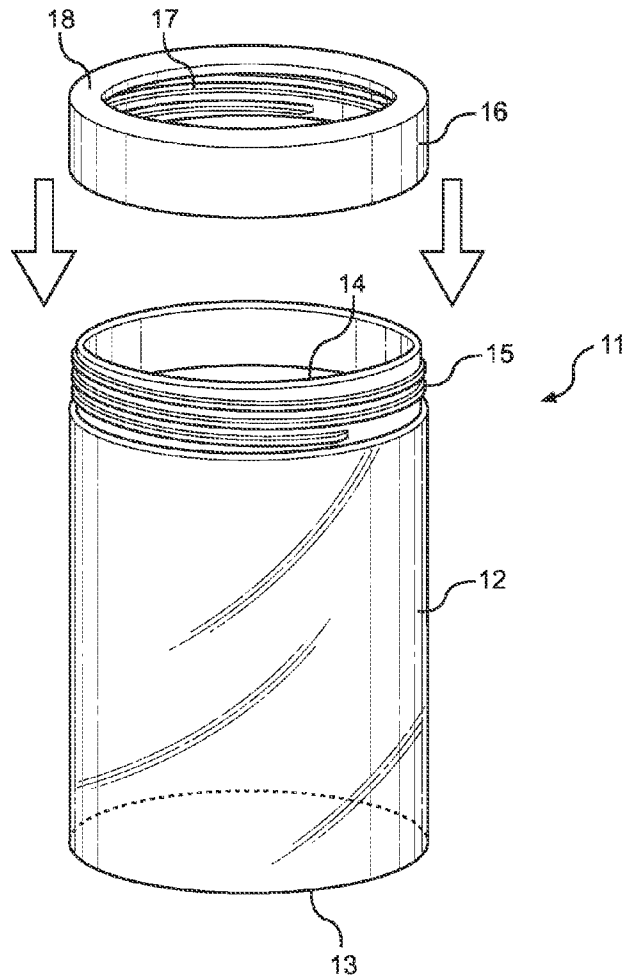




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(19) **United States**(12) **Patent Application Publication**
Marchiori(10) **Pub. No.: US 2015/0096324 A1**(43) **Pub. Date: Apr. 9, 2015**(54) **BEVERAGE COOLING DEVICE**(71) Applicant: **Dante Sante Andrea Marchiori**, Sao
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Paulo (BR)(21) Appl. No.: **14/329,326**(22) Filed: **Jul. 11, 2014****Related U.S. Application Data**(60) Provisional application No. 61/887,692, filed on Oct.
7, 2013.**Publication Classification**(51) **Int. Cl.**
F25D 31/00 (2006.01)(52) **U.S. Cl.**CPC **F25D 31/002** (2013.01)(57) **ABSTRACT**

Described is a beverage cooling device adapted to hold a single beverage container therein. The beverage cooling device includes a substantially cylindrical container having a bottom, sidewalls, and an open top. A lid having a central opening can be secured to the open top so as to enclose the interior volume of the container. The central opening is sized to receive a beverage container, such as a can or a bottle, and creates a tight fit therewith. The upper portion of the beverage container extends outward from the container so that a user can drink from the beverage container. A cooling agent, such as crushed ice, can be enclosed within the container of the beverage cooling device and a beverage container can be disposed therein. The beverage container is then surrounded by the cooling agent, which helps to cool the beverage and maintain the beverage at a cool temperature.



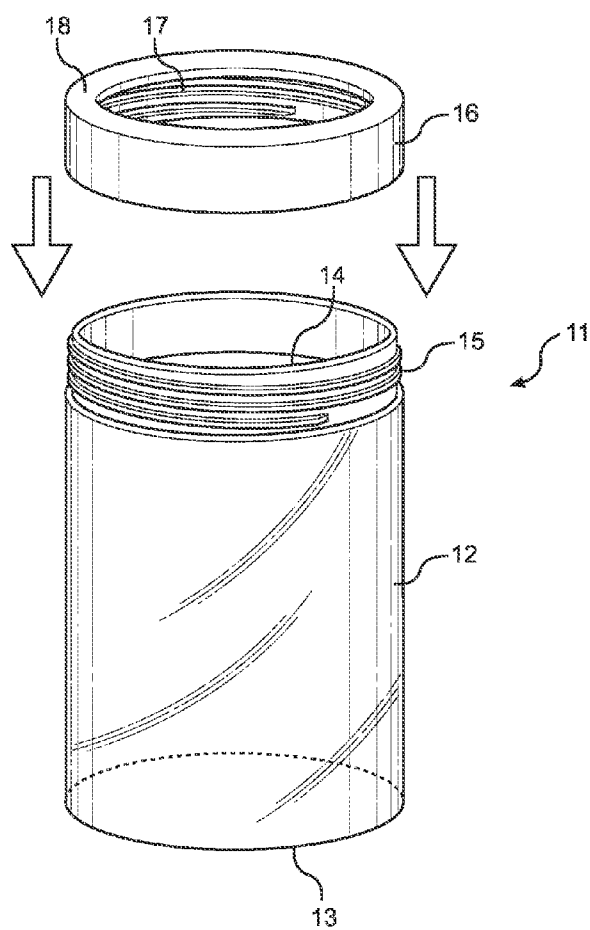


FIG. 1

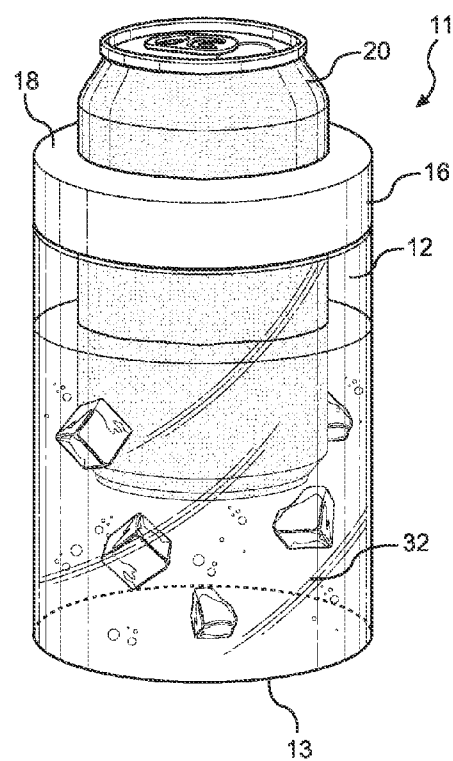


FIG. 2

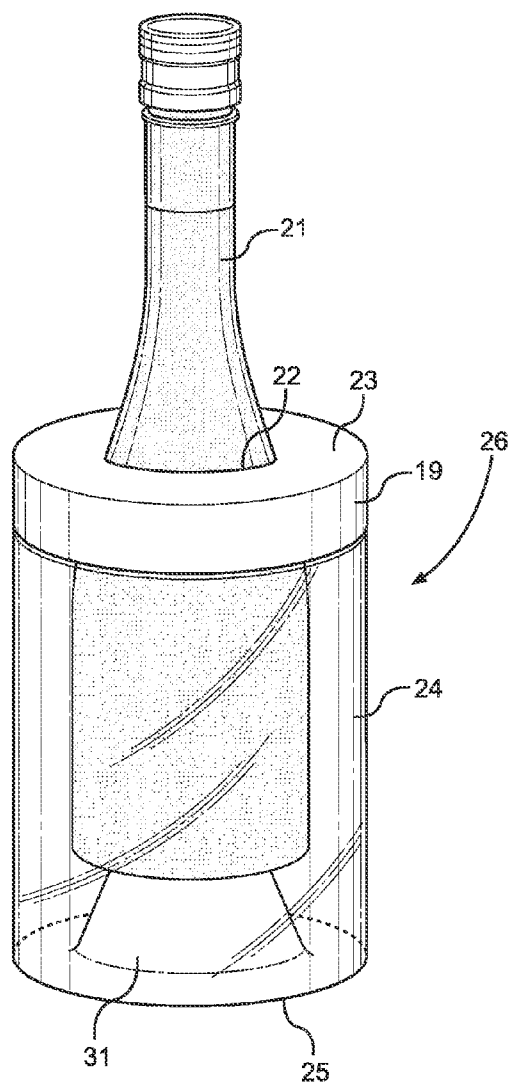


FIG. 3

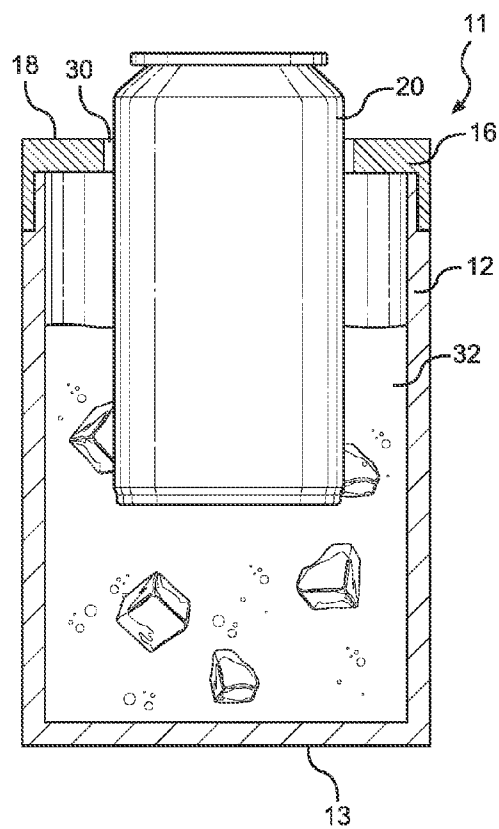


FIG. 4

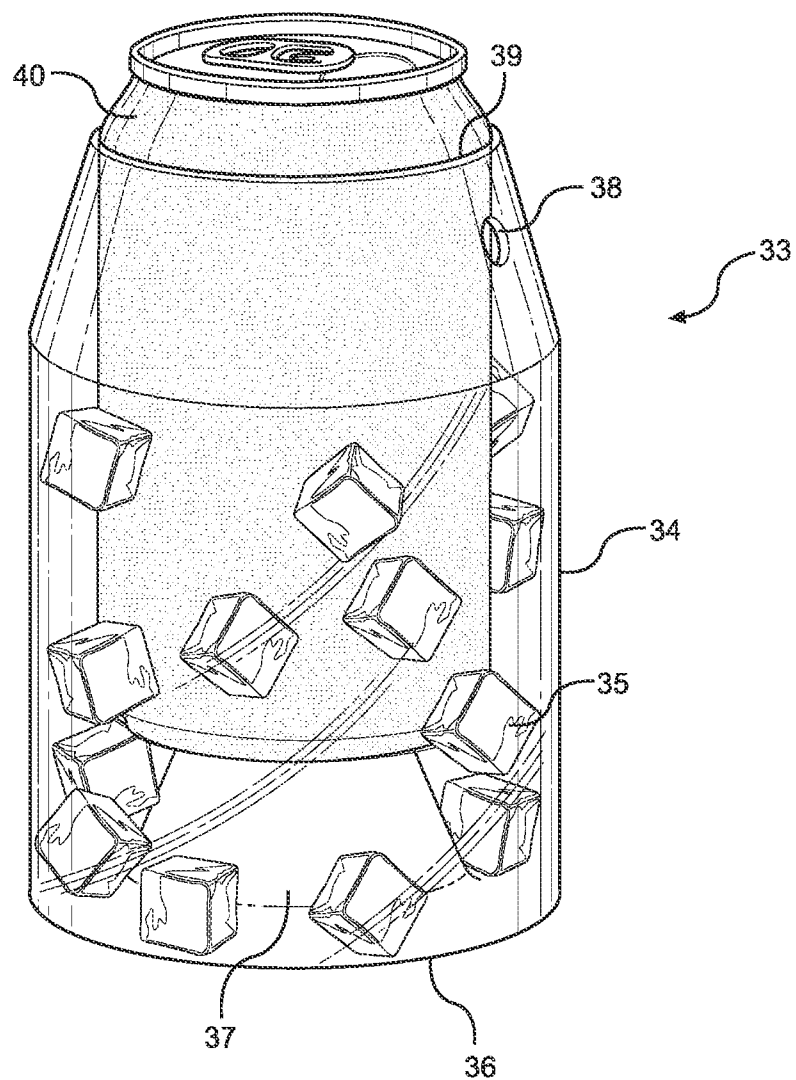


FIG. 5

BEVERAGE COOLING DEVICE

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of U.S. Provisional Application No. 61/887,692 filed on Oct. 7, 2013, entitled "Thermo Active Cooler." The above identified patent application is herein incorporated by reference in its entirety to provide continuity of disclosure.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to a beverage holder and cooling device. The present invention is adapted to hold a single beverage container, such as a bottle or can. Further, the present invention holds a cooling agent, such as crushed ice, ice cubes, or ice water, such that a beverage container held within the cooling device is contacted by the cooling agent. Thus, the cooling agent helps to cool a beverage and maintain the beverage at a cool temperature so that the beverage is not warmed by ambient temperature or by the user's hand while the user is consuming the beverage.

[0004] It is often difficult to keep beverages cold while spending time outdoors. During periods of warm weather, people enjoy spending time outdoors at picnics, parks, beaches, swimming pools, and sporting events, among others. While outdoors, people often become thirsty and bring drinks for consumption throughout the day. However, cold beverages become warm and unpalatable if left unrefrigerated for a period of time. A can or bottle of a beverage may become warm when left at ambient temperature, or can be warmed by the heat from the hand of a person holding the container. As a result, many people choose to dispose of the warmed beverage rather than to attempt to cool the beverage.

[0005] In order to keep beverages warm when outdoors, many people fill coolers or buckets with water and ice and submerge the beverages therein. However, coolers and buckets filled with ice and water are heavy and cumbersome, making the cooler or bucket difficult to transport. Further, the bucket or cooler must be filled with a fairly large quantity of water and ice. Once the beverage is removed from the cooler, the beverage will be warmed by the ambient temperature and by the hand of the user. Thus, the cooler offers only a temporary solution, and does not help to keep the beverage warm while a person is drinking the beverage. Additionally, using a cooler or bucket is unnecessary and inconvenient where a person wishes to only cool a small number of beverages. Further, it may be impractical to bring a cooler or bucket to certain events, such as sporting events.

[0006] Thus, the present invention provides a beverage cooling device adapted to hold a single beverage container, and that helps to cool the beverage and maintain the beverage at a cool temperature while the user is drinking the beverage. The present invention comprises a cylindrical container having a bottom, sidewalls, and an open top. A lid having a central opening can be removably secured to the top. The opening is preferably circular and is sized so that it fits tightly around the exterior surface of a beverage container, such as a bottle or a can. The lid helps to secure a portion of a beverage container within the interior volume of the container, while allowing an upper portion of the beverage container to extend outward therefrom so that a user may drink from the beverage container. The container of the present invention comprises a

larger diameter than that of the beverage container inserted therein so that the interior volume of the container is sufficiently large to hold the container and a cooling agent therein. In this way, the portion of the beverage container disposed within the beverage cooling device is in contact with the cooling agent, such as crushed ice, helping to maintain the beverage at a cool temperature while the user is drinking therefrom.

[0007] 2. Description of the Prior Art

[0008] Devices have been disclosed in the prior art that relate to beverage cooling devices. These include devices that have been patented and published in patent application publications. These devices generally relate to beverage cooling devices. The following is a list of devices deemed most relevant to the present disclosure, which are herein described for the purposes of highlighting and differentiating the unique aspects of the present invention, and further highlighting the drawbacks existing in the prior art.

[0009] Beverage insulators or koozies are known that are adapted to prevent a beverage from becoming warm. Beverage insulators generally comprise a cylindrical sleeve of an insulating material, such as rubber or foam, and can be disposed about the exterior surface of a beverage container. In this way, the user holds the beverage container by grasping the beverage insulator, which prevents the heat from the user's hand from being transferred to the beverage. Similarly, ambient heat is inhibited from passing through the walls of the container. However, such devices merely limit heat transfer, and do not actively keep the beverage cool. Thus, the beverage will still become warm since the beverage is not being cooled by the beverage insulator.

[0010] Other devices relate to insulated containers in which a beverage can be poured. The containers generally include a double-walled construction, wherein an inner wall is separated from an outer wall by a space. This helps to prevent heat transfer through the walls of the container, allowing the beverage to remain cool or warm for an extended period of time. However, such devices do not actively keep the beverage cool, and provide no cooling means. Further, the user is required to pour a beverage from its original container into the insulated container. This can be inconvenient and the user is required to clean the insulated container between uses.

[0011] In light of the devices disclosed in the prior art, it is submitted that the present invention substantially diverges in design elements from the prior art and consequently it is clear that there is a need in the art for an improvement to existing beverage cooling devices. In this regard the instant invention substantially fulfills these needs.

SUMMARY OF THE INVENTION

[0012] In view of the foregoing disadvantages inherent in the known types of beverage cooling devices now present in the prior art, the present invention provides a new beverage cooling device wherein the same can be utilized for providing convenience for the user when keeping a beverage cool while consuming the beverage.

[0013] It is therefore an object of the present invention to provide a new and improved beverage cooling device that has all of the advantages of the prior art and none of the disadvantages.

[0014] It is another object of the present invention to provide a beverage cooling device that is adapted to hold and cool a single beverage container of various type, such as a bottle, a can, or a similar container.

[0015] Another object of the present invention is to provide a beverage cooling device comprising a cooling agent that actively cools a beverage while the user is drinking the beverage.

[0016] Yet another object of the present invention is to provide a beverage cooling device having a removable lid with an opening to provide access to the beverage container held therein.

[0017] Another object of the present invention is to provide a beverage cooling device that may be readily fabricated from materials that permit relative economy and are commensurate with durability.

[0018] Other objects, features and advantages of the present invention will become apparent from the following detailed description taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTIONS OF THE DRAWINGS

[0019] Although the characteristic features of this invention will be particularly pointed out in the claims, the invention itself and manner in which it may be made and used may be better understood after a review of the following description, taken in connection with the accompanying drawings wherein like numeral annotations are provided throughout.

[0020] FIG. 1 shows a perspective view of an embodiment of the beverage cooling device of the present invention adapted to hold a can therein, and having the lid removed.

[0021] FIG. 2 shows a perspective view of an embodiment of the beverage cooling device of the present invention as used to hold a can therein, and having the lid secured.

[0022] FIG. 3 shows a perspective view of an embodiment of the beverage cooling device of the present invention as used to hold a bottle therein.

[0023] FIG. 4 shows a cross sectional view of an embodiment of the beverage cooling device of the present invention as used to hold a can.

[0024] FIG. 5 shows a perspective view of an embodiment of the beverage cooling device of the present invention having a tapered upper end.

DETAILED DESCRIPTION OF THE INVENTION

[0025] Reference is made herein to the attached drawings. Like reference numerals are used throughout the drawings to depict like or similar elements of the beverage cooling device. For the purposes of presenting a brief and clear description of the present invention, the preferred embodiment will be discussed as used for cooling a beverage while allowing the user to drink from the beverage container. The figures are intended for representative purposes only and should not be considered to be limiting in any respect.

[0026] Referring now to FIG. 1, there is shown a perspective view of an embodiment of the beverage cooling device of the present invention adapted to hold a can therein, and having the lid removed. The beverage cooling device 11 of the present invention comprises a container 12 having a bottom 13, sidewalls, and an open top 14. The container 12 is preferably cylindrical, but may have various other shapes. In the illustrated embodiment, the bottom 13 is shown as being substantially flat. The container 12 is preferably composed of a composite plastic, such as polyethylene terephthalate (PET) or polypropylene. The container 12 defines an interior volume in which a beverage container and a cooling agent can be positioned. The interior volume is sufficiently large such that

a beverage container positioned therein does not contact the sidewall of the container 12, and thus space is provided about the exterior of the beverage container.

[0027] The open top 14 of the container 12 preferably includes threading 15 on the exterior surface thereof, and is adapted to receive a lid 16 having a threaded interior. In this way, the lid 16 can be threadedly secured to the container 12 of the present invention so as to enclose the interior volume of the container 12. The lid 16 comprises a central opening 17 through the upper surface 18 thereof. The central opening 17 can be sized so as to accept the neck of a bottle therethrough, or the central opening 17 can be sized so as to accept a can therethrough. The central opening 17 is preferably sized so that it closely fits to the exterior of the beverage container so as to form a tight seal around the exterior surface of the beverage container. Further, the central opening 17 forms a tight seal around the exterior of the beverage container so as to maintain the position of the beverage container therein. In some embodiments of the present invention, the central opening 17 comprises a rubber gasket thereon so as to help create a tight fit about the exterior of the container.

[0028] Referring now to FIG. 2, there is shown a perspective view of an embodiment of the beverage cooling device of the present invention as used to hold a can therein, and having the lid secured. A beverage container 20 can be inserted into the interior volume of the container 12 of the beverage cooling device 11. The lid 16 can be secured to the container 12, such that the upper portion of the beverage container 20 extends through the central opening of the lid 16 so that a user can drink from the beverage container in the ordinary manner. Thus, the upper portion of the beverage container 20 protrudes outward from the lid 16 and container 12. The central opening is sized so that the lid 16 fits snugly against the exterior of the beverage container 20, limiting movement of the beverage container 20 and preventing cooling agent 32 disposed within the interior volume from escaping therefrom. The central opening may create a water-tight seal.

[0029] The interior volume of the container 12 of the present invention is sufficiently large so as to accommodate a beverage container 20 and a cooling agent 32 therein. A cooling agent 32, such as water, ice cubes, crushed ice, or a combination thereof, is disposed within the interior volume and is adapted to cool a beverage container 20 placed therein. The diameter of the container 12 is larger than the diameter of central opening on the lid 16 and thus the beverage container 20 so that the beverage container 20 does not contact the sidewalls of the container 12 when positioned therein. In this way, there is empty space around the sides of the beverage container 20 in which the cooling agent 32 can be disposed. The cooling agent 32 is enclosed within the container 12 and serves to actively cool a beverage container 20 placed therein. Thus, rather than merely insulating the beverage container 20 to maintain the cool temperature, the cooling agent 32 helps to continually cool the beverage.

[0030] Referring now to FIG. 3, there is shown a perspective view of an embodiment of the beverage cooling device of the present invention as used to hold a bottle therein. The illustrated embodiment is substantially the same as the illustrated embodiment of FIGS. 1 and 2, except that the lid 19 comprises a central opening 22 on the upper surface 23 thereof that is sized so as to receive the neck of a bottle 21. Thus, the central opening 22 is smaller than in embodiments of the present invention adapted for use with beverage cans. Further, the container 24 is elongated relative to the container

of FIGS. 1 and 2, so that the container 24 can accommodate the elongated body of the bottle 21.

[0031] In the illustrated embodiment, the bottom 25 of the container 24 includes a central protrusion 31 that extends into the interior volume of the container 24. In such embodiments, the bottom of a beverage container inserted into the container 24 will contact the protrusion 31 on the bottom 25, preventing the beverage container 21 from being inserted further into the container 24. The protrusion may comprise a frustoconical shape and has a flat upper surface on which the bottom of a beverage container 21 can rest. The protrusion 31 helps to maintain the position of the beverage container 21 inside of the container 24, and prevents the beverage container 21 from moving within the container 24 of the present invention.

[0032] Referring now to FIG. 4, there is shown a cross sectional view of an embodiment of the beverage cooling device of the present invention. In operation, the lid 16 of the container 12 of the present invention is removed from the container 12. A cooling agent 32, such as crushed ice, can be inserted into the container 12 so as to fill a portion of the interior volume. A beverage container 20 is then inserted into the container 12 and into the cooling agent 32. As the beverage container 20 enters the container 12, the cooling agent 32 is displaced, causing the cooling agent 23 to rise along the exterior of the sides of the beverage container 20. The user can then position the central opening of the lid 16 over the upper portion or neck of the beverage container 20, and can screw the lid 16 onto the open top of the container 12. The neck or upper portion of the beverage container 20 positioned within the central opening fits tightly against the gasket 30 disposed about the central opening so as to create a mechanical interference fit therewith. In this way, the cooling agent 32 is prevented from escaping through the central opening on the lid 16. Further, the beverage container 20 is held securely within the container 12, and is prevented from falling out of the container 20. Thus, the cooling agent 32 in contact with the exterior surface of the beverage container 20 helps to maintain the contents of the beverage container 20 at a cool temperature, and the beverage will not be warmed by the user's hands.

[0033] Referring now to FIG. 5, there is shown a view of an embodiment of the beverage cooling device of the present invention having a tapered upper end. In some embodiments of the present invention, the beverage cooling device 33 comprises a container 34 having a bottom 36, sidewalls, and an open upper end 39. The container 34 is preferably substantially cylindrical. The bottom 36 of the container can be substantially flat, and in the illustrated embodiment, the bottom 36 is shown as having a central protrusion 37 on which the bottom of a beverage container 40 can be supported. The central protrusion 37 helps to maintain the beverage container 40 in a stable position such that it does not move within the container 34.

[0034] The container 34 tapers towards the upper end 39 such that the opening at the upper end 39 comprises a smaller diameter than the diameter of the bottom of the container 36. A beverage container 40 can be positioned directly into the open upper end 39, such that the beverage container 40 fits snugly against the exterior surface of the beverage container 40. Thus, the beverage container 40 is held within the opening at the top by a mechanical interference fit. Accordingly, in such embodiments, no lid is required as the open upper end 39

of the container 34 is adapted to receive a beverage container 40 therethrough, and creates a tight fit or seal therewith, similar to the

[0035] The container 34 further includes an aperture 38 on an upper portion thereof that is adapted to allow air to escape the container 34. As the beverage container 40 is inserted into the container 34, pressure may build from the inability of air to escape the container 34. The aperture 38 allows air to escape as the beverage container 40 is inserted therein. Further, the aperture 38 is located on an upper portion of the container 34 so as to prevent cooling agent 35 from escaping the container 34. Preferably, crushed ice is used as the cooling agent 35 as the crushed ice is substantially solid, and is too large to escape through the aperture 38. While drinking from the beverage container 40 secured within the beverage holding device 33, the user can position the aperture 38 away from the user such that cooling agent 35 having a liquid form cannot escape through the aperture 38.

[0036] It is therefore submitted that the instant invention has been shown and described in what is considered to be the most practical and preferred embodiments. It is recognized, however, that departures may be made within the scope of the invention and that obvious modifications will occur to a person skilled in the art. With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

[0037] Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

I claim:

1. A beverage cooling device, comprising:

a container having a bottom, sidewalls, and an open top, defining an interior volume;

a lid removably secured to said open top and having a central opening thereon adapted to tightly fit against the exterior of a beverage container inserted therethrough;

wherein a cooling agent is adapted to be disposed within said interior volume, and said beverage container is adapted to be positioned within said interior volume such that said beverage container is surrounded by said cooling agent.

2. The beverage cooling device of claim 1, wherein

said open top of said container comprises threading on an exterior surface thereof, and wherein an interior portion of said lid comprises threading thereon, such that said lid can be removably secured to said open top of said container.

3. The beverage cooling device of claim 1, wherein said central opening is sized so as to receive the neck of a bottle therethrough.

4. The beverage cooling device of claim 1, wherein said central opening is sized so as to receive the upper portion of a beverage can therethrough.

5. The beverage cooling device of claim 1, wherein said bottom of said container is substantially flat.

6. The beverage cooling device of claim 1, wherein said bottom of said container comprises a protrusion that extends into said interior volume of said container and is adapted to provide a resting surface for said beverage container inserted into said container.

7. The beverage cooling device of claim 1, wherein said central opening on said lid comprises a gasket thereon adapted to create a tight seal with a beverage container inserted therethrough.

8. The beverage cooling device of claim 1, wherein said central opening on said lid is adapted to create a watertight seal with a beverage container inserted therein.

9. A beverage cooling device, comprising:
a container having a bottom, a sidewall, and an open upper end, defining an interior volume;
wherein said container tapers towards said open upper end;

wherein said open upper end comprises is adapted to tightly fit against the exterior of a beverage container inserted therethrough;

wherein a cooling agent is adapted to be disposed within said interior volume, and a beverage container is adapted to be positioned within said interior volume such that said beverage container is in contact with said cooling agent.

10. The beverage cooling device of claim 9, wherein said container comprises an aperture on an upper portion thereof adapted to allow air to escape from said interior volume of said container.

11. The beverage cooling device of claim 9, wherein said bottom of said container comprises a central protrusion that extends into said interior volume of said container, and is adapted to support a bottom of a beverage container inserted therein.

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