LID FOR BEVERAGE CONTAINER

Inventor: Anna-Maria S. Arnljots, Logan, UT (US)

Correspondence Address:
KELLEY DRYE & WARREN LLP
3050 K STREET, NW
SUITE 400
WASHINGTON, DC 20007 (US)

Appl. No.: 11/512,151
Filed: Aug. 30, 2006

Related U.S. Application Data
Provisional application No. 60/712,092, filed on Aug. 30, 2005.

ABSTRACT
Applicant has developed a novel lid assembly. According to at least one embodiment of the invention, a lid for use in conjunction with a beverage container comprises: a plastic molding of circular footprint with a first inverted U-channel feature at its perimeter which engages the lip of a container. The outermost wall of the channel incorporates a plurality of molded, rolled, or similarly created, inwardly facing latch features at its boundary that engage reentrant detailing on the underside of the container's lip. The lid is detached from the container by the purposeful disengagement of said latch details from the lid.
LID FOR BEVERAGE CONTAINER

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present invention relates to, and is entitled to the benefit of the earlier filing date and priority of U.S. Application Ser. No. 60/712,092 filed Aug. 30, 2005.

FIELD OF INVENTION

[0002] The present invention relates to a lid for use with a beverage container and in particular, to a lid that may be used with a disposable beverage container.

BACKGROUND

[0003] The use of a molded plastic lid to cover and seal the top of a beverage container is well documented. The known lids, with varying degrees of success, provide spill and leak resistance of the contained fluid, air venting, sealing capability enabling the content's intermittent consumption, and the prevention of foreign bodies entering the beverage.

[0004] U.S. Pat. No. 4,756,440 ("the 440 patent") to Gartner, issued Jul. 12, 1988, describes a non-vented lid having a deformable planer cover surface that incorporates a raised drinking spout. The spout's concave tip profile incorporates a plurality of small apertures through which the containers contents are selectively dispensed. The product's lid and spout detailing function cooperatively enabling the pressure balancing deformation of the cover element at the application of suction, negative pressure, during the drinking process. The lid sealingly engages a beverage container at its perimeter with prior-art detailing, a radiused snap-on, snap-off feature which determines the usefulness of the subject application.

[0005] Subsequent to the '440 patent, U.S. Pat. No 4,925,051 ("the 051 patent") to Herbst, issued May 15, 1990, describes a substantially similar product to the '440 patent in which the lid's raised spout feature is positioned within a trough that is integrated within the cover element. The lip of the spout feature incorporates slit detailing which opens responsive to the application of a downward force, to dispense the container's content there through. The positional relationship between the valve spout and trough detailing restrict the product's convenient usage.

[0006] In addition, U.S. Pat. No. 4,946,062 ("the 062 patent") to Coy, issued Aug. 7, 1990, describes a product that is substantially similar to the '440 patent in which the spout is adapted to incorporate a 'duck-bill' valve that controls the flow of beverage from the container. The lid's planer cover incorporates vent detailing that balances the negative pressure created by suction during beverage dispensing. As the '440 patent, the lid sealingly engages a container at its perimeter with a radiused snap-on, snap-off feature which determines the usefulness of the subject application.

[0007] U.S. Pat. No. 5,050,758 ("the 758 patent") to Freeman, issued Sep. 24, 1991, describes a non-venting lid, that as the corollary to the now lapsed U.S. Pat. No. 4,138,033 to Payne, issued Feb. 6, 1979, incorporates a flip-sealed spout detail which is activated by the pinching pressure of the lips about its outer surface during beverage dispensing. The flip-seal may be selectively snapped shut within the lid to prevent egress of fluid. A companion container within whose inner lip detail the outer lid's lip sealingly engages, is illustrated but not discussed.

[0008] U.S. Pat. No. 5,186,347 ("347 patent") also to Freeman, issued Feb. 16, 1993, describes a product that is substantially similar in form to both the '440 patent and the now lapsed U.S. Pat. No. 4,243,156 to Lobbestael, issued Jan. 6, 1981, and functionally similar to the '051 patent, replacing said spout's beverage-dispensing slit detailing with a membrane component.

[0009] U.S. Pat. No. 5,385,255 ("255 patent") to Varano, issued Jan. 31, 1995, describes a vented, biodegradable product that incorporates lid-to-container engagement detailing which is derivative of here-cited prior art solutions, but is more substantially retained and constructed. The product's inwardly rolled perimeter detailing engages the similarly detailed container lip providing an improved, reversible holding force.

[0010] U.S. Pat. No. 5,850,908 ("908 patent") to Jasek, issued Dec. 22, 1998, describes a vented, pressure sensitive closure device that is mounted to the top of a beverage container. When suction is applied to the device's mouthpiece, seal details within its structure are opened enabling fluid dispensing, and close when the suction force is removed. If carbonated beverage is present within a related container, an increase of internal pressure will result in a higher fluid sealing force. The complexity of the product dictates both an elevated manufacturing cost and its non-disposable usage.

[0011] U.S. Pat. No. 5,927,565 ("565 patent") to Paczonay, issued Jul. 27, 1999, describes a vented, pressure sensitive closure device which, activated by positive pressure, is the corollary of the vacuum, negative pressure activated '908 patent. Both products are mounted to the top of a beverage container, but Paczonay's valve assembly requires that the container be upended when dispensing fluid.

[0012] U.S. Pat. No. 5,944,205, ("the 205 patent") to Lajoie, issued Aug. 31, 1999 describes a baby feeding bottle that incorporates an air vent component within its structure. Similar in detail to the valve spouts of cited prior art devices, the air vent, which is mounted to either the side wall or base surface of the container, enables desirable internal pressure balance as its fluid contents are dispensed.

[0013] U.S. Pat. No. 5,988,426, ("the 426 patent") to Stern, issued Nov. 23, 1999 describes a product that is substantially similar in form and performance characteristics, to the '440, '051 and '62 patents in its lid-to-container engagement detailing. A non-fluid dispensing lid, the product incorporates a vent hole at the center of its planer cover over which a hydrophobic filter is attached. The filter facilitates the release of pressure from inside the container while preventing leakage of its contents.

[0014] U.S. Pat. No. 6,138,710, ("the 710 patent") to Chomic, issued Oct. 31, 2000 describes a feeding bottle vent disc that is substantially similar in overall concept to the '205 patent and in specific design detailing, to the spout tip elements of both the '440 patent which comprises a plurality of through holes and '051 patent which comprises a plurality of slots. The vent is incorporated within a feeding bottle to elevate the vacuum pressure created when fluid is withdrawn there from during feeding.
U.S. Pat. No. 6,199,711, ("the 711 patent") to Lansky, issued Mar. 13, 2001 describes a splash guard for a beverage container that comprises an upper and lower lid component, which are assembled in an axially adjustable relationship to one another. The lids may be rotated with respect to one other to effect either a "flow" or "no flow" capable positioning. As the 758 patent, the splash guard sealably engages the interior wall of the beverage container adjacent to its lip detail, and at its exterior wall by similar, performance determining detailing to that of the '440 patent.

U.S. Pat. No. 6,305,570, ("the 570 patent") to Atkin, issued Oct. 23, 2001 describes a 'leak proof' closure, lid assembly, which as the '440 patent, sealingly engages a container at its perimeter with a radially snap-on, snap-off feature. The lid comprises a planer cover surface and raised spout feature as the '440 patent to which additionally, a multi-functional diaphragm valve assembly is mounted. When a suction force is applied to the spout the axially mounted valve is drawn away from its seat enabling passage of the contained beverage to the user. Flexion of the diaphragm simultaneously enables the passage of air into the container at the valves perimeter, which beneficially balances its internal and external pressures.

U.S. Pat. No. 6,938,048 ("the 048 patent") to Kevorkian, issued Jun. 4, 2002 describes a vented feeding bottle which combines the general form of the '205 patent with the specific hydrophobic vent detail of the '426 patent. As the '710 patent and others, the vent is incorporated within the bottle to alleviate the vacuum pressure created when fluid is withdrawn there from during feeding.

U.S. Pat. No. 6,431,390 ("the 390 patent") to Waller, issued Aug. 13, 2002 describes a lid that is substantially similar in overall conception to the '051 patent but distinct in its spill-limiting feature. In one embodiment, the planer cover surface incorporates a radially partitioned trough feature adjacent to its outer edge. The trough positioned more closely to the lid center incorporates a plurality of apertures within its outermost wall as it transitions to the through base. Fluid dispensed through said apertures, accumulates in the trough before being consumed, a feature that both limits spill volume and enables the protected dispensing of either hot or cold fluids. The planer cover also incorporates a small vent hole that alleviates the vacuum pressure created when fluid is withdrawn there from.

What is needed in the industry is a beverage lid that will overcome problems known with the known lids discussed previously. It is an advantage of an embodiment of the present invention to provide a functional spill-proof lid that will not separate from the beverage container to which it is attached during normal use. It is a further advantage of an embodiment of the present invention to provide a lid that may be selectively locked to, and released from a beverage container.

It is yet another advantage of an embodiment of the present invention that the incorporated spout feature comprises a valve. It is yet another advantage of an embodiment of the present invention to incorporate a spout that enhances the spill resistance of the beverage container while simultaneously providing selective activation or deactivation of beverage flow to the user.

It is yet another advantage of an embodiment of the present invention that the spout valving is activated by compression of the user's lips, rather than force generated by suction. It is still another advantage of an embodiment of the present invention that the spout is ergonomically detailed and is self-adapting to the user's unique needs.

It is still another advantage of an embodiment of the present invention that the spout element is positioned in angular relationship to the lid's planer cover surface thereby enhancing user comfort and convenience. It is still another advantage of an embodiment of the present invention to provide a spout incorporating vent detailing that enables pressure normalization within the container while its contents are being consumed.

It is a further advantage of an embodiment of the present invention to provide a valve assembly that enables pressure normalization while simultaneously preventing fluid leakage there through. It is an additional advantage of an embodiment of the present invention that a leak-proof seal between lid and beverage container is created by slidingly mating the conic surfaces of the inner container wall adjacent its lip and, the outer alignment wall of the lid, in preference to the surface-to-surface sealing method of existing product offerings. It is an additional advantage of an embodiment of the present invention that a lid comprising the aforementioned detailing is adaptable for use with beverage containing cold beverage, carbonated or non-carbonated beverage, and/or hot beverage.

SUMMARY

Responsive to the foregoing challenges, Applicant has developed a novel lid assembly. At least one embodiment of the present invention comprises a lid assembly for a beverage container comprising a lid component and an integrated spout, wherein the spout comprises a dispensing aperture and a valve, wherein the lid component comprises a first perimeter channel dimensioned to reversibly engage the lip of a container and a second inscribed channel in communication with the inner circumference of the first perimeter channel, at least one latching feature disposed on an interior surface of the first perimeter channel, and wherein the valve has a first position and a second position. The assembly may further comprise at least one venting aperture. The valve may be biased towards the first position. The valve comprises at least one flap, and/or a sealing plate. The latching feature may comprise at least one latching edge.

The at least one venting aperture may be disposed on the lid component and/or on the integrated spout. There may be at least two venting apertures. The venting aperture and/or the spout may be comprised of a hydrophobic membrane. The lid assembly may comprise individual latching features, at least two latching features, and/or one continuous latching feature disposed around the interior surface of the first perimeter channel. The valve may have a first closed position and a second open position, wherein the valve may be biased towards the first closed position. The spout may further comprise a valve seat incorporating at least one venting aperture which is sealed off by a sealing plate when the valve is in the first closed position and are open when the valve is in the second open position.

According to at least one embodiment of the invention, a lid for use in conjunction with a beverage container comprises: a plastic molding of circular footprint with a first
inverted U-channel feature at its perimeter which engages the lip of a container. The outermost wall of the channel incorporates a plurality of molded, rolled, or similarly created, inwardly facing latch features at its boundary that engage reentrant detailing on the underside of the container's lip. The lid is detached from the container by the purposeful disengagement of said latch details from the lid.

[0027] A second, deeper 'U' channel is positioned concentrically inboard of the first channel and comprises a plurality of gas-venting slots. The channel sealingly locates the lid within the container while providing structural integrity to the molding. A planar cover surface, bordered by the inner circumference of said second channel, arcs upwardly to one side of the lid to create a drinking spout feature.

[0028] The spout comprises an outer, low profiled, elongated 'nipple like' form and a concentric, inwardly tapering trough feature having a sphincter valve within its base plane. Downward pressure on the nipple opens the sphincter valve thereby enabling flow of beverage to the user. Air is simultaneously drawn through the venting slots into the container thereby preventing the problematic creation of a vacuum. The molded spout component is combined with the lid during the manufacturing process: it may also be a fully integrated feature of a unitary lid component.

[0029] According to at least another embodiment of the invention, a lid for use in conjunction with a beverage container comprises: a plastic molding of circular footprint with an inverted 'U' channel feature at its perimeter which engages the lip of a container. The outermost wall of the channel incorporates a plurality of integrated, inwardly facing latch features at its boundary that engage the reentrant detailing on the underside of the container. The lid is detached from the container by the purposeful disengagement of said latch details from the lip.

[0030] A second, deeper 'U' channel is positioned concentrically inboard of the first channel and comprises a plurality of gas-venting slots. The channel sealingly locates the lid within the container while providing structural integrity to the molding. A planar cover surface bordered by the inner circumference of said second channel, arcs upwardly to one side of the lid to create a drinking spout.

[0031] The spout comprises a low profile, elongated nipple having a circular spindle evolving from its rear surface, about which a sealing plate is snap-located, and a rebated valve seat of elliptical outline incorporating a plurality of breather holes. Downward pressure on the nipple disengages the sealing washer from the valve seat enabling flow of beverage to the user, and the simultaneous flow of air through the breather holes to normalize pressure within the container. The independent spout component is combined with the lid molding during the manufacturing process: it may also be a fully integrated feature of a unitary lid component.

[0032] According to another embodiment of the invention, the first described latching detail may be integrated within the second alternative lid detail. According to another embodiment of the invention, the second described latching detail may be integrated within the first alternative lid detail.

BRIEF DESCRIPTION OF DRAWINGS

[0033] The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate embodiments of the invention and together with the description, serve to explain the principles of the invention. Where appropriate, the same reference numerals refer to the same or similar elements.

[0034] FIG. 1 is a perspective view—front, of a lid assembly according to an embodiment of the present invention.

[0035] FIG. 2 is a perspective view—rear, of a lid assembly according to an embodiment of the present invention.

[0036] FIG. 3 is an assembly of a lid and beverage container according to an embodiment of the present invention.

[0037] FIG. 4 is an inverted perspective view—front, of a lid assembly according to an embodiment of the present invention.

[0038] FIG. 5 is a longitudinal cross-section, of a lid assembly according to an embodiment of the present invention.

[0039] FIG. 6 is a section view of the lid component and lid/spout positional relationship according to an embodiment of the present invention.

[0040] FIG. 7 is a perspective view—front, of a lid assembly according to an embodiment of the present invention.

[0041] FIG. 8 is a perspective view—rear, of a lid assembly according to an embodiment of the present invention.

[0042] FIG. 9 is a perspective view—rear, of a lid assembly according to an embodiment of the present invention.

[0043] FIG. 10 is an assembly of lid and beverage container according to an embodiment of the present invention.

[0044] FIG. 11 is an inverted perspective view—rear, of a lid assembly according to an embodiment of the present invention.

[0045] FIG. 12 is a longitudinal cross-section, of a lid assembly according to an embodiment of the present invention.

[0046] FIG. 13 is a section view of the lid component and lid/spout positional relationship according to an embodiment of the present invention.

DETAILED DESCRIPTION

[0047] Reference will now be made in detail to embodiments of the present invention, an example of which is illustrated in the accompanying drawings. With reference to FIGS. 1-3, an example of lid assembly 100 is illustrated which comprises lid component 20 and an integrated spout 40. Lid component 20 and spout 40 may be integrated features of a unitary lid assembly 100 or may alternatively be distinct elements which are integrated during product manufacture. Lid assembly 100 may be produced by injection/molding, pressure/vacuum forming or similar technique, or combination thereof, using thermoplastic materials that may include polystyrene/polyethylene and their derivatives, medical grade polypropylene, polyurethane or polymer of similar performance characteristics, or any other suitable material. Lid component 20 is of a circular footprint and has a first inverted 'U' shape cross-sectioned perimeter channel 21 that is adapted to be in communication with, and removably engages from, external reentrant lip
of disposable beverage container 60, as shown in FIGS. 4A-C. Second tapered inscribed channel 22 is inscribed within the inner circumference of and in communication with perimeter channel 21 enabling inscribed channel 22 to form a sealing communication against inner lip detail 62 of container 60. Inscribed channel 22 is in communication with planar cover surface 23 at inscribed channel's 22 inner circumference. Spout 40 is integrated into the top surface of lid component 20 and is in communication with a portion of cover surface 23 and a portion of inscribed channel 22. Spout 40 comprises dispensing aperture 47 and valve 41 wherein valve 41 has a first position and a second position. The first position is a substantially closed position defined by a valve position that substantially impedes or reduces the flow of a liquid through the valve. The second position is an open position defined by a valve position that permits the flow of liquid through the valve. Valve 41 is biased towards the first, or closed, position. Valve 41 may comprise a pressure valve, a slit-valve, flap-valve, sealing plate valve, or any other suitable valve. During operation valve 41 alternately facilitates fluid dispensing and fluid sealing at the application of downward pressure of the user's lips thereupon, shown as Direction G in FIG. 2.

In addition, FIGS. 1-3 illustrate biometrically contoured surface 42 of spout 40, whose elliptical footprint 43 transitions outwardly at an obtuse angle, shown as 43', with respect to planar cover surface 23 of lid component 20, terminating on swept surface 44. Surface 44 is invaginated to create tapered ob-round cavity 45. In one embodiment valve 41 comprises at least one slit or flap 46. In one embodiment valve 41 comprises two slits or flaps 46. When user's lip-pressure is applied to contoured surface 42, cavity 45 rolls inwardly, thereby opening flaps 46 of valve 41 and allowing the flow of beverage therethrough. The angular orientation of at least one dispensing aperture 47, disposed on spout 40 within swept surface 44, provides improved user ergonomics that, in distinction to prior art beverage container lids, do not require the hyper-extension of the neck when drinking and thereby, a more comfortable, leak-proof drinking experience. The embodiment may or may not further comprise at least one venting aperture 24. Venting aperture 24 and/or spout 40 may be formed of a hydrophobic membrane.

In FIGS. 4-6, particular reference is made to one embodiment of a container-engagement latching feature 31 and fluid-sealing feature of perimeter channel 21 of lid component 20 and lid assembly 100. Lid perimeter channel 21 incorporates at least one latching feature 31 disposed on its interior surface that is in communication with and removably engages with the underside external reentrant lip 61 of the beverage container, thereby reducing the possibility of the accidental separation of lid assembly 100 from container 60 and consequent beverage loss. Re-entrant detail latching edges 32 of latch feature 31 enables the easy assembly of lid assembly 100 and container 60, but requires the purposeful disengagement of at least one and preferably at least two opposed latching edges 32 from the underside of lip 61 for its removal. Latching edges 32 may be sharp-edged and/or eyebrow-shaped, and/or of any other suitable edge and shape detailing. Molded tabs 27 (FIG. 2), and/or markings 28 (FIG. 2B) and/or similar detailing, delineate the location of latch feature 31 on lid perimeter channel 21. Second Inscribed channel 22 may further incorporate at least one venting aperture 24. Venting aperture 24 may be comprised of at least one minute 'pass by core,' formed opening or slot, or any other suitable opening. In one embodiment venting aperture 24 is positioned circumferentially opposite spout 40. Venting aperture 24 facilitates egress of carbonation from within container 60 while simultaneously preventing the loss of fluid there through and, ingress of pressure balancing ambient air during the dispensing of beverage there from.

In an embodiment illustrated in FIGS. 7-13, lid assembly 100 comprises lid component 20 and integrated spout 40. Lid component 20 and spout 40 may be integrated features of a unitary lid assembly 100 or may alternatively be distinct elements that are integrated during product manufacture. Lid assembly 100 may be produced by injection/over-molding, pressure/vacuum forming or similar technique, or combination thereof, using thermoplastic materials that may include polystyrene/polyethylene and their derivatives, medical grade polypropylene, polyurethane or polymer of similar performance characteristics, and/or any other suitable material. Lid component 20 is of circular footprint and has a first inverted 'U' shape cross-sectioned perimeter channel 21 that is adapted to communicate with, and removably engages with, external reentrant lip 61 of disposable beverage container 60. FIG. 11A-C. Second tapered inscribed channel 22 is inscribed within the inner circumference of perimeter channel 21 enabling inscribed channel's 22 sealing communication against inner lip detail 62 of container 60. Spout 40 comprises valve 41. In this embodiment valve 41 is a sealing plate valve and further comprises sealing plate 48, enabling alternate fluid dispensing or fluid sealing at the application of downward pressure of the user's lips thereupon, shown as Direction L in FIGS. 8 and 9. Valve 41 has a first position and a second position depending on the disposition of sealing plate 48. The first position is defined as substantially closed, reducing the flow of liquid through valve 41, and the second position is defined as open, allowing the flow of liquid through valve 41. Valve 41 is biased towards the first, or closed, position.

In FIGS. 7-10, illustrate biometrically contoured surface 42 of spout 40, whose elliptical footprint 43 at arcing surface 50 transitions outwardly to form elongated dome 51 about vertical axis Q. The arced surface 50 of dome 51 incorporates, and is pierced by, at least one dispensing aperture 47 and at least one venting aperture 24. Ob-round spindle 54 evolves from the rear of arcing surface 50 at point 55 and provides an axis about which sealing plate 48 of valve 41 is snap-assembled. A portion of plate 48 is sealingly disposed within rebated feature valve seat 56 at the rear of contoured surface 42 and dome 51. Plate 48 and rebated feature valve seat 56 function cooperatively to provide valve 41 function. In an alternative embodiment, valve seat 56 incorporates at least one venting aperture 24. When lip-pressure is applied to contoured surface 42, spindle 54 and attached sealing plate 48 roll inwardly enabling the flow of beverage around plate 48 to dispensing aperture 47, and air to enter the container through venting aperture 24. The angular orientation K of spout 40 and dispensing aperture 47 with respect to planer cover surface 23, provides improved user ergonomics that, in distinction to prior art beverage container lids, does not require the hyper-extension of the neck when drinking and thereby, a more comfortable, leak-proof drinking experience.
[0052] In FIGS. 11-13, particular reference is made to one embodiment of a beverage container-engagement latching feature 31 and fluid-sealing features of perimeter channel 21 of lid assembly 100. Perimeter channel 21 incorporates at least one latching feature 31 that may be in communication with and reversibly engages the underside external reentrant lip 61 of beverage container 60 thereby reducing the probability of the accidental separation of lid from container and consequent fluid loss. At least one latching edge 32 of latching feature 31 enables the easy assembly of lid assembly 100 to container 60 but requires the purposeful disengagement of at least one, and preferably at least two opposed latching edges 32 from external reentrant lip 61 for its removal. Latching edge 32 may be sharp-edged, re-entrant designed, or any other suitable shape and/or design. Molded tabs 27, markings 28 or similar detailing delineate the location of latching feature 31 on perimeter channel 21. Inscribed channel 22 may further incorporate at least one venting aperture 24. Venting aperture 24 may be comprised of at least one minute ‘pass by core,’ formed opening, or any other suitable opening. In one embodiment venting aperture 24 is positioned circumferentially opposite spout 40. Venting aperture 24 facilitates egress of carbonation from within container 60 while simultaneously preventing the loss of fluid there through and, ingress of pressure balancing ambient air during the dispensing of beverage there from.

[0053] Numerous characteristics and advantages have been set forth in the foregoing description, together with details of structure and function. The novel features are pointed out in the appended claims. The disclosure, however, is illustrative only, and changes, may be made in detail, especially in matters of shape, size, and arrangement of parts, within the principle of the invention, to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A lid assembly for a beverage container comprising:
a lid component and an integrated spout;
wherein the spout comprises a dispensing aperture and a valve;
wherein the lid component comprises a first perimeter channel dimensioned to reversibly engage the lip of a container and a second inscribed channel in communication with the inner circumference of the first perimeter channel;
at least one latching feature disposed on an interior surface of the first perimeter channel; and
wherein the valve has a first position and a second position.
2. The assembly of claim 1, further comprising at least one venting aperture.
3. The assembly of claim 1, wherein the valve is biased towards the first position.
4. The assembly of claim 1, wherein the valve comprises at least one flap.
5. The assembly of claim 1, wherein the valve comprises a sealing plate.
6. The assembly of claim 1, wherein the latching feature comprises at least one latching edge.
7. A lid assembly for a beverage container comprising:
a lid component and an integrated spout;
wherein the spout comprises a dispensing aperture and a valve;
wherein the lid component comprises a first perimeter channel dimensioned to reversibly engage the lip of a container and a second inscribed channel in communication with the inner circumference of the first perimeter channel;
at least one latching feature disposed on an interior surface of the first perimeter channel;
wherein the valve has a first position and a second position; and
at least one venting aperture.
8. The assembly of claim 7, wherein the at least one venting aperture is disposed on the lid component.
9. The assembly of claim 7, wherein the at least one venting aperture is disposed on the integrated spout.
10. The assembly of claim 7, wherein the venting aperture is comprised of a hydrophobic membrane.
11. The assembly of claim 7, wherein the integrated spout is formed by a hydrophobic membrane.
12. The assembly of claim 7, comprising at least two latching features.
13. The assembly of claim 7, comprising one continuous latching feature disposed around the interior surface of the first perimeter channel.
14. A lid assembly for a beverage container comprising:
a lid component and an integrated spout;
wherein the spout comprises a dispensing aperture and a valve;
wherein the lid component comprises a first perimeter channel dimensioned to reversibly engage the lip of a container and a second inscribed channel in communication with the inner circumference of the first perimeter channel;
at least one latching feature disposed on an interior surface of the first perimeter channel;
wherein the valve has a first closed position and a second open position, wherein the valve is biased towards the first closed position; and
at least one venting aperture.
15. The assembly of claim 14, wherein the valve comprises at least one flap.
16. The assembly of claim 14, wherein the valve comprises a sealing plate.
17. The assembly of claim 14, comprising at least two venting apertures.
18. The assembly of claim 14, wherein the at least one venting aperture is disposed on the integrated spout.
19. The assembly of claim 16, further comprising a valve seat incorporating at least one venting aperture which is sealed off by a sealing plate when the valve is in the first closed position and are open when the valve is in the second open position.
20. The assembly of claim 14, wherein the at least one venting aperture is disposed on the lid component.

* * * * *