing results in the spout moving from the closed condition to the open condition.

Preferably, when in closed condition, the application of force by squeezing the container and/or lid in a direction parallel to the direction in which the spout engages and disengages with the catch results in the spout moving from the closed condition to the open condition.

Preferably, application of force by squeezing the elevated portion results in the spout, when in the closed condition, moving from the closed condition to the open condition.

Preferably, application of force by squeezing the annular base results in the spout, when in the closed condition, moving from the closed condition to the open condition.

In a further aspect, the invention may also be said to reside in a lid to releasably engage to the rim of an open topped cup or container, the lid comprising:

a. a lip engaging, or able to engage, about, within or both about and within the rim of the container,

b. an annular wall extending upwardly relative the lip,

c. a lid top at the top of the annular wall, the annular wall presenting an elongate formation in the form of a spout raised out from the annular wall, the end of the spout is at or elevated above the lid top and defines a closable opening with and at the lid top via which material in the container can egress, the formation separated at least partially from the remainder of the annular wall (preferably by a live hinge) to allow:

i. the spout to be depressed (eg towards the annular wall) to cause the end of the spout to contact the lid top to thereby close the closable opening, and

ii. the annular wall to be compressed in a direction lateral to the elongate direction of the formation to move the spout away from the annular wall to thereby open the closable opening.

Preferably the end of the spout has an edge that defines the periphery of the closable opening with an edge of the lid top, the edge of the spout and the edge of the lid top being commensurate each other when the closeable opening is closed.

Preferably, the formation extends from or proximal to a lid top to or towards a base of the lid with closable facing towards the lid top or upwardly.

In a further aspect the present invention may also be said to be a lidded container comprising a lid as herein described and a rim defined open top container at where the lid is secured.

In a further aspect the present invention may also be said to be a container with a lid located at the top of a container portion of the container, the lid as herein described.

Preferably the lid is integrally formed with the container portion.

Preferably the lid is removable from the container portion.

These and other features, objects and advantages of the present invention will be readily apparent to persons of ordinary skill in the art upon reading the entirety of this disclosure, which includes the accompanying drawings and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

Some preferred embodiments of the invention will now be described by way of example and with reference to the accompanying photos and drawings, of which:

Figure 1 is a front view of a lid an embodiment of a lid.

Figure 2 is a rear view of the lid of Figure 1

Figure 3 is a top plan view of the lid of Figure 1 with the spout in the open configuration.

Figure 4 is a side view of the lid of Figure 1 with the spout in the open configuration.

Figure 5 is a perspective view of the lid of Figure 1 with the spout in the open configuration, the lid being attached to a container.

Figure 6 is a side view of the lid and container of Figure 5 showing the spout in the open configuration

Figure 7 is a side view of the lid and container of Figure 5 showing the spout in the closed configuration.

Figure 8 is a partial perspective view of the lid and container of Figure 5 showing the spout in the open configuration.

Figure 9 is a partial perspective view of the lid and container of Figure 5 showing the direction of force to be applied to cause the spout to move from the open configuration to the closed configuration.

Figure 10 is a partial perspective view of the lid and container of Figure5 showing the spout in the closed configuration upon application of force in the direction shown in Figure 9.

Figure 11 is a partial perspective view of the lid Figure 1 showing the direction of the force to be applied using a user's finger in order to cause the spout to move from the open configuration to the closed configuration.

Figure 12 is a partial perspective view of the lid Figure1 showing the spout being move from the open configuration to the closed configuration upon application of force using the user's finger in the direction shown in Figure 10.

Figure 13 is a partial perspective view of the lid and container of Figure 5 showing the direction of force to be applied in order to cause the spout to move from the closed configuration to the open configuration.

Figure 14 is a partial perspective view of the lid and container of Figure5 showing the spout in the open configuration upon application of force in the direction shown in Figure12.

Figure 15 shows a side schematic view of the spout of the lid of Figure 1 in the open configuration.

Figure 16 shows a side schematic view of the spout of the lid of Figure 1 in the closed configuration.

Figure 17 is a top plan view of the lid of Figure 1 showing an air circulation hole.

DETAILED DESCRIPTION

As shown in 1 -17, the lid 101 has an annular base 102 with an annular rim which is adapted to releasably engage with the outside of the top of a container 120 such that in use it preferably substantially sealably fits about the circumference of a drinking edge of a container 120. The annular rim may be adapted to releasably engage with the outside of the top of a container 120, preferably about the circumference of a drinking edge of a container 120 preferably as a snap fit arrangement. The diameter of the lid 101 can be manufactured according to the size of the container 120. Projecting upwardly from the base 102 is an annular elevated portion 103 and as can be seen in figure 4, one first region 104 of the elevated portion 103 is greater in height than the other second region 105. The first region 104 of the elevated portion 103 is preferably about 10mm in height from the base 102 whereas the second region 105 is preferably about 8mm in height from the base 102. Although not shown in figures, an annular internal extension may optionally project downwardly from the base 102 which when in use fits inside the container 120 to assist application to the container 120 and to make the attachment of the lid 101 to the container 120 more stable.

Preferably, the lid 101 comprises a horizontal surface 117. Such horizontal surface 117 can allow stacking of the cup/container onto the lid 101.

Preferably, the lid top may comprise a tapered surface or surface that is shaped in such a way that user can drink the liquid inside the container comfortably. The shape may be configured to suit the face or part of the face of the user that may come in contact with the lid top 119 during use.

As shown in figures 1-17, the lid 101 also has a spout 107 which can be moved between an open configuration and a closed configuration. The open

configuration is shown in figures 3, 4, 5, 6, 8, 9, 11, 14, 15 and 17 and a closed configuration is shown in figures 7, 10, 12, 13 and 16.

As can be seen for example in figures 3 and 9, the lid 101 has an aperture 108 which liquid can flow from. The aperture 108 may be considered a drinking aperture to allow a user to drink the contents of the container 120. A user can place their lips onto the lid surrounding the aperture 108 to allow cup/container 120 content to be poured through the aperture 108 into the mouth of the user. The width of the aperture 108 at the opening of the spout 107 is preferably about 26mm. The maximum extension of the opening of the spout 107 when in a drinking configuration (open configuration) is preferably about 7mm, however it may be between 4mm and 30 mm depending on the size of the container and/or spout 107. The spout 107 and aperture 108 have been adapted such that they may provide a natural flow of liquid when in use in the spout's open condition, with dimensions based around for example a typical mouth size of users, liquid volumes to escape and comfortable angles for the liquid to pour into a user's mouth. The difference in height between the two regions 104, 105, of the lid 101 creates a pitch which may allow liquid of the container 120 when in use to flow further into a user's mouth.

From the above description and from figures 1-17, it can be appreciated that, the spout 107 in the lid 101 of the present embodiment extends vertically or substantially vertically between and preferably from the lid top 119 to or towards the base 102.The spout 107 is formed on the elevated annular portion 103. This can be advantageous as it can allow easy release of a content especially thicker and more viscous liquids such as smoothies or milkshakes through its egress opening 108 without requiring additional articles such as straws. Such, vertical or substantially vertical orientation of the spout 107 can provide a functionality of an article such as a straw. The spout 107 extends along first region 104 of the elevated portion 103 that is in the form of an annular wall extending upwardly relative the lip or rim of the base 102. The aperture 108 faces towards the top of the lid 101.

Apart from the orientation and location of the spout 107, the structure and/or shape of the spout 207 may be same as the structure and/or shape of the spout at described in PCT Application No. PCT/IB2017/057397, the entirety of which is incorporated herein by reference.

Similarly, the hinge arrangement of the spout 107 at the periphery of the spout may also be same or at least similar as hinge arrangement of the spout as

described in PCT Application No. PCT/IB2017/057397, the entirety of which is incorporated herein by reference.

A first gripping portion 151a is formed on the elevated annular portion 103 at one side of the spout 107 and similarly a second gripping portion 151b is formed on the elevated annular portion 103 at another side of the spout 107 as shown in Figure 1. These gripping portions 151a, 151b may facilitate gripping and pressing or squeezing using a user's fingers as shown in figures 13 and 14

When the spout 107 is in a closed configuration the aperture 108 is closed. Preferably the closed aperture 108 creates a seal sufficient to help prevent liquid from the egressing from the aperture 108. The closed configuration may be achieved by applying force to the end 112 of the spout 107 in the direction of the arrow 160 as shown in figure 9. The seal is created between the end 112 of the spout 107 and the elevated portion 103 for example at the top portion 113 of the elevated portion 103. Once force is applied in that direction (shown by arrow 160), the aperture 108 is closed as shown in Figure 10. The force to close the aperture 108 may be applied to the end 112 of the spout 107 using user's finger (e.g. thumb) as shown in figures 11 and 12.

The spout 107 may be retained in its closed condition by a catch 111. When the spout 107 is in a closed configuration, the spout 107 may engage with the catch 111 as shown in the schematic figure 15. The way of manufacturing the catch 111 may be by a number of means, however in the preferred embodiment the catch 111 is an undercut formed in the elevated portion 103 at for example at the top portion 113 of the elevated portion 103. The end 112 of the spout 107 can lodge under the undercut when the spout 107 is in the closed condition. When the spout 107 is not retained by the catch 111, it can return to its open condition. In other embodiments the catch may be a flexible hook, barb, interference fit or many other similar element or device or feature.

When the spout 107 is in an open configuration the aperture 108 is open. The open configuration is shown in figures 3, 4, 5, 6, 8, 9, 11, 14 and 15. Applying a force or squeezing the lid towards the direction of the arrows 165a, 165b as shown in figure 13 results in the spout 107 moving from a closed configuration (shown in figure 13) to an open configuration as shown in figure 14. The end 112 moves relative to the rest of the lid in a direction away from elevated portion 103 (i.e. towards outward direction of the lid/container) to create the opening in the form of the aperture 108. In some embodiments of the present invention, applying a force or

squeezing the lid towards the direction of the either one of the arrows 165a, 165b may result in the spout 107 to move from the open configuration to the closed configuration. Therefore, in some embodiments of the present invention the spout 107 may be moved from an closed configuration to open configuration using force in either one or two points of the lid 101.

The preferred action of squeezing the annular base 102, or lid 101, or container 120, in a direction orthogonal to the direction of the spout 107, and towards the centre of the annular base 102, will have the effect of moving the catch 111 away from the end 112 of the spout 107. In one embodiment, where the container 120 is a circular rimmed cup, the effect of squeezing the container 120 to a more elliptical shape will move the catch 111 away from the end 112 so as to release from the spout 107. The spout 107 can then move or caused to be moved to its open configuration. Once the spout 107 is released from the catch 111, the spout 107 may be in the open configuration.

As shown in figures 13 and 14, a preferred method to open the aperture 108 is to apply a force at gripping portions 151a, 151b using user's fingers. In other words, the user may use his/her fingers to squeeze the lid 107 at the gripping portion 151a, 151b thereby applying a force on the lid 101 that causes the spout 107 to transition from a closed configuration to an open configuration. The force needs to be applied towards the centre of the annular base 102. In some embodiments of the present invention, the preferred method to open the aperture 108 is to apply a force at either one of the gripping portions 151a, 151b using user's fingers. In other words, the user may use his/her fingers to squeeze the lid 107 at either one of the gripping portion 151a, 151b thereby applying a force on the lid 101 that causes the spout 107 to transition from a closed configuration to an open configuration. As shown, the gripping portions 151a, 151b may comprise textured profile (hatched feature, preferably, cross-hatched feature) to facilitate gripping using user's fingers. Such textured profile on exterior surface of the gripping portion also provides visual indication to the user regarding the location of the gripping portions 151a, 151b. Such visual indication helps to minimise the risk of damage or accidental spillage of contents inside the container 120 due to application of force at the incorrect portion of the lid 107.

Another method of releasing the spout 107, is to pull the catch 111 away from the end 112. A further method of releasing the spout 107, is to pull up on the spout 107 and in order to facilitate pulling of the spout 107, the end 112 may comprise a tab (not shown). The tab may be similar to the tab as described in PCT

Application No. PCT/IB2017/057397 the entirety of which is incorporated herein by reference. The effect of pulling on the tab of the spout 107 will merely bend the spout 107 so that it can get out from underneath the catch 111.

The spout 107 and aperture 108 may be adapted such that they help to provide a natural flow of liquid when open and in use. The dimensions of the spout 107 and aperture 108 may be based around at least one of (a) typical mouth size of users (b) liquid volumes to escape and (c) comfortable angles for the liquid to pour into a user's mouth.

As shown in Figure 17, the lid 101 may optionally comprise air circulation hole 170 on lid top. Such air circulation hole 170 can help improve liquid flow. Air circulation hole 170 may assist in pressure regulation. The air circulation hole can also provide ventilation.

In use, a user places the annular rim of the base 102 around the circumference of a drinking edge of the container 120. If an inner annular wall is present, such inner annular wall is present inside the container such that a secure fit is made. A user can then decide whether to keep the spout 107 closed to transport the contained liquid and help maintain the temperature of the liquid or to open the spout 107 by either popping the spout 107 open or by applying force on the gripping portions 151a, 151b towards the direction of the inside of the container 120 which results in the spout 107 moving to a drinking or open configuration. Once the spout 107 is in the open or drinking configuration a user can drink the liquid contained within the container via the aperture 108. As the spout 107 can be opened and closed the user can either finish drinking all the liquid or close the spout 107 and drink the remaining liquid at a later point in time.

Therefore, it will be appreciated that the lid 101 comprises a formation in a non-peripheral region that is able to be pressed or already pressed, to a condition that at least substantially closes a flowable material egress opening (i.e. aperture 108). The formation is able to be released from that condition to allow material egress from the container via the material egress opening 108. The formation may be a spout 107.

It will be appreciated that the lid 101and its various parts can be produced in a range of different sizes. It will also be appreciated that the lid 101, can be made in a number of different ways such as injection formed, vacuum formed, compression molding, pressure forming, and hydro forming etc. The lid 101can also be made from

a number of different materials however most preferably the lid is made from plastic and most preferably a biodegradable plastic

In one preferred embodiment the lid 101 is made substantially from CPLA (crystallised polylactic) which is a compostable polymer. In another preferred embodiment, the lid 101is made substantially from PP (polypropylene). In another preferred embodiment the lid101is made substantially from PP (polypropylene) at 0.5 mm gauge. In another preferred embodiment, the lid 101 is made from Polyethylene (PET).

The opening of the spout 107 may be of many sizes. In the most preferred form the flow area is at around 1.2cm^2. A typical range may be 0.8cm^2 to 1.5cm^2.

The two diameters of the lid 101 may for example be, 'Regular' and 'Large' which are 80mm and 90mm respectively.

The lid 101has a number of benefits and advantages over known lids. It can be opened and closed by the user which minimises accidental spillage. When closed the spout also helps to maintain the temperature of the liquid in the container for longer. The lid is also user friendly as is easy to use and allows liquid to escape in a more ergonomic fashion when the spout is open. The lid 101 may comprise inner wall106 that makes the lid101 to container connection more secure than known lids. Although not shown in the Figures, projecting downwardly from or relative to the base 102 may be an annular internal extension which when in use fits inside a container. The extension is configured to assist application of the lid 102 to the container 120 and to make the attachment of the lid 102 to the container 120 more stable. The extension preferably has a snug fit inside the inside wall of the container. The extension may further aid in prevention of liquid leaking out between the container 120 and the lid 102, by creating a further seal between the extension and the inside wall of the container 120. The extension may be similar to the one as described in PCT Application No. PCT/IB2017/057397 the entirety of which is incorporated herein by reference.

The simple squeezing manner that allows the spout107to move/transition to its open configuration is an important aspect of at least some embodiments of invention. The simple squeezing manner can be performed with one hand, while the same hand can also be used to carry the container.

From the above description and the figures, it can be appreciated that an aspect of the present invention may reside in a lid 101 for closing an opening of a container 120 that is adapted to contain a flowable material. The lid 120 comprises a peripheral region and a non-peripheral region. The peripheral region engages, or able to engage, about, within, or both about and within, the container 120, and the non-peripheral region is located inwardly of the peripheral region.

The non-peripheral region has a formation (that is preferably a spout 107). The formation 107 is able to be pressed or already pressed, to a closed condition that at least substantially closes a flowable material egress opening 108 of the non-peripheral region. Similarly, the formation 107 is able to be released from the closed condition to an open condition to allow material egress from the container via the material egress opening 108. The peripheral region may be annular or substantially annular. The formation 107 extends from or proximal to a lid top to or towards a base of the lid with the material egress opening 108 facing towards the lid top or upwardly.

As shown, the material egress opening 108 may face towards the lid top or upwardly and not peripherally outwardly.

The base 108 may be an annular base adapted to detachably engage the rim of the container 120. The lid may further comprise an elevated portion 103 that is an elevated wall portion projecting upwardly from the annular base 102 as shown in the figures. The spout 107 may defines part of the material egress opening 108. As shown, the spout 107 may be formed on the elevated portion 103 of the lid 102 with the spout 107 extending along a first region 104 of the elevated portion 103 and upwardly relative the base 102. The formation may be biased to the open condition. The lid may comprise a catch 111 that is adapted to capture of part of the formation for retaining the formation in its closed condition. The catch 111 may be adapted to releasably receive part of the spout 107 when it is in a closed condition. The catch 111 may be located at the lid top. The catch 111 may be adapted to releasably receive part of the spout 107 when the spout 107 is in a closed condition. The spout 107 may be biased by the hinge to the open condition but prevented to moving to the open condition when the spout is received by the catch 111.

The material egress opening 108 may be in part arcuate as shown. As shown in Figures 11 and 12, applying the force on the formation towards the peripheral region may be adapted to cause the formation to transition from the open condition to the closed condition. The lid 101 may further comprises a first gripping portion

151a formed at one side of the formation 107 and a second gripping portion 151b formed on at another side of the formation 107. Squeezing of or pushing on at least one of the first and second gripping portions 151a, 151b may be adapted to cause the formation 107 to transition from the closed condition to the open condition. The first and second gripping portion 151a, 151b may comprise a textured profile to facilitate gripping using user's finger(s). Application of force by squeezing the elevated portion 103 may result in the spout 107, when in the closed condition, moving from the closed condition to the open condition. The lid 101 may further comprises a horizontal surface 117 to allow stacking of the container onto the lid 102.

The lid 101 may be arranged and formed such that when in use, with a container 120 containing a flowable material and the lid 101 is fitted to the container 120, a user is able to move the spout 107 between the closed condition which closes the open end of the container 120 such that the material is substantially prevented from escaping from the container 120 and an open condition which allows a user to pour the material contained within the container 120. In use, a user can squeeze the container 120 or the lid 101 which results in the spout 107 moving from the closed condition to the open condition. The lid 101 may further comprises an air circulation hole 170 for improving the fluid flow.

The elevated portion 103 may be greater in height above the base 102 in a first side wall portion (i.e. the first region 104) than a diametrically opposed second side wall portion (i.e. the second region 105). The first side wall portion (i.e. the first region 104) may be about 10mm in height and the second side wall portion (i.e. the first region 104) may be about 8mm in height above the base. The elevated portion 103 may be adapted and configured to releasably engage with the spout 107 when the spout 107 is in the closed condition.

The lid 101 may be made from material(s) which is/are biodegradable. The lid 107 may be made substantially from biodegradable plastic. The lid 107 may be adapted to be in use with the container. The container may be a disposable hot beverage container.

From the above description, it can be appreciated that in one aspect the present invention may reside in a lid 101 to releasably engage to the rim of an open topped cup or container 120. The lid 101 may comprise a lip engaging, or able to engage, about, within or both about and within the rim of the container 120. The lid may also comprise an annular wall (i.e. elevated portion 103) extending upwardly

relative the lip. The lid 101 may also comprise a lid top 119 at the top of the annular wall. The annular wall (i.e. elevated portion 103) may present an elongate formation in the form of a spout 10. The end of the spout 107 is elevated at or above the lid top (see for example Figure 6, 15, 16) and defines a closable opening (i.e. material egress opening 108) with and at the lid top via which material in the container 120 can egress. The formation is separated at least partially from the remainder of the annular wall (preferably by a live hinge) to allow:

i. the spout 107 to be depressed e.g., towards the annular wall (i.e. elevated portion 103) to cause the end of the spout 107 to contact the lid top to thereby close the closable opening (i.e. material egress opening 108), and

ii. the annular wall to be compressed in a direction lateral to the elongate direction of the formation to move the spout 107 away from the annular wall (i.e. elevated portion 103) to thereby open the closable opening. As shown, the formation 107 may extend from or proximal to a lid top to or towards a base 102 of the lid 102 with the closable opening (i.e. material egress opening 108), facing towards the lid top or upwardly.

The end of the spout 107 may have an edge that defines the periphery of the closable opening (i.e. material egress opening 108), with an edge of the lid top. The edge of the spout 107 and the edge of the lid top (i.e. material egress opening 108), may commensurate each other when the closable opening (i.e. material egress opening 108), is closed.

Although in the preferred embodiments the lid 101 is for a container it will be appreciated by those skilled in the art that the lid 101could be used on other items for example the lid 101 could be used for any type of container which has an open top which flowable material such as a liquid or granular solids (e.g. sugar) or paste or sauce or the like is poured out of.

It will be appreciated that having a spout 107 and aperture108, of a particular shape/structure as shown in the drawings is advantageous as such triangular and convex shape/structure does not allow ice cubes to fully block flow of liquid from the aperture108. Further such shape/structure is adapted to suit drinking thicker or more viscous liquids such as smoothies or milkshakes. Further, since the spout 107 extends from or proximal to a lid top to or towards a base of the lid with the material egress opening 108 facing towards the lid top (i.e. is oriented vertically or substantially vertically and not horizontally), the container need not be tilted too much to pull the contents/liquids out from the container through the opening of the spout 107. Also, such orientation of the spout 107 facilitates releasing of the

contents from the container 120 through the egress opening 108 without needing additional articles like straws or similar. Therefore, due to its orientation as shown in the drawings and as described above, the spout 107 of the lid 101 can provide similar functionality as a straw and can be used to easily release thicker and more viscous liquids such as smoothies or milkshakes through its egress opening 108.

It is to be understood that even though numerous characteristics and advantages of the various embodiments of the present invention have been set forth in the foregoing description, together with details of the structure and functioning of various embodiments of the invention, this disclosure is illustrative only, and changes may be made in detail so long as the functioning of the invention is not adversely affected. For example. the particular elements of the lid 101 such as the base 102, internal wall 106 elevated portion 103, spout 107 and tab may vary dependent on the particular application for which it is used without variation in the spirit and scope of the present invention.

Where in the foregoing description reference has been made to elements or integers having known equivalents, then such equivalents are included as if they were individually set forth.

Although the invention has been described by way of example and with reference to particular embodiments, it is to be understood that modifications and/or improvements may be made without departing from the scope or spirit of the invention.

CLAIMS:

1. A lid for closing an opening of a container that is adapted to contain a flowable material, the lid comprising a peripheral region engaging, or able to engage, about, within, or both about and within, the container, and

a non-peripheral region inwardly of the peripheral region;

wherein the non-peripheral region has a formation, the formation being

i. able to be pressed or already pressed, to a closed condition that at least substantially closes a flowable material egress opening of the non-peripheral region, and

ii. able to be released from the closed condition to an open condition to allow material egress from the container via the material egress opening,

wherein the formation extends from or proximal to a lid top to or towards a base of the lid with the material egress opening facing towards the lid top or upwardly.

2. A lid as claimed in claim 1, wherein the formation is a spout.

3. A lid as claimed in claim 2, wherein the base is an annular base adapted to detachably engage the rim of the container.

4. A lid as claimed in claim 3, wherein and lid further comprises an elevated portion that is an elevated wall portion projecting upwardly from the annular base.

5. A lid as claimed in claim 4, wherein the spout defines part of the material egress opening, the spout being formed on the elevated portion of the lid with the spout extending along a first region of the elevated portion and upwardly relative the base.

6. A lid as claimed in any one of the preceding claims, wherein the peripheral region is annular or substantially annular.

7. A lid as claimed in any one of the preceding claims, wherein the formation is biased to the open condition.

8. A lid as claimed in any one of the preceding claims, wherein the lid comprises a catch that is adapted to capture of part of the formation for retaining the formation in its closed condition.

9. A lid as claimed in any one of the preceding claims, wherein the material egress opening is in part arcuate.

10. A lid as claimed in any one of the preceding claims, wherein the lid further comprises a first gripping portion formed at one side of the formation and a second gripping portion formed on at another side of the formation, wherein squeezing of or pushing on at least one of the first and second gripping portions is adapted to cause the formation to transition from the closed condition to the open condition.

11. A lid as claimed in claim 10, wherein each of the first and second gripping portions comprises a textured profile to facilitate gripping using user's finger(s).

12. A lid as claimed in any one of the preceding claims, wherein applying the force on the formation towards the peripheral region is adapted to cause the formation to transition from the open condition to the closed condition.

13. A lid as claimed in any one of the preceding claims, wherein the lid further comprises an air circulation hole for improving the fluid flow.

14. A lid as claimed in any one of the preceding claims, wherein the lid further comprises a horizontal surface to allow stacking of the container onto the lid.

15. A lid as claimed in claim 2 or to any one of claims 3 to 14 when appended to claim 2, wherein the lid is arranged and formed such that when in use, with a container containing a flowable material and the lid is fitted to the container, a user is able to move the spout between the closed condition which closes the open end of the container such that the material is substantially prevented from escaping from the container and an open condition which allows a user to pour the material contained within the container and also wherein in use the lid is adapted such that a user can squeeze the container or the lid which results in the spout moving from the closed condition to the open condition.

16. A lid as claimed in any one of claims 4, wherein the elevated portion is greater in height above the base in a first side wall portion than a diametrically opposed second side wall portion.

17. A lid as claimed in claim 16, wherein the first side wall portion is about 10mm in height and the second side wall portion is about 8mm in height above the base.

18. A lid as claimed in any one of the preceding claims, wherein the lid has an inner annular wall adapted to engage with the inside wall of a container.

19. A lid as claimed in claim 4, wherein the elevated portion is adapted and configured to releasably engage with the spout when the spout is in the closed condition.

20. A lid as claimed in any one of claims 1 to 7 or to any one of claims 9 to 19 when those claims are appended to any one of claims 1 to 7, wherein the lid comprises a catch which is adapted to releasably receive part of the spout when it is in a closed condition.

21. A lid as claimed in claim 20, wherein the catch is located at the lid top.

22. A lid as claimed in claim 20 or 21, wherein the catch is adapted to releasably receive part of the spout when the spout is in a closed condition, the spout being biased by the hinge to the open condition but prevented to moving to the open condition when the spout is received by the catch.

23. A lid as claimed in any one of the preceding claims, wherein the lid made from material(s) which is/are biodegradable.

24. A lid as claimed in any one of the preceding claims, wherein the lid is made substantially from biodegradable plastic.

25. A lid as claimed in any one of the preceding claims, wherein the lid is adapted to be in use with the container.

26. A lid as claimed in claim 25, wherein the container is a disposable hot beverage container.

27. A lid as claimed in claim 1, wherein application of force by squeezing the elevated portion results in the spout, when in the closed condition, moving from the closed condition to the open condition.

28. A lid to releasably engage to the rim of an open topped cup or container, the lid comprising:

a. a lip engaging, or able to engage, about, within or both about and within the rim of the container,

b. an annular wall extending upwardly relative the lip,

c. a lid top at the top of the annular wall, the annular wall presenting an elongate formation in the form of a spout raised out from the annular wall, the end of which is at or elevated above the lid top and defines a closable opening with and at the lid top via which material in the container can egress, the formation separated at least partially from the remainder of the annular wall to allow:

i. the spout to be depressed towards the annular wall to cause the end of the spout to contact the lid top to thereby close the closable opening, and

ii. the annular wall to be compressed in a direction lateral to the elongate direction of the formation to move the spout away from the annular wall to thereby open the closable opening.

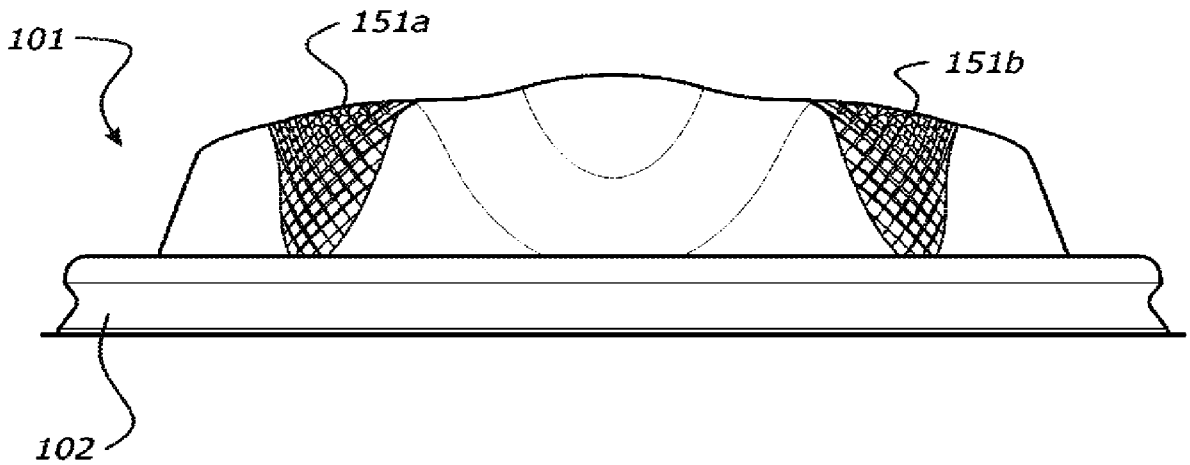

FIGURE 1

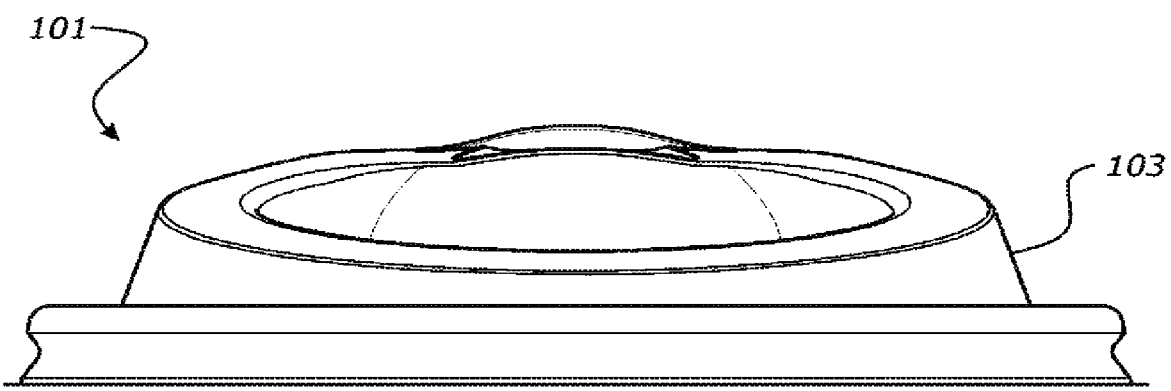

FIGURE 2

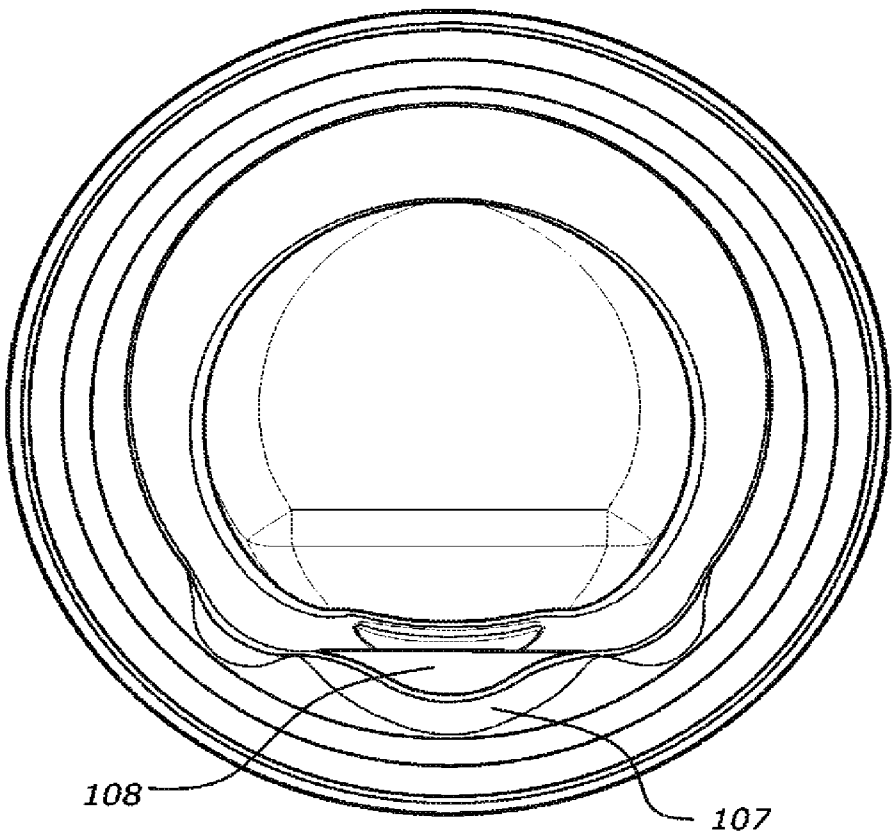

FIGURE 3

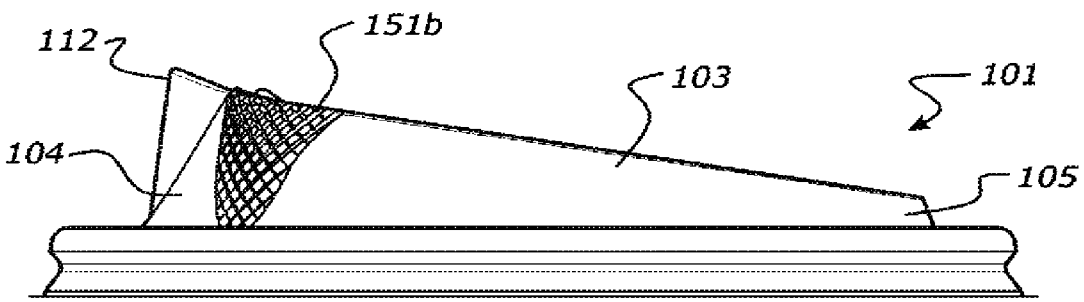

FIGURE 4

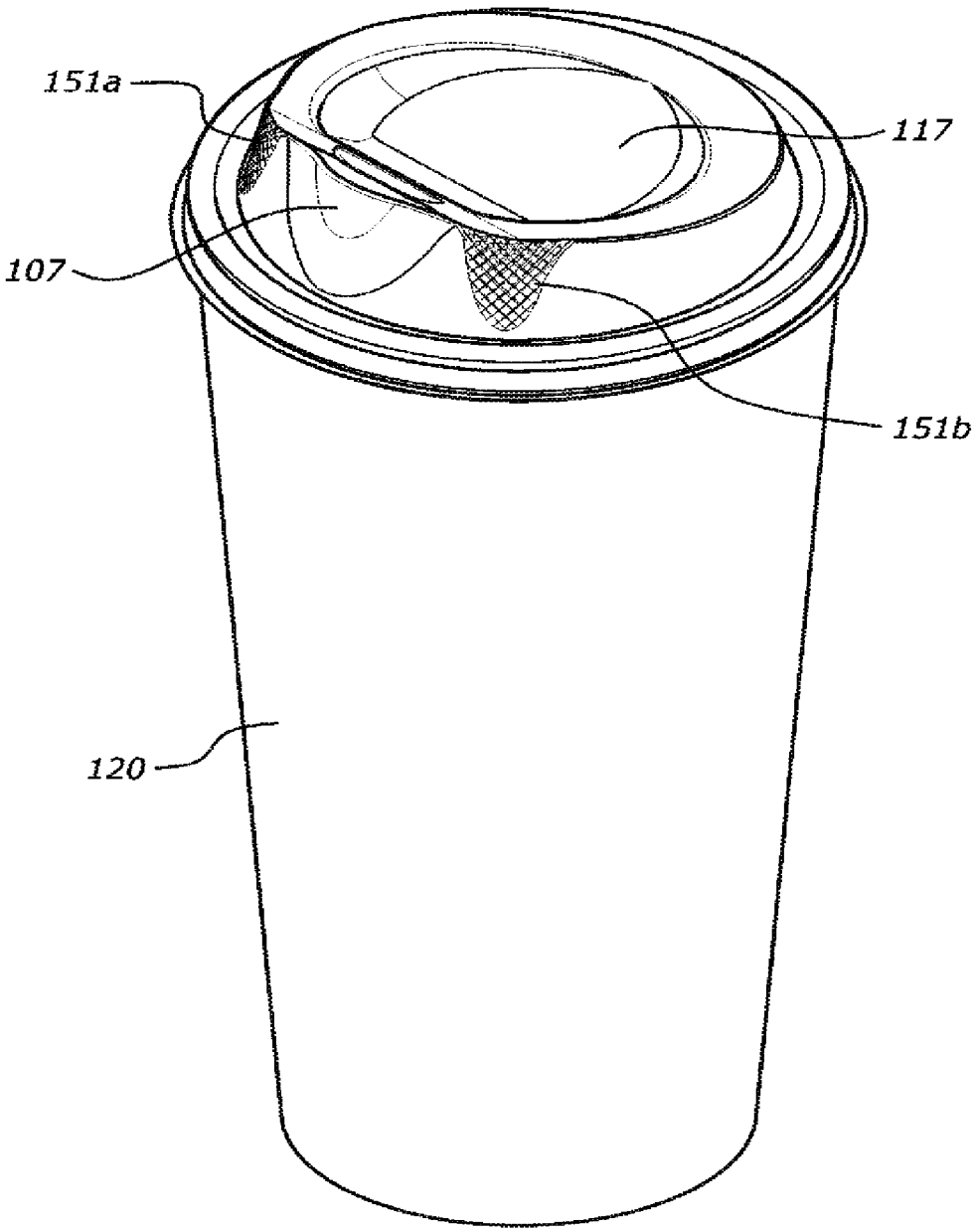

FIGURE 5

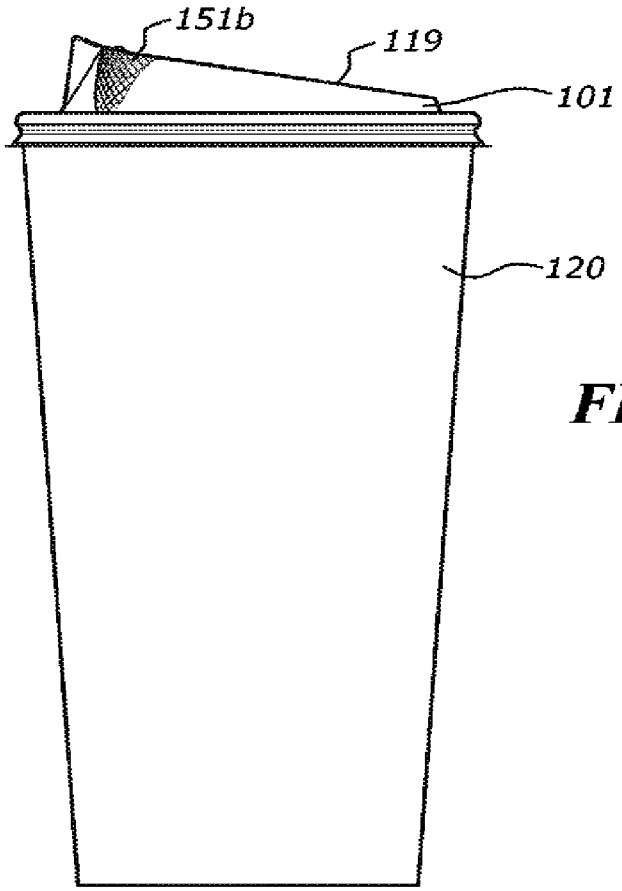

FIGURE 6

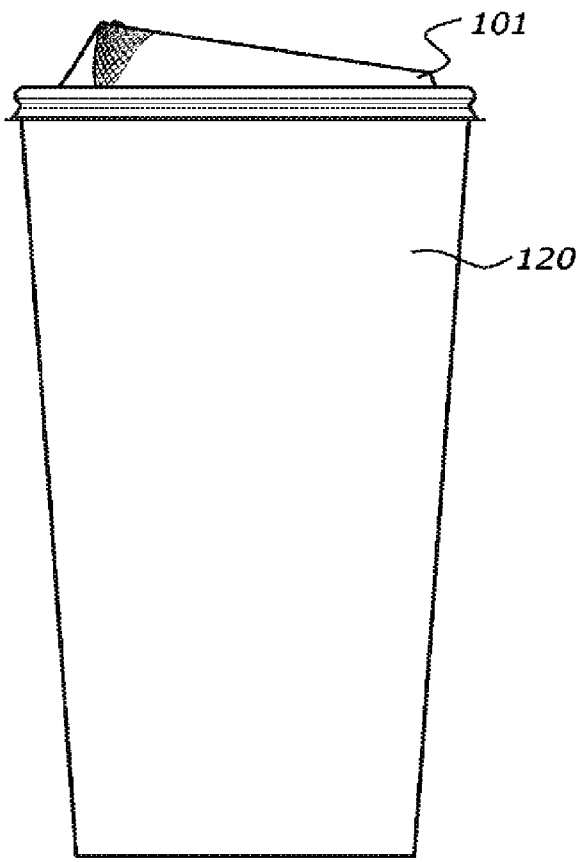

FIGURE 7

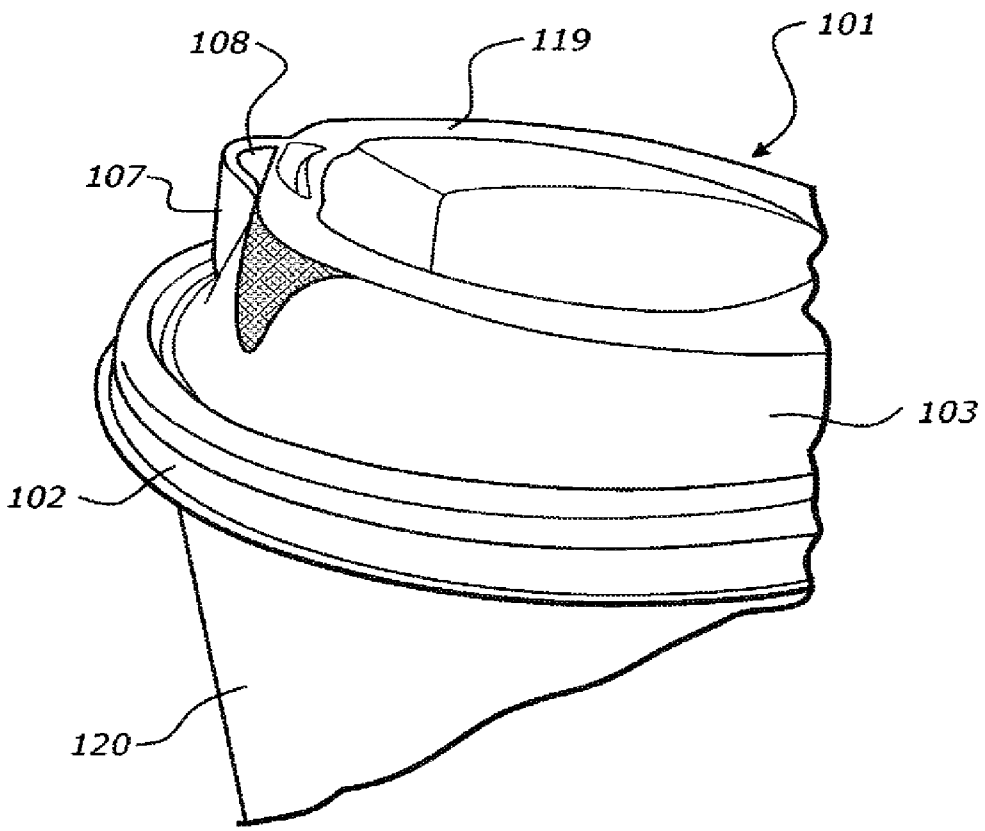

FIGURE 8

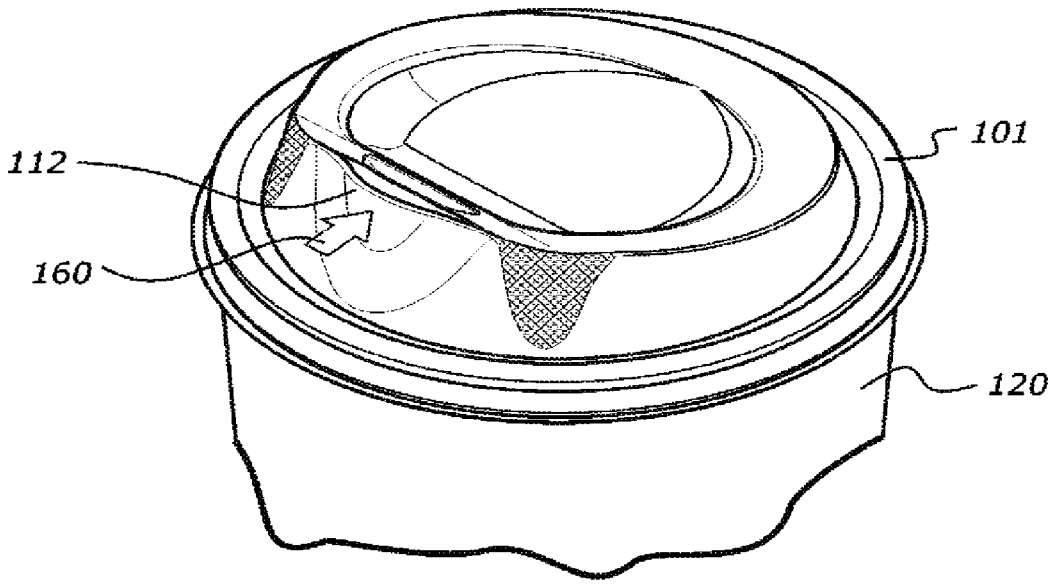

FIGURE 9

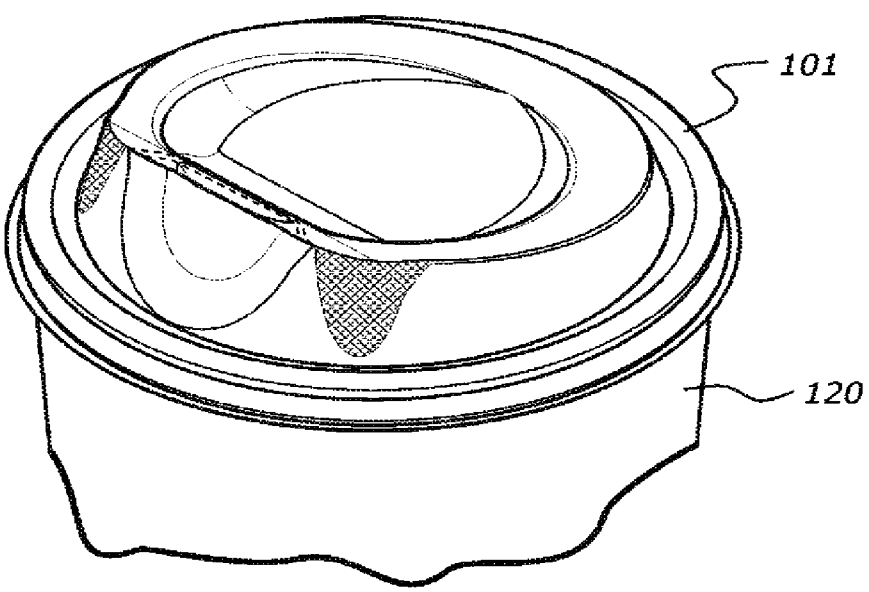

FIGURE 10

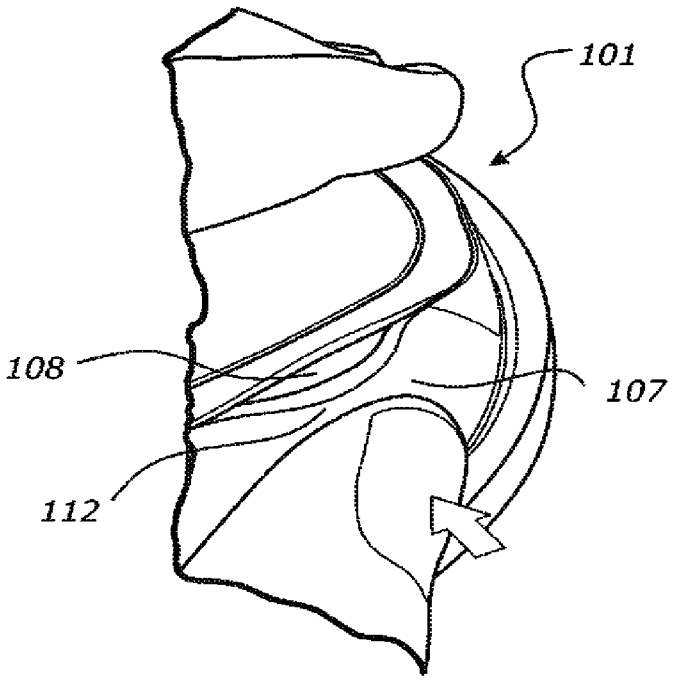

FIGURE 11

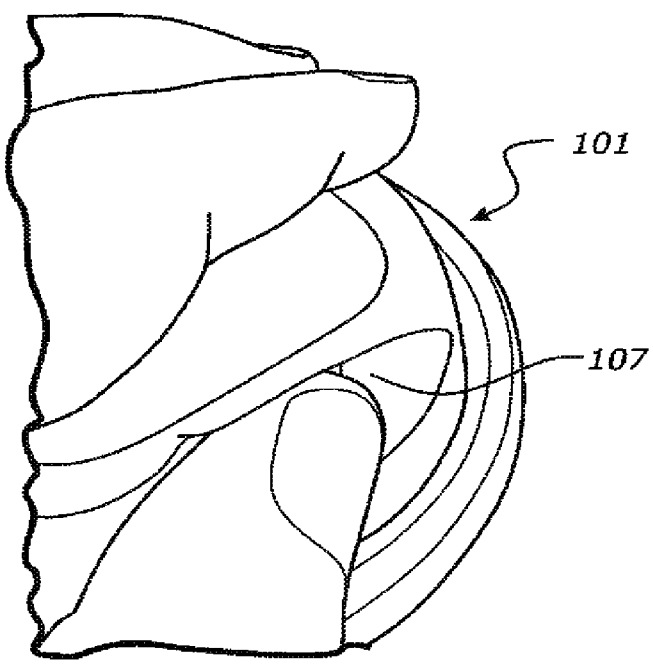

FIGURE 12

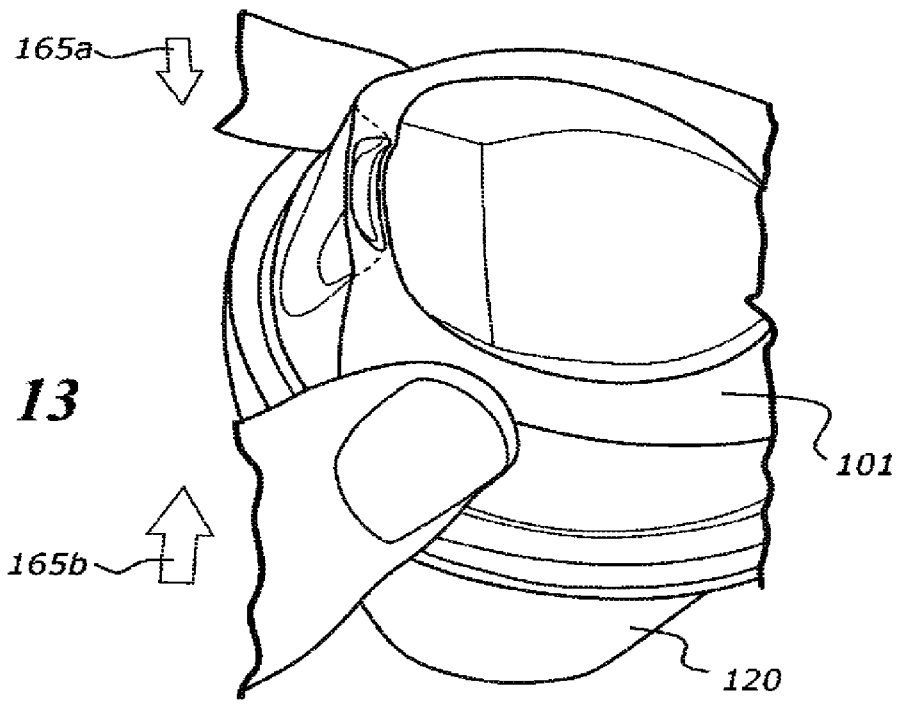

FIGURE 13

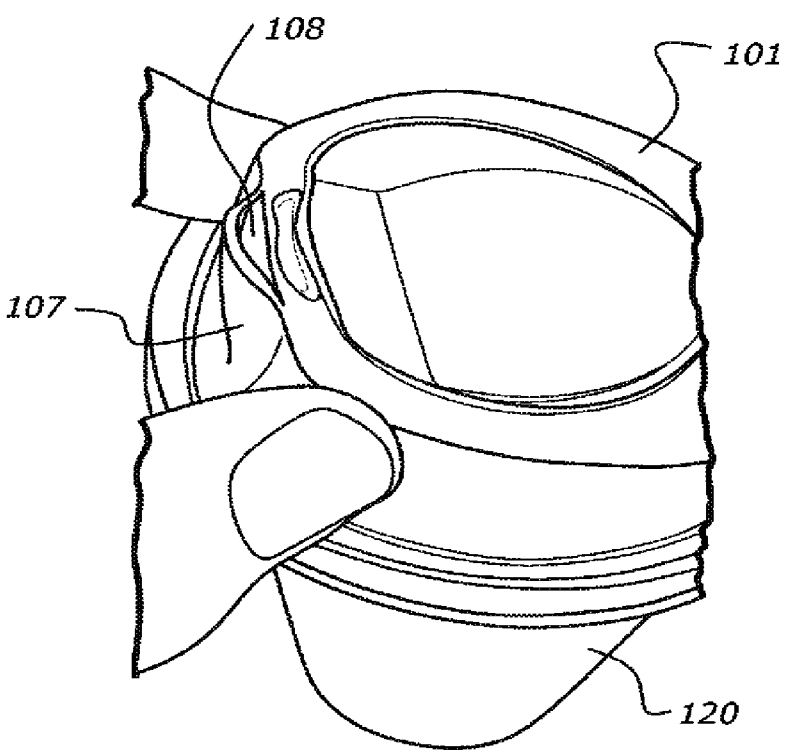

FIGURE 14

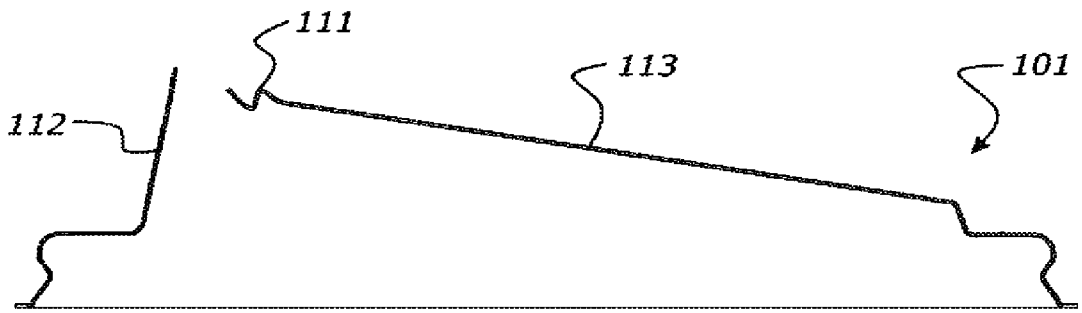

FIGURE 15

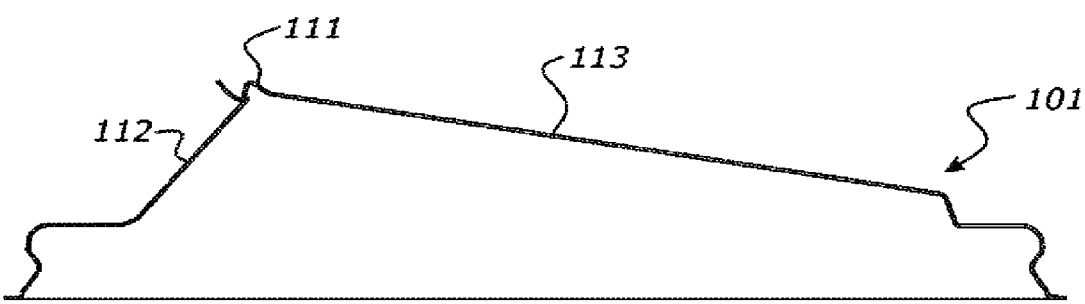

FIGURE 16

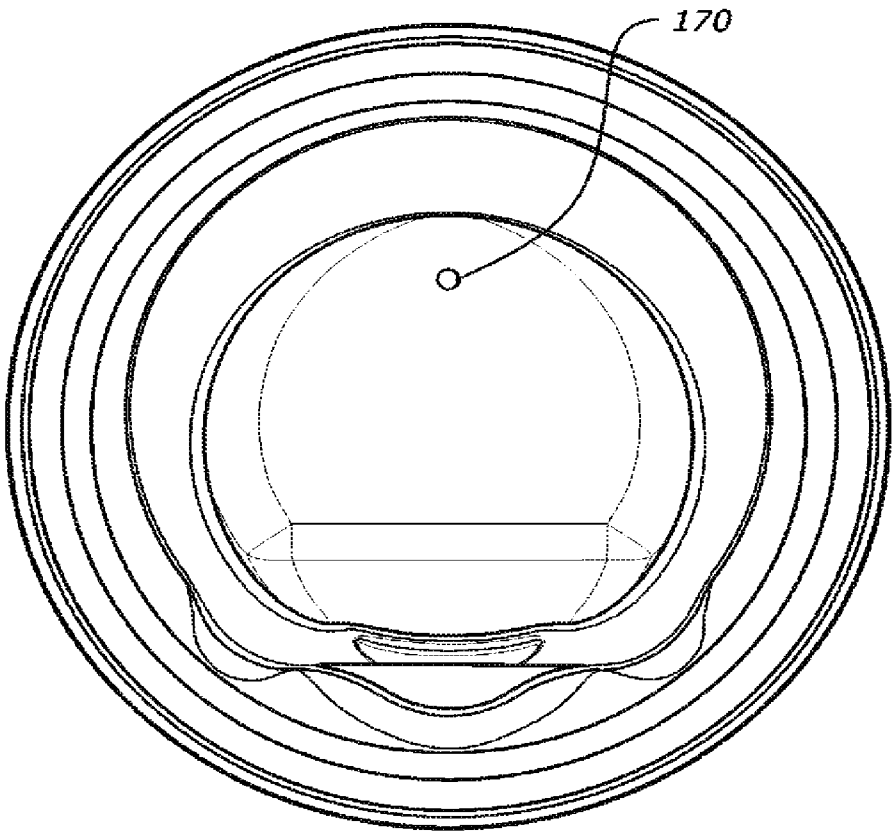

FIGURE 17

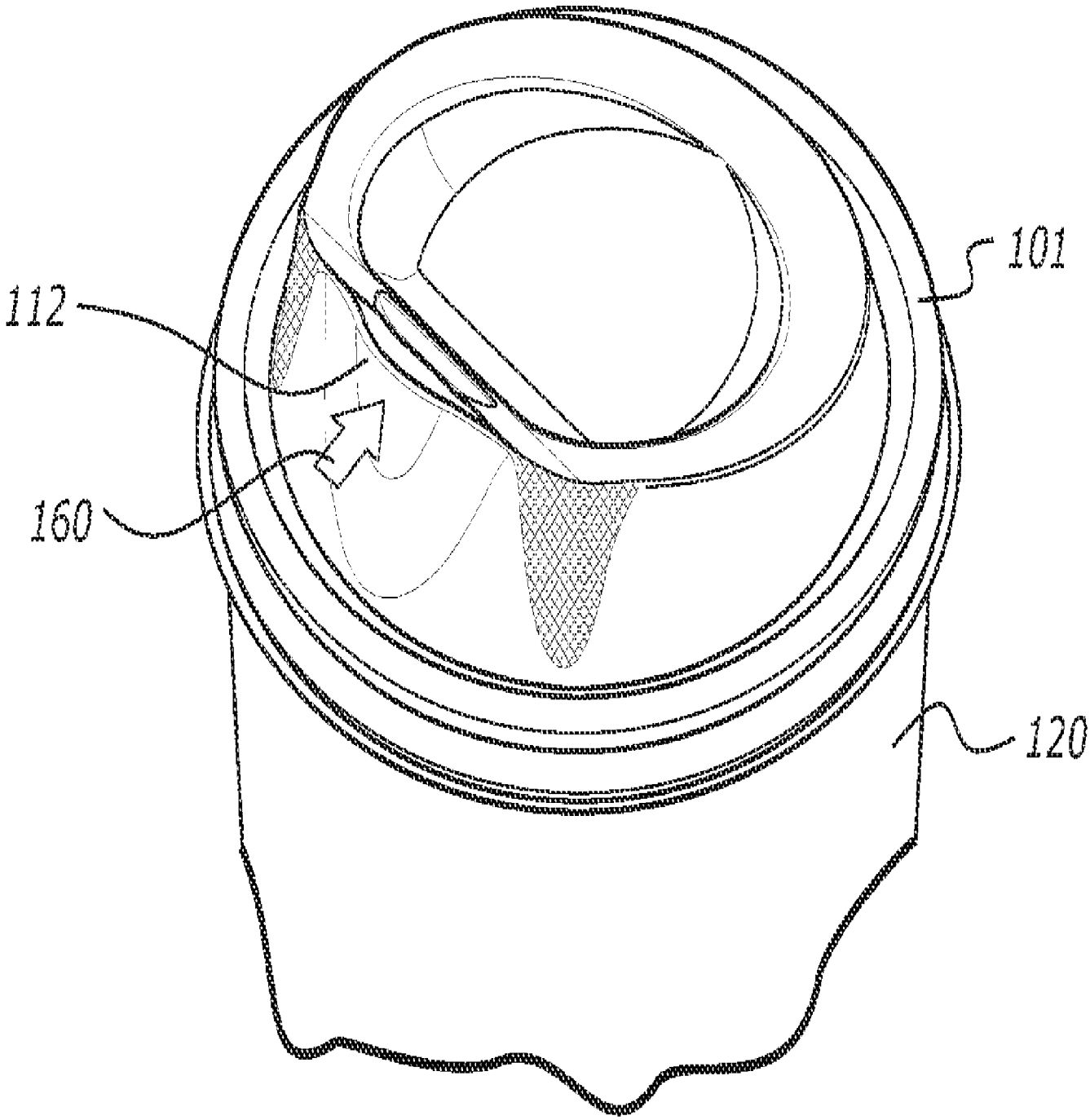

FIGURE 9