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(54) **LID FOR A BEVERAGE CAN**

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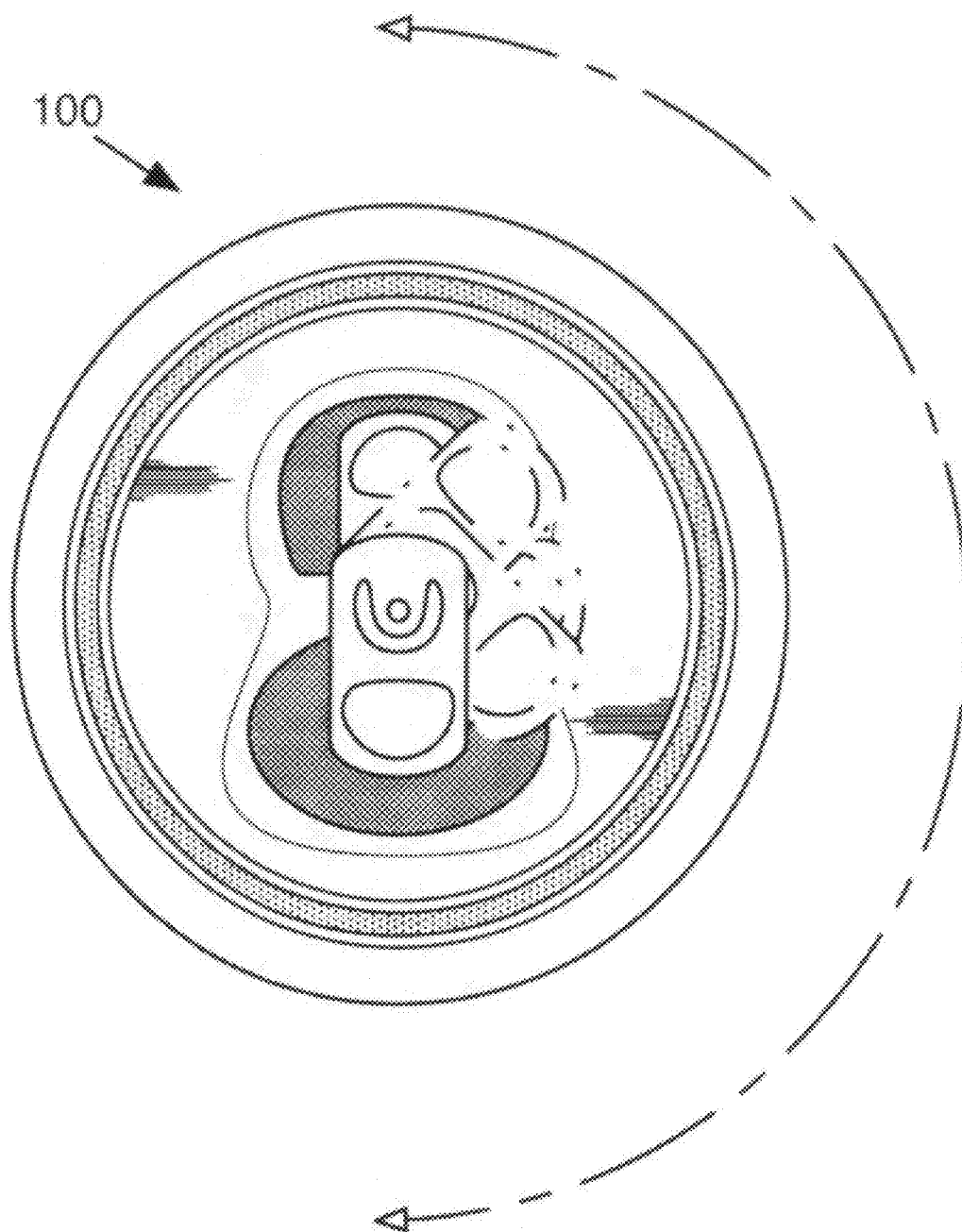
(57) **ABSTRACT**

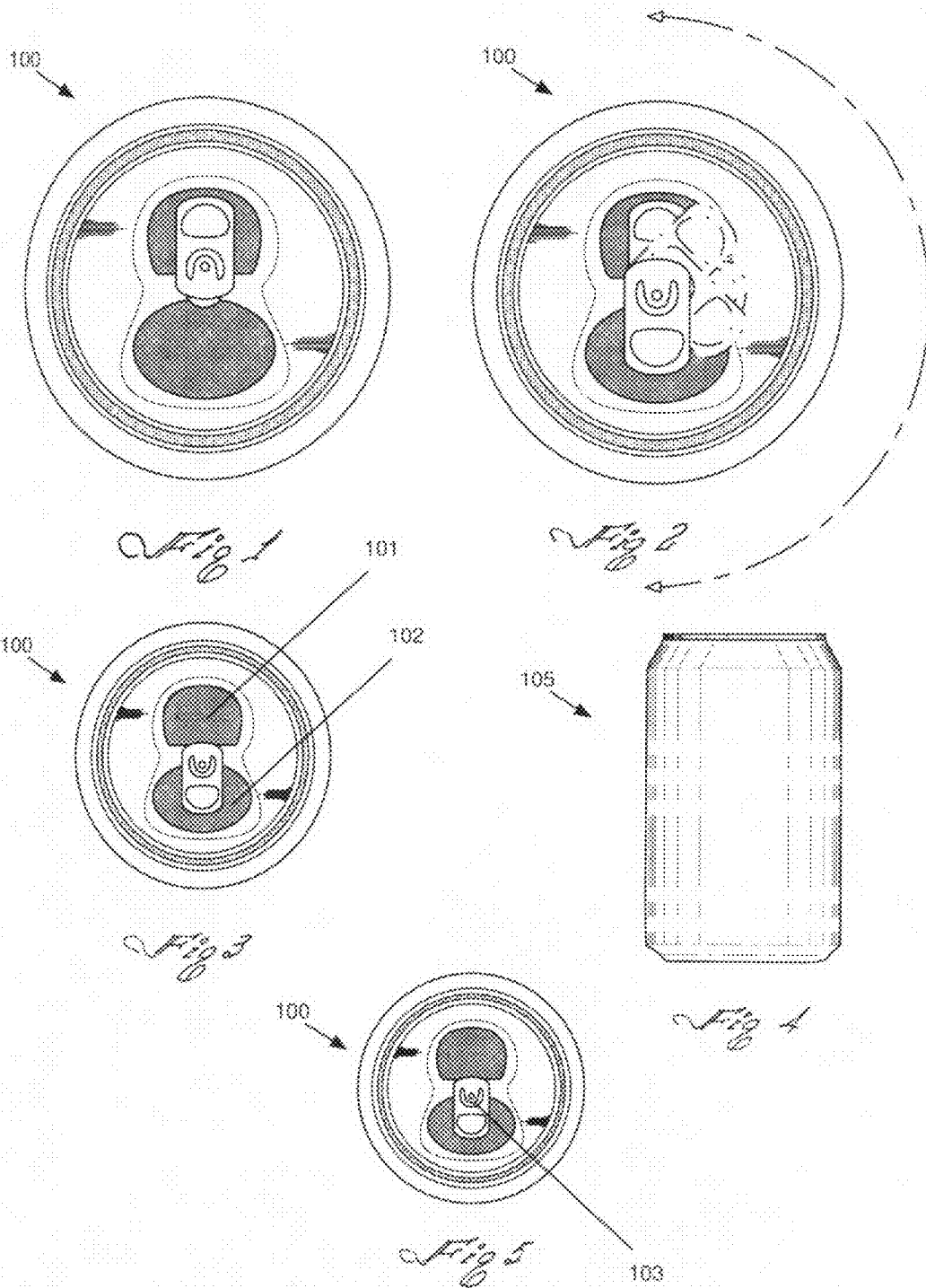
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An Improved Beverage Can Lid comprises a pressure relief orifice, and a beverage orifice. The tab can be turned around about 180° in order to open the pressure relief orifice. The Improved Beverage Can Lid is affixed to the top of the beverage can body.





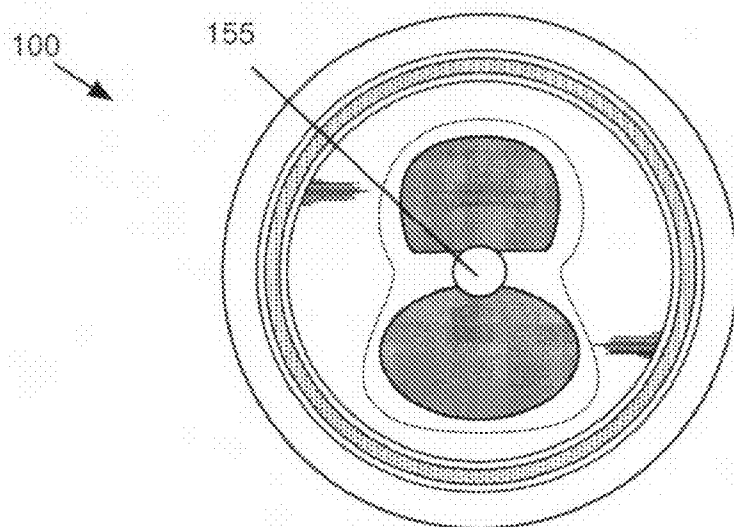


Fig 6

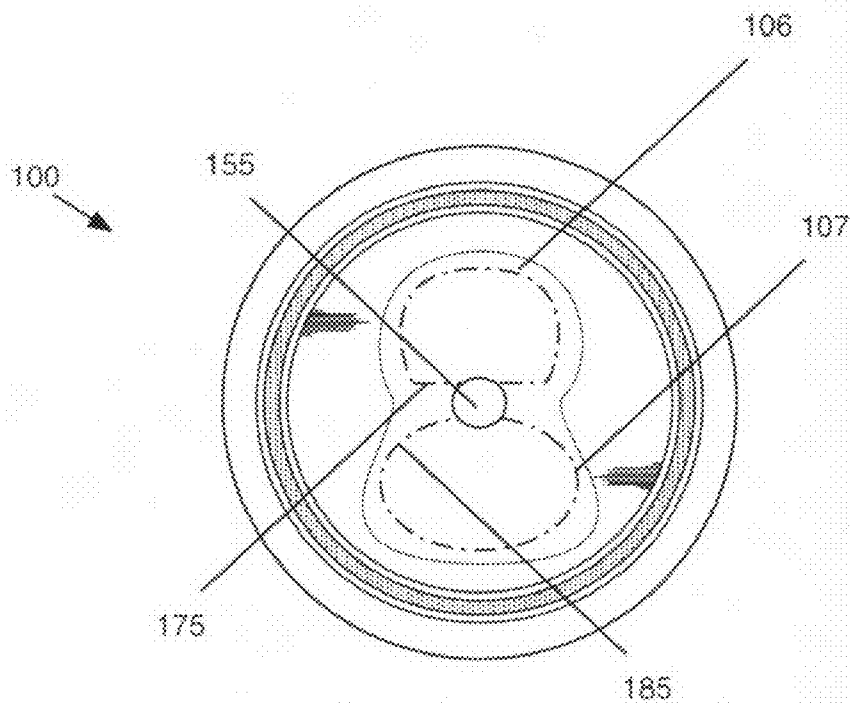


Fig 7

LID FOR A BEVERAGE CAN

FIELD OF THE INVENTION

[0001] The present invention is in the area of beverage cans, and more particularly pertains to an improved beverage can lid.

BACKGROUND OF THE INVENTION

[0002] In modern days, one of the impediments to drinking various beverages from aluminum cans is air pressure. The flow of beverage from an aluminum can is slowed and restricted in part because there is no auxiliary entry point for surrounding air outside of the can to enter into the can when the contents are being extracted (ie drinking directly from the can). When the extraction orifice is in use the user's mouth will additionally create a barrier and prevent ambient air from entering into the can. In other words, the only way surrounding air can enter into the beverage can is from the same orifice from which the fluids pour.

[0003] Since the early 1900s when beverage cans were first put in use, cans were designed with two openings. One opening was used to extract the content in the can while the other opening was used to allow sufficient air exchange so the contents of the can flow freely and unrestricted. In time beverage cans have lost the ability of this second opening which has made drinking or pouring from these cans restricted and agitated. Modern day standard stay-on-tab can lids are generally made up of one scored circular or oval (iwide mouth) section (extraction orifice) with a fulcrum type lifting tab that is attached by a 3 mm rivet.

[0004] In order to increase the flow of beverages out of aluminum cans (or similar containers), some people have used screwdrivers, or other devices to puncture a hole into a can. This puncture acts as a pressure relief valve which allows various gases and air to exit and enter the can from both the puncture hole as well as the typical hole through which the beverage flows into a person's mouth or into a container such as a glass or a stein.

[0005] Unfortunately, the use of screwdrivers or knives can be clumsy, awkward, and dangerous in the use of creating a pressure relief orifice. One of the problems with this method is that residual moisture on the outer surface of a can render the can slippery. And a sharp metal object can easily glance off the surface and potentially cause a serious cut to one's hand.

[0006] Therefore, what is clearly needed in the art is an apparatus which safely and effectively facilitates an improved fluid and gas exchange into and out of the beverage can.

SUMMARY OF THE INVENTION

[0007] It is an object of the present invention to provide simple and cost effective improvement for a beverage can lid to enhance the flow of the contents of a stay-on-tab can lid. This is achieved through a second pressure relief orifice which is diametrically opposed from the typical beverage orifice on the beverage can lid. The stay-on-tab which is enhanced by a multiple purpose enlarged rivet is used to open both orifices simply by rotating the tab approximately 180° and pulling up.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

[0008] FIG. 1 is a plan view of a preferred embodiment of the present invention.

[0009] FIG. 2 is a plan view of a preferred embodiment of the present invention.

[0010] FIG. 3 is a plan view of a preferred embodiment of the present invention.

[0011] FIG. 4 is a side-elevation view of a preferred embodiment of the present invention.

[0012] FIG. 5 is a plan view of a preferred embodiment of the present invention.

[0013] FIG. 6 is a plan view of a preferred embodiment of the present invention.

[0014] FIG. 7 is a plan view of a preferred embodiment of the present invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

[0015] According to a preferred embodiment of the present invention, an improved beverage can lid is used to facilitate an improved fluid and gas exchange into and out from a beverage can. The present invention is described in enabling detail below.

[0016] For the purposes of the present invention, the term "scoring" shall mean a perforation into the aluminum or other material in order to facilitate a smooth puncturing or opening of an orifice. For the purposes of the present invention, the term "rivet" shall refer to a circular member for use in affixing the tab of a can to the can itself. The rivet enables the tab to rotate about an axis near the center of the can lid.

[0017] The present invention implements a standard stay-on-tab can lid for use with all size beverage can lids. It is improved by adding a scored section in the rear of the can lid to make a second orifice for pressure relief or air access. The second orifice is opened with the same fulcrum-style tab used for opening the extraction orifice in the front of the can lid. The tab is unrestricted to a 360° rotation. As such, the user has the option to open either the extraction orifice, the pressure relief orifice, or both of them at the same time for best usage. The pressure relief orifice is similar to the extraction orifice in design just located diametrically opposed on the beverage can lid. Ideally, the pressure relief scored section would be any version of a rounded shape that would be large enough for a can tab to open.

[0018] FIGS. 1-6 illustrate a preferred embodiment of the present invention. An Improved Beverage Can Lid 100 comprises a pressure relief orifice 101, and a beverage orifice 102. As illustrated in FIGS. 2-3, the tab 103 can be turned around about 180° in order to open the pressure relief orifice 101. The rivet 155 is enlarged and positioned in the center such that the edges of the rivet 155 can open the pressure relief orifice 101 and the beverage orifice 102 by puncturing the first scoring 106 and the second scoring 107 respectively. The Improved Beverage Can Lid 100 is affixed to the top of the beverage can body 105.

[0019] The beverage can lid orifices are made from two different scored sections, the pressure relief orifices scoring 106 and extraction orifice scoring 107. These scorings are used to weaken the beverage can lid so the opening tab 103 can be rotated into position to puncture and open each scoring respectively. The enlarged rivet 155 is positioned in the center such that the opening tab 103 can be rotated to open the pressure relief orifice 101 and the extraction orifice 102. FIG. 2 illustrates how a user can rotate the stay-on-tab 180° to engage each of the two orifices separately.

[0020] It should be noted here that in some preferred embodiments, the tab 103 may have to be placed in a location

in which the tab may be positioned such that it may be able to puncture and open both orifices. As such, the location of the tab **103**, as well as its location will also depend in part upon the size, shape, and dimensions of the tab itself.

[0021] The tab is based of a standard beverage can stay-on-tab class 1 lever opener with modifications made to accommodate the larger rivet size. The Stay-on-tabs fulcrum point being the attachment spot to the rivet nearest the load side. The effort side (or handle) is the longer side of the tab which the operator uses to lift up and apply extreme pressure to the load side (or opener) which is the shorter side used to puncture and then push open the score sections in the can lid.

[0022] To open an orifice, the operator rotates the opener end of the tab in the direction of the orifice they would like to open then pulls up on the handle side. Once this is done and the orifice has been opened the operator then presses the tab back down on the handle side to the starting position. Then if the operator chooses to open the second orifice they simply rotate the tab roughly 180° and duplicate the process.

[0023] FIG. 6 illustrates that in some preferred embodiments, the pressure relief orifice **101** can be made from a first scoring **106**, and a second scoring **107**. This scoring is essentially a perforation made into the aluminum or other material of the lid in order to enable the tab to puncture and open the pressure relief orifice **101**. It should be noted that in FIGS. 5-6 the tab **103** has been removed for illustrative purposes in order to illustrate the scorings.

[0024] The rivet **155** is enlarged and positioned such that one end is positioned over the bottom of the first score **175** and the top of the second score **185**. This positioning enables the tab to be rotated in such a manner such that the tab can puncture and open both orifices.

[0025] An enlarged rivet is used to create a greater axis of rotation for the tab. In turn, the resulting design of the dual orifice is realistically functional due in fact to the fulcrum style opener of the stay-on-tab which opens each orifice at the point nearest the rivet first, then outward from there. Consequently, by increasing the rivet size the distance of separation between the extraction orifice and the pressure relief orifice is subsequently increased.

[0026] The enlarged rivet greatly reduces spillage and allows an unrestricted flow of air into the can through the

pressure relief orifice when the contents of the beverage can is being extracted out through the extraction orifice in the lid. The enlarged rivet greatly strengthens the design of the fulcrum-style opener by allowing for more room for the tab to be attached to the enlarged rivet which makes the tab more suitable for the purpose of opening two orifices instead of one.

[0027] The enlarged rivet also strengthens the center section of the beverage can lid where the rivet is present. If need be, the additional room is created by the enlarged rivet to create adequate room for strengtheners to give the beverage can lid the strength to handle the load of opening two scored sections in the beverage can lid. The rivet size is generally doubled the standard beverage can rivet but can range from a 4 mm to 15 mm circular rivet depending on the beverage can lid size and design of the two orifices themselves.

[0028] It should be noted here that in some preferred embodiments, the tab **103** may have to be placed in a location in which the tab may be positioned such that it may be able to puncture and open both orifices. As such, the location of the tab **103**, as well as its location will also depend in part upon the size, shape, and dimensions of the tab itself. It should also be noted that in some preferred embodiments, the pressure relief orifice **101** may be pre-made into the beverage can lid. This orifice may be sealed through use of an adhesive strip or similar mechanism.

[0029] It will be apparent to the skilled artisan that there are numerous changes that may be made in embodiments described herein without departing from the spirit and scope of the invention. As such, the invention taught herein by specific examples is limited only by the scope of the claims that follow.

What is claimed is:

1. An Improved lid for a beverage can comprising:
 - a pressure release orifice, a beverage orifice, and an enlarged rivet;
 - the pressure relief orifice is comprised of a scoring; the enlarged rivet is positioned such that it is disposed near the pressure relief orifice and the beverage orifice.

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