ABSTRACT

The present invention is directed to a sipper lid with straw capability and includes a cup engaging section, a spout section, and a straw receptacle. The cup engaging section is adapted for securing the lid to a drinking cup; the spout section includes a protrusion and at least one opening that is located at or adjacent to the top of the protrusion; and the straw receptacle, which functions to facilitate the insertion of a drinking straw into the drinking cup, may be spaced from the spout opening or it may be positioned adjacent thereto. In another embodiment, the present lid further includes a groove or channel adapted for accommodating and holding spilled fluid within a confined area of the lid.
SIPPER LID WITH STRAW CAPABILITY

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of and priority to U.S. Provisional Patent Applications Ser. No. 61/053,750, filed May 16, 2008, entitled SIPPER LID WITH STRAW CAPABILITY, which application is hereby incorporated by reference to the extent permitted by law.

BACKGROUND OF THE INVENTION

[0002] This invention relates generally to drink-through cup lids, commonly known as a "sippy lid," and, more particularly, to a spill-proof lid for drinking containers.

[0003] Beverage container lids adapted to fasten over the rim or lip of beverage containers are well known. Such lids reduce spillage and evaporation of the beverage within the container and help insulate the contents of the container from the external ambient temperature. In their most simple form, such beverage container lids comprise a generally flat lid surface in the form of a disk having a peripheral sealing skirt for securing the lid to the rim of the beverage container. Many prior art lids incorporate an opening in the top of the lid in order to allow drinking of the contents in the normal drinking fashion.

[0004] While such lids are suitable for the purposes just described, some spills can not be avoided from the drinking of a beverage through such lids, particularly where small children are involved. This problem has been somewhat reduced with a sippy lid. The sippy lid spouts are very helpful to kids. Commonly, these lids have drinking extensions extending from their upper surface that a child can place in his/her mouth to sip from the cups to which they are attached. Some sippy lid spouts have open slots or holes through which the liquid in the cup flows when the cup is inverted.

[0005] U.S. Pat. No. 5,079,013 discloses a covered container having a drinking spout that contains a liquid outlet control valve. The control valve automatically closes when the container is overturned or otherwise tipped over. When a person's mouth exerts a suction force to the drinking spout the control valve automatically opens to enable the person to withdraw liquid from the container. The person can drink from the covered container in various tilted positions as long as the control valve is in contact with the liquid.

[0006] Nonetheless, if the user desires to use a straw with the sippy cup lid, the straw would have to be inserted after removing the lid, or a straw adaptable lid would have to replace the sippy lid. In an effort to overcome the aforementioned shortcomings, the present invention provides lids utilizing both a straw opening and a spout, depending upon the desired use by the user.

[0007] Further, some spillage cannot be avoided when drinking the contents of a beverage from the spout of a sipping lid, or from a straw opening. Some liquid is spilled during drinking from the beverage cup through the spout, or through the straw opening. In addition, unless the opening for the straw is exactly the same diameter as the straw, the fluid within the cup may spill out of the opening between the straw and the sides of the opening.

[0008] It is therefore desirable to provide a lid on a drinking cup, particularly for small children, which serves a dual function of providing a straw opening as well as a spout, and which can be readily and conveniently used in various attitudes or positions in accordance with the present invention. It is also desirable to provide a drinking lid which improves spill prevention when drinking from the beverage cup.

[0009] Specific advantages and features of the invention will be apparent from the attached drawings and description of an illustrative embodiment of the invention.

BRIEF SUMMARY OF THE INVENTION

[0010] The invention relates to various embodiments of a sipper lid having a straw opening and/or a drainage groove. The present invention overcomes many of the shortcomings and limitations of the prior art devices discussed above and teaches the construction and operation of several embodiments of a sipper lid adapted for use with a wide variety of different beverage containers. In one aspect of the present invention, the lid includes a cup engaging section, a spout section, and a straw receptacle. The cup engaging section, adapted for securing the lid to a beverage cup, is generally shaped to engage and extend over the top rim of the beverage cup and typically extends downwardly toward the bottom of the beverage cup for a short distance. The cup engaging section has an exterior skirt portion which includes a peripheral groove to engage the peripheral rim on the upper edge of the cup and to provide sealing of the cup so that the lid is secured to the cup. The spout section comprises a protrusion and at least one drink-through opening that is located at or adjacent to the top of the protrusion. The protrusion extends from the upper surface of the lid. At least one opening enables the user to drink fluid through the spout section when the cup is inverted or angled from the upright position to allow the fluid in the cup to create hydrostatic pressure at the opening. The openings are usually small in diameter to limit outflow if the cup is inadvertently dropped or overturned. Some suction can be applied by the user to increase the flow rate of the fluid.

The lid also includes a straw receptacle which functions as a means for facilitating the insertion of a drinking straw into the cup for withdrawing liquid by suction. The straw receptacle is formed in a medial portion of the lid. The straw receptacle includes a receptacle or break lines defining an opening, either of which can accommodate the straw. The break lines allow the straw to be inserted therethrough and facilitate engagement of the straw with the lid such that the engagement minimizes the leakage of the fluid. The straw is inserted through the straw receptacle and provides fluid communication between the beverage cup and an external environment.

[0011] In another embodiment of the present invention, the lid further comprises a groove or channel adapted for accommodating and holding spilled fluid within a confined area of the lid. The groove is formed between the cup engaging section and a central portion of the lid and encompasses the straw receptacle so as to readily receive any fluid which may flow out of the spout section or the straw receptacle during drinking. The groove forms an annular channel that is sufficient in size to hold and trap any spilled fluid, and which will channel the spilled fluid back towards the user's mouth if drinking from the sippy spout.

BRIEF DESCRIPTION OF DRAWINGS

[0012] FIG. 1 is a perspective view of a first embodiment of the present sipper lid constructed in accordance with the teachings of the present invention.
[0013] FIG. 2 is a perspective view of another embodiment of the present sipper lid constructed in accordance with the teachings of the present invention.

[0014] FIG. 3 is a perspective view of another embodiment of the present sipper lid constructed in accordance with the teachings of the present invention.

[0015] FIG. 4 is a perspective view of still another embodiment of the present sipper lid constructed in accordance with the teachings of the present invention.

[0016] FIG. 5 is a perspective view of still another embodiment of the present sipper lid constructed in accordance with the teachings of the present invention.

[0017] It should be understood that the drawings are not necessarily to scale and that the embodiments are sometimes illustrated by graphic symbols, phantom lines, diagrammatic representations and fragmentary views. In certain instances, details which are not necessary for an understanding of the present invention or which render other details difficult to perceive may have been omitted. It should be understood, of course, that the invention is not necessarily limited to the particular embodiments illustrated herein. Like numbers utilized throughout the various Figures designate like or similar parts or structure.

DETAILED DESCRIPTION OF THE INVENTION

[0018] The present invention is generally embodied in a lid for a drinking cup. The lid may be used with drinking cups of various types. The lid provides a cover for the cup to which it is attached which inhibits spillage and reduces heat transfer between the beverage and the surrounding atmosphere. The lid is secured in place on the cup by an annular mounting portion which engages the rim or lip of the cup, wherein the annular mounting portion includes a downwardly extending skirt which forms the outer peripheral circumference of the lid.

[0019] Referring to the drawings, FIGS. 1-3 are perspective views of several embodiments of a cup lid constructed in accordance with the teachings of the present invention. The lid 10 illustrated in FIG. 1 generally includes three main portions; a cup engaging section 20, a spout section 30, and a straw receptacle 40. As used herein, upper, lower and other position terms are used to describe the invention as oriented in the drawings.

[0020] The cup engaging section 20 is generally shaped to extend over the top rim of the beverage cup and extends downwardly toward the cup bottom a pre-determined distance (not shown). The cup engaging section 20 is shaped for mating with the corresponding rim portion of the cup. In this regard, the cup engaging section 20 has an exterior skirt portion 22 on its lower side, which includes a peripheral groove to engage the peripheral rim (not shown) on the upper edge of a drinking cup and to provide sealing of the drinking cup so that the lid 10 is removably secured to the cup. The lower edge of the exterior skirt portion 22 is bounded by a peripheral ridge 24 which extends radially outwardly.

[0021] The spout section 30 comprises a protrusion 32 which extends from the upper surface of the lid 10. The spout section 30 further includes at least one opening 34 which enables the consumer to drink through the spout section 30. The spout section 30 is preferably integrally molded with the rest of the lid 10 and extends upward from the top surface thereof to a distal end which is shaped and sized to be comfortably received in a user’s mouth for drinking. The spout section 30 further includes at least one drink-through opening 34 that is located at or adjacent to the top of the protrusion 32. The drink-through opening 34 can be formed in any convenient shape such as circular, elliptical, rectangular, oval or any other shape which can dispense liquid directly into the user’s mouth. The spout section 30 is shown located adjacent to and integral with the peripheral of the lid 10. In one embodiment, the spout section 30 is preferably located on the opposite side of the straw receptacle 40. In another embodiment, the spout section 30 could be located elsewhere, such as closer to the straw receptacle 40, depending upon the particular application. The size and shape of the spout section 30 can likewise vary and it can take on a wide variety of different sizes and shapes depending upon the application.

[0022] The lid 10 also includes a straw receptacle 40 which functions as a means for facilitating the insertion of a drinking straw (not shown) into the associated cup for withdrawing liquid by suction. The straw receptacle 40 can likewise be of any shape and is formed on the top surface of the lid 10 so as to be adapted to receive the straw. The straw receptacle 40 is formed in a medial portion 12 of the lid 10 which is not raised. In one embodiment, the straw receptacle 40 comprises a plurality of score or break lines 44 that accommodate the straw. In another embodiment, the straw receptacle 40 forms an opening to accommodate the straw. In still another embodiment, the straw receptacle 40 comprises a recess (not shown) within the lid 10, which forms a hollow structure tapering from the underside of the lid 10 to a distal end and defines, in an upper surface of the lid 10, an opening for insertion of the straw. In the embodiment of FIG. 1, the straw receptacle 40 defines a plurality of break lines 44 which allow the straw to be inserted therethrough and which facilitate engagement of the straw with the lid 10 such that the engagement minimizes the leakage of the fluid. The straw is inserted through the straw receptacle 40 and provides fluid communication between the beverage cup and an external environment, or a user sucking on the straw. Although the straw receptacle 40 functions primarily to receive the straw, such straw receptacle 40 can also serve as a vent. Like the spout section 30, the straw receptacle 40 can be positioned anywhere on a medial portion of the lid 10, but should be positioned remote from the spout section 30 so as to prevent spillage of any fluid through the straw receptacle during consumption of the fluid through the spout section 30.

[0023] Once break lines 44 are broken by the end of a straw, the side walls 46 forming the receptacle 40 are separated from one another along the break lines 44 and allow the straw to travel into the cup between the respective side walls 46. As the straw passes between side walls 46, the side walls 46 bend around the straw to conform to the shape of the straw. Therefore, the side walls 46 provide a close engagement around the inserted straw, which acts to seal the cup lid 10 around the straw to prevent the contents of the cup from spilling out of the straw receptacle 40 from around and between the straw and side walls 46. In use, the user will insert the straw by pressing it through the break lines 44 from the upper surface of the lid 10 in a manner consistent with intuition and other straw-type lids.

[0024] FIGS. 2 and 3 disclose other embodiments 48 and 52 of the present sipper lid 10. Like numbers in FIGS. 2 and 3 refer to like structure through all of the drawings. As best shown in FIGS. 2 and 3, a groove or channel 50 is formed on the top surface of the lid 10 at a central portion 14 which readily receives any fluid which may flow out of the spout section 30 or the straw receptacle 40 when the drinking cup is
jarred or which may spill during consumption of the beverage through either the spout opening 34 or the straw receptacle 40. The central portion 14 is defined by the groove or channel 50 and is that portion of the top surface of the lid that is confined therewithin. The groove 50 defines the perimeter of the central portion 14. FIG. 2 shows use of the groove 50 in conjunction with the spout section 30 and FIG. 3 shows use of the groove 50 in combination with both the spout section 30 and the straw receptacle 40. Because of this spillage tendency, the drainage groove 50 is provided on the top face of lids 48 and 52 to accommodate spilled fluid. As can be seen from FIGS. 2 and 3, the groove 50 forms an annular channel that is of sufficient size to trap and collect spilled fluid. The groove 50 can be of any shape and size and it is located in close vicinity to the spout opening 34 so as to allow the fluid to both enter the groove 50 and to allow the fluid to travel back towards the mouth of a user during a drinking motion when drinking from the spout opening 34. In this regard, in the embodiments illustrated in FIGS. 2 and 3, the groove 50 travels along a portion 54 of the spout portion 32 as illustrated. During a drinking motion from the spout opening 34, the lids 48 and 52 will be tilted towards the mouth of the user thereby allowing any fluid in the channel 50 to likewise flow downhill towards the mouth of user for consumption. Other locations on the top surface of the lids 48 and 52 for the groove 50 can likewise be used for trapping spilled fluid and for preventing the spilled fluid from running off of the lid surface depending upon the overall configuration of the lid. In its primary purpose, the groove 50 blocks and holds spilled fluid in the groove 50 and, in its secondary purpose, it can likewise funnel the spilled fluid to the user’s mouth when drinking from the spout opening 34.

[0025] It is also recognized and anticipated that the central portion 14 of the top surface of the present lid structure which is defined by the perimeter of the groove or channel 50 can be depressed or recessed so as to further hold any spilled fluid in this confined area. In addition, the central portion 14 can likewise be sloped towards the straw receptacle 40 in FIG. 3 so that it can likewise funnel any spilled fluid towards the receptacle 40 to return any such fluid to the beverage cup. In this regard, the area surrounding the straw receptacle 40 can likewise be further sloped or depressed so as to capture and aid in funneling any wayward spilled fluid to such opening.

[0026] FIG. 4 illustrates still another embodiment of the present lid structure 56 wherein the straw receptacle 40 and the sipper opening 34 illustrated in FIGS. 1 and 3 are combined in the spout section of the lid. In this regard, the lid 56 includes a spout section 58 which includes a protrusion 60 which extends from the upper surface of the lid 56 as illustrated. In this embodiment, the protrusion 60 is of sufficient width to include both at least one sipper opening 62 and a straw opening 64. Like straw opening 40, straw opening 64 may include a plurality of break or score lines 66 similar to break lines 44 discussed above for accommodating a straw. The break lines 66 may be perforated or may include sufficient space or openings therethrough between the respective side walls forming the straw receptacle so as to allow the beverage fluid to pass therethrough when the spout section 58 is used as a sipper lid and a child is using the sipper opening 62 for consuming a beverage. In this regard, the sipper opening 62 and the straw receptacle 64 may be one and the same and the straw receptacle 64 may include a small sipper opening in the middle of the break lines 66 (not shown). It is also recognized that the sipper opening 62 can be separate and apart from the straw opening 64 as shown in FIG. 4 and that the sipper opening 62 may include one or more small openings around or adjacent to the straw opening 64 for allowing a child to use the spout section 58 in conjunction with the at least one sipper opening 62. Other configurations and arrangements of the sipper opening 62 and the straw opening 64 on spout section 58 are likewise recognized and envisioned. When the straw receptacle 64 is used, a user again merely inserts a drinking straw through the score or break lines 66 so as to allow the straw to travel into the cup therebelow. Lid 56 also includes a groove or channel 50 and a central portion 14 as illustrated for capturing and funneling any spilled fluid back towards the mouth of the user when the sipper opening 62 is used as previously explained with respect to embodiments 48 and 52 illustrated in FIGS. 2 and 3. In all other respects, the construction and operation of the lid 56 is substantially identical to lids 10, 48 and 52.

[0027] Still further, the overall dimensions of the present lid as well as the specific shape and configuration of the various sections associated therewith are also subject to wide variations and may be sized and shaped into a wide variety of different sizes and configurations so as to be compatible with the size and shape of the particular beverage cup onto which the present structures may be mounted, or to conform with any space limitations associated therewith without impairing the teachings and practice of the present invention. The configuration of the straw receptacle 40 and the location of the groove 50 as illustrated in FIGS. 3 and 4 could also be changed as required to accommodate the position of the spout section 30. In addition, the actual shape and travel pattern of the groove 50 can likewise be varied.

[0028] The cup engaging section 20 of the lids 10, 48, 52 and 56 illustrated in the drawings will securely seal available beverage cups with a rounded rim around the upper circumference, such as is typically found in cups constructed primarily of molded plastic, paperboard or other appropriate material depending upon the particular application involved. Because both hot and cold beverages of the type intended to be covered by the present lid are often served in foam cups that lack this rim, the present lids have been designed to seal this style of cup as well. It is contemplated that the lids of the present invention can be used to seal many difference types of cups. It is also pointed out that the cup engaging section 20 could be modified to be adapted for any suitable type of drinking cups.

[0029] The various embodiments of the present lid construction can likewise be described in terms of a first component 11 (FIG. 3) having a substantially flat circular surface area including an outer perimeter 13 and a central portion 14; a second component 20 for securing the lid to a drinking cup, the second component extending downwardly from the outer perimeter 13 of the first component 11 and engaging and extending over a top rim portion of a drinking cup; and a third raised component 30 having a sipper opening 34 associated therewith, the sipper opening 34 being located adjacent to the outer perimeter 13 of the first component 11. The straw receptacle 40 can be positioned and located on the first component 11 as illustrated in FIG. 3, or it can be located adjacent the sipper opening on the raised third component as illustrated in FIG. 4. In similar fashion, the groove 50 can be described as being formed between the outer perimeter 13
and the central portion 14 of the first component 11 as best illustrated in FIGS. 3 and 4. In this particular description, the first component 11 corresponds basically to the substantially flat upper surface portion of the lid 10; the second component corresponds to the cup engaging section 20 as previously explained; and the third raised component corresponds to the spout sections 30 and 58 as previously explained. As best illustrated in FIG. 3, the groove 50 encompasses the straw receptacle 40 and includes at least a portion thereof located in the vicinity of the sipper opening 34, this portion corresponding to that portion of the groove 50 which travels along the portion 54 of the protrusion 32 of spout section 30 in the vicinity of the sipper opening 34 as best illustrated in FIG. 3.

[0030] In a preferred embodiment, the material of the lids 10, 48, 52 and 56 should be made of a thin but relatively hard plastic material, such as polycarbonate or polypropylene. Those skilled in the art will recognize that other materials can be used without departing from the spirit and scope of the present invention.

[0031] Although illustrated with respect to a child’s sippy cup, aspects of the present invention are also applicable to other drinking containers, such as sports bottles and the like. A number of embodiments of the present invention have been described. It is also recognized that the groove 50 could be used solely in conjunction with a lid that only includes the straw receptacle 40 and no spout section 30. This embodiment is illustrated in FIG. 5 wherein the lid 68 includes a first component 69 having a substantially flat circular top surface 70, the first component 69 likewise having an outer perimeter 13 and a central portion 14 associated therewith. The substantially flat top surface portion 70 includes a straw receptacle 40 and a groove 50 encompassing the same as previously explained. The lid 68 likewise includes a second component 20, namely, the cup engaging portion as previously described which extends downwardly from the outer perimeter 13 of the first component 69 and is adapted for securing the lid 68 to a drinking cup. The lid 68 does not include a spout section 30 or its associated projection 32 as illustrated in FIGS. 1-3. The groove 50 is formed on the first component 69 and encompasses the straw receptacle 40 as previously explained.

[0032] It is also understood that various modifications may be made to all of the various embodiments without departing from the spirit and scope of the present invention.

[0033] Thus, there has been shown and described several embodiments of a novel invention. As is evident from the foregoing description, certain aspects of the present invention are not limited by the particular details of the examples illustrated herein, and it is therefore contemplated that other modifications and applications, or equivalents thereof, will occur to those skilled in the art.

[0034] Many changes, modifications, variations and other uses and applications of the present constructions will, however, become apparent to those skilled in the art after considering the specification and the accompanying drawings. All such changes, modifications, variations and other uses and applications which do not depart from the spirit and scope of the invention are deemed to be covered by the invention and the scope of the present disclosure is not intended to be limited solely to the embodiments shown herein. All structural and functional equivalents to the elements of the various embodiments described throughout this disclosure that are known or later come to be known to those of ordinary skill in the art are expressly incorporated herein by reference and are intended to be encompassed by this disclosure.

What is claimed is:

1. A lid for use on a drinking cup comprising:
a cup engaging section adapted for securing the lid to a drinking cup, said cup engaging section being generally shaped to engage and extend over a top rim of a drinking cup;
a spout section including a protrusion extending upwardly from the upper surface of the lid, said protrusion including at least one opening extending therethrough that is located at or adjacent to a top portion of the protrusion; and
a straw receptacle formed on the upper surface of the lid configured for facilitating insertion of a drinking straw into the drinking cup, said straw receptacle being spaced from said protrusion opening.

2. The lid of claim 1 further including a groove formed on the upper surface of the lid at a central portion thereof, said groove forming an annular channel that is sufficient in size to hold and trap spilled fluid.

3. The lid of claim 2 wherein said groove encompasses the straw receptacle.

4. The lid of claim 2 wherein a portion of said groove is located on said spout section in the vicinity of said at least one protrusion opening.

5. The lid of claim 1 wherein said cup engaging section includes an exterior skirt portion which engages a peripheral rim on the upper edge of the drinking cup.

6. The lid of claim 1 wherein the straw receptacle is formed in a medial portion of the lid.

7. The lid of claim 1 wherein said at least one protrusion opening is diametrically opposed to said straw receptacle.

8. The lid of claim 1 wherein said at least one protrusion opening is recessed within said protrusion.

9. The lid of claim 1 wherein said straw receptacle includes a plurality of break lines defining an opening.

10. The lid of claim 1 wherein said straw receptacle is recessed on the upper surface of the lid.

11. A lid for use on a drinking cup comprising:
a cup engaging section adapted for securing the lid to a drinking cup, said cup engaging section being generally shaped to engage and extend over a top rim of a drinking cup;
a spout section including a protrusion having at least one opening extending therethrough located at or adjacent to a top portion thereof, said protrusion extending upwardly from the upper surface of the lid; and
a groove formed on the upper surface of the lid, at least a portion of said groove being in the vicinity of said at least one protrusion opening, said groove forming an annular channel that is sufficient in size to hold and trap spilled fluid.

12. The lid of claim 1 wherein at least a portion of said groove is located on said spout section.

13. The lid of claim 11 further including a straw receptacle, said straw receptacle being located on said protrusion adjacent to said spout opening.

14. The lid of claim 13, wherein said straw receptacle includes a plurality of break lines defining an opening.

15. The lid of claim 13 wherein said at least one protrusion opening and said straw receptacle form a single opening.

16. The lid of claim 14 wherein said spout opening is located in the middle of said plurality of break lines.
17. A lid for use on a drinking cup comprising:
a first component having a substantially flat circular surface area, said first component including an outer perimeter and a central portion;
a second component for securing the lid to a drinking cup, said second component extending downwardly from the outer perimeter of said first component, said second component engaging and extending over a top rim of a drinking cup;
a raised third component having a sipper opening, said sipper opening being located adjacent said outer perimeter of said first component;
a straw receptacle adapted for facilitating insertion of a drinking straw into the drinking cup; and
a groove formed between the outer perimeter and the central portion of said first component, said groove forming an annular channel that is sufficient in size to hold and trap spilled fluid.

18. The lid of claim 17 wherein said groove encompasses said straw receptacle and includes at least a portion located in the vicinity of said sipper opening.

19. The lid of claim 18 wherein that portion of said first component encompassed by said groove is recessed from the remainder of said first component.

20. A lid for use on a drinking cup comprising:
a first component having a substantially flat circular surface area, said first component including an outer perimeter and a central portion;
a second component for securing the lid to a drinking cup, said second component extending downwardly from the outer perimeter of said first component, said second component engaging and extending over a top rim of a drinking cup;
a straw receptacle located on said first component for facilitating insertion of a drinking straw therethrough; and
a groove formed on said first component and encompassing said straw receptacle, said groove forming an annular channel that is sufficient in size to hold and trap spilled fluid.

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